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PUBLIC COMPANY ANALYSIS

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Vendor Financial Watch

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U.S. Market Analysis Program



DECEMBER 1993

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# INFORMATION SERVICES VENDOR FINANCIAL WATCH

**INPUT**<sup>®</sup>

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San Francisco • New York • Washington, D.C. • London • Paris • Frankfurt • Tokyo

Published by  
INPUT  
1881 Landings Drive  
Mountain View, CA 94043-0848  
U.S.A.

## **Information Services Market Analysis Program**

### ***Information Services Vendor Financial Watch***

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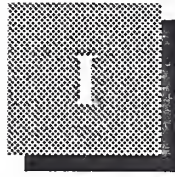
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# Introduction

## A

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### Objective

The Vendor Financial Watch (VFW) is INPUT's financial performance comparison of public information services companies. It provides vendor-by-vendor and industry-sector performance comparisons of the activities of public companies within the U.S. information services industry. INPUT clients use this information to compare and contrast the revenue and profitability performance against the performance of similar companies and against different sectors of the information industry.

This issue of the VFW covers 109 public information services companies. Only companies that are independent public companies based within the United States are presented. To qualify for entry into this publication, each company must generate greater than 50% of its revenues from information services and/or software products. Computer manufacturers are not listed within this report.

## B

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### Report Structure

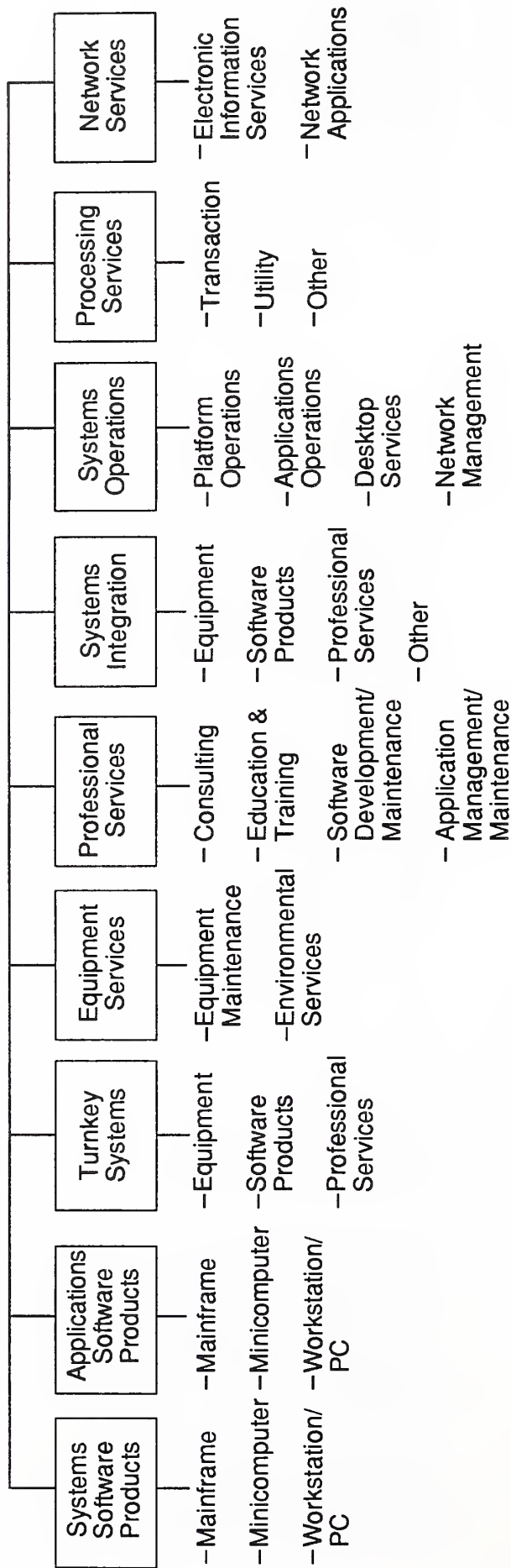
The VFW is segmented into seven chapters. Chapters II through VII present information that pertains to specific industry sectors as follows:

- Chapter II - Total information services industry financial performance
- Chapter III - Processing/Network Services Companies
- Chapter IV - Electronic Information Services Companies
- Chapter V - Software Products Companies
- Chapter VI - VAR/Turnkey Systems Companies
- Chapter VII - Professional Services Companies

The industry sectors are defined within INPUT's information services industry structure, which is illustrated in Exhibit I-1. This structure is the infrastructure for the majority of INPUT's market analysis and forecasts.

EXHIBIT I-1

### Information Services Industry Structure—1993



Source: INPUT

**C****Data Reported**

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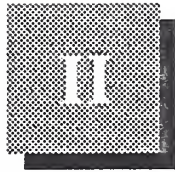
This edition of the VFW presents a three-year, 1990-1992, revenue and net income history for each company that is itemized within each of the industry sectors. Furthermore, the annual revenue and net income changes corresponding to each year within the three-year period are presented for both the information service vendor and the industry sector as a whole. An *N/A* (not applicable) notation is used in the cases when companies generate a net loss rather than a net income for at least one of the two years used in the period change calculation.

The after-tax profit margin for each vendor is also calculated on a yearly basis. The after-tax profit margin (profit margin) measures an organization's profitability after operating expenses, interest, taxes and extraordinary items. The *N/A* notation is also used when specific profit margins cannot be calculated because the company has generated a net loss rather than a net income. The profit margin is calculated as follows:

$$\textit{Profit Margin} = \textit{Net Income/Revenue}$$

For each of the five information service sectors, a five-year financial history, from 1988 to 1992, is presented at the beginning of the appropriate chapters.

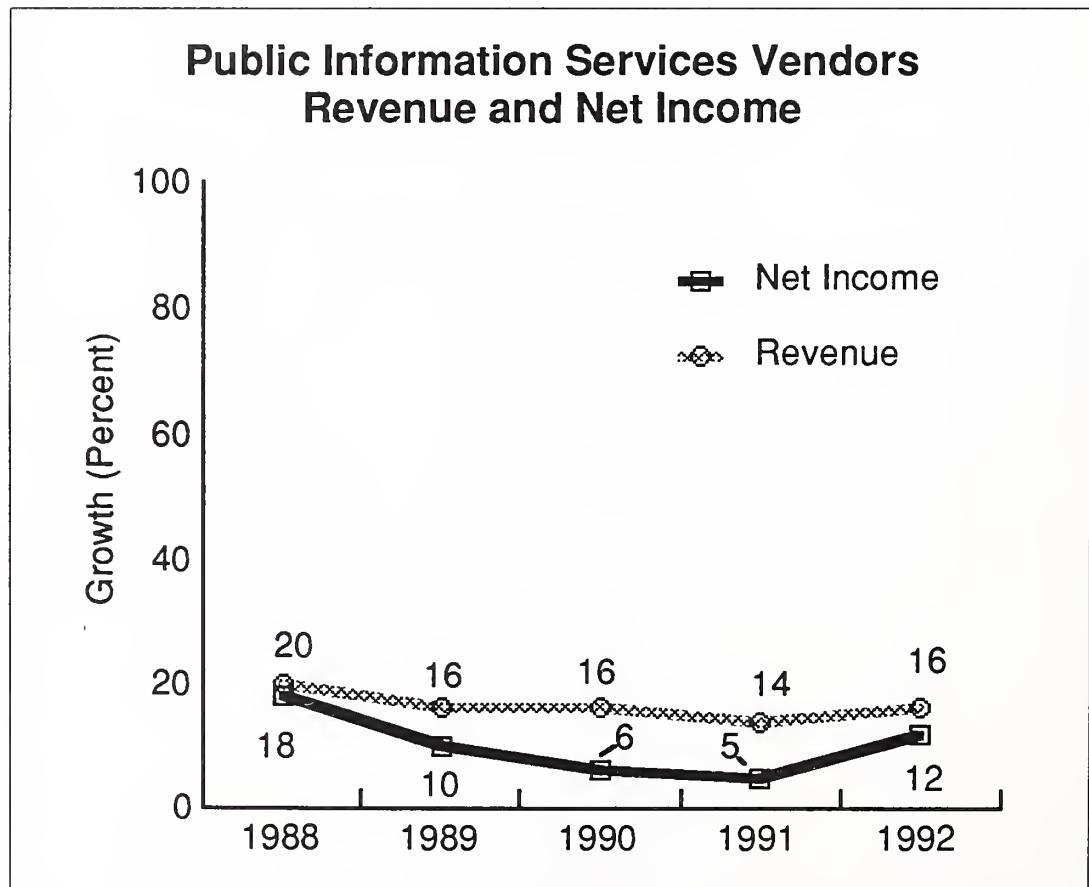
The data utilized within this report has been extracted from public sources (annual reports, 10-K reports, 10-Q reports). In an effort to promote meaningful comparisons, the data is presented on a calendar-year basis rather than a fiscal-year basis. Moreover, companies are categorized according to the information service from which they derive the largest proportion of their 1992 revenue.



## Public Information Services Trends Analysis

The public information services industry companies have maintained a steady revenue growth rate during the past five years. Aggregate revenue increased from \$30.0 billion in 1991 to \$34.8 billion in 1992, a growth rate of 16%. Revenue growth for the entire group has been relatively flat during the past four years as a result of a sluggish world economy and eroding prices for both hardware and software products (see Exhibit II-1). In terms of 1992 revenue ranking, Microsoft leads the public information services industry with revenue amounting to \$3.3 billion. CSC was ranked number two, followed by ADP and Computer Associates, respectively (see Exhibit II-2).

EXHIBIT II-1



## EXHIBIT II-2

**Public Information Services Vendors—Financial Overview**

Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
MICROSOFT	1477.8	2276.0	3252.3	54	43
CSC	1679.3	1944.7	2474.4	16	27
ADP	1736.0	1810.8	2075.9	4	15
COMPUTER ASSOC.	1310.7	1437.8	1773.0	10	23
FIRST FIN. MGMT.	814.5	1034.2	1388.1	27	34
ORACLE	1027.8	1085.3	1309.9	6	21
INTERGRAPH	1044.6	1195.4	1176.7	14	-2
EQUIFAX INC.	1078.8	1093.8	1134.3	1	4
NOVELL	526.3	710.4	988.6	35	39
LOTUS DEVELOP	692.2	828.9	900.1	20	9
CUC INT'L	453.6	644.6	742.3	42	15
REYNOLDS & REYNOLDS	607.3	591.7	664.6	-3	12
POLICY MGMT	346.1	415.4	497.1	20	20
SHARED MEDICAL	403.1	438.7	469.6	9	7
BORLAND	208.5	436.5	463.7	109	6
ASK	249.7	395.1	448.2	58	13
LEGENT	308.8	364.3	446.1	18	22
CADENCE DESIGN	389.1	391.6	434.5	0	11
AUTODESK	237.9	284.9	367.7	20	29
AMER. MGMT. SYS.	260.3	284.4	332.5	9	17
FISERV	183.2	281.3	332.1	54	18
SUNGARD DATA	262.1	283.6	324.6	8	14
LOGICON	257.3	287.4	320.5	12	11
COMP. TASK GROUP	243.9	285.1	302.7	17	6
CORPORATE S/W	197.0	226.9	301.1	15	33
INFORMIX	146.1	179.8	283.6	23	58
INFO. RESOURCES	179.8	222.7	276.4	24	24
STERLING S/W	206.1	228.9	268.7	11	17
ADOBE SYSTEMS	168.7	229.7	265.9	36	16
BBN	266.4	262.9	257.9	-1	-2
GERBER SCIENTIFIC	279.8	257.0	251.5	-8	-2
SYSTEM SOFT ASSOC	129.6	171.3	225.6	32	32
BMC SOFTWARE	125.0	176.2	224.9	41	28
C3	90.3	91.0	224.9	0	147
SYMANTEC	104.6	189.3	214.9	81	14

## EXHIBIT II-2 (CONT.)

## Public Information Services Vendors—Financial Overview

Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
NAT'L. DATA	249.6	220.6	212.0	-12	-4
SEI	171.9	187.9	208.7	9	11
HBO	174.1	170.7	202.2	-2	18
COMDATA HOLDINGS	189.8	184.5	193.1	-3	5
PAYCHEX	128.8	147.7	175.1	15	19
ALDUS	135.0	167.5	174.1	24	4
STRUCTURAL DYNAM	118.6	146.3	163.6	23	12
COMPUTER DATA SYS.	126.1	134.0	157.0	6	17
SOFTWARE PUB	153.5	141.3	151.9	-8	8
TRIAD SYSTEMS	143.7	140.4	151.8	-2	8
ANALYSTS INT'L.	114.2	119.6	146.8	5	23
C.A.C.I.	148.1	134.7	143.1	-9	6
FILENET	102.9	122.5	138.3	19	13
SYSTEMS CENTER	94.7	122.8	131.0	30	7
TOTAL SYS. SVCS.	83.9	112.4	129.7	34	15
CONTINUUM	97.1	128.8	125.9	33	-2
KNOWLEDGEWARE	92.3	125.3	121.7	36	-3
INTERLEAF	84.1	94.0	115.4	12	23
COMSHARE	115.9	124.1	113.1	7	-9
BOOLE & BABBAGE	97.0	99.2	112.6	2	14
COMPUTER LANG. RES.	119.4	115.7	111.0	-3	-4
AMERICAN S/W	99.1	114.0	109.2	15	-4
ACXIOM	99.5	90.9	106.1	-9	17
DYNAMICS RES.	90.5	97.7	102.6	8	5
COMP. HORIZONS	99.4	94.5	102.2	-5	8
KEANE	93.0	95.6	99.3	3	4
CERNER	55.3	75.0	98.3	36	31
SYS. & COMP. TECH.	50.4	72.0	96.5	43	34
WARNER COMPUTER SYS.	46.8	63.3	92.3	35	46
INTERSOLV	62.6	71.8	79.1	15	10
CYCARE	77.7	74.5	74.8	-4	0
PHOENIX TECH	38.8	58.0	72.9	49	26
M/A/R/C	73.1	71.3	66.7	-2	-7
COMPTEK RESEARCH	51.0	61.5	65.9	20	7
CONCORD COMP.	37.2	48.1	65.6	29	36

## EXHIBIT II-2 (CONT.)

**Public Information Services Vendors—Financial Overview**

Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
MACNEAL SCHWENDLER	56.6	55.8	65.5	-1	17
INTERMETRICS	52.4	60.8	60.2	16	-0
AUTO-TROL TECH.	77.2	64.0	54.1	-17	-16
HOGAN SYSTEMS	40.0	57.4	53.9	44	-6
DELPHI INFO. SYSTEMS	23.1	39.3	49.8	70	27
BRANDON SYSTEMS	37.1	38.3	48.5	3	26
SOFTECH	49.4	52.8	47.3	7	-11
LCS INDUSTRIES	42.5	43.1	47.2	1	10
WORDSTAR	35.7	40.6	34.5	14	-15
ASA INT'L	18.7	23.5	31.4	25	34
SPINNAKER S/W	11.2	25.9	29.5	132	14
SCIENTIFIC S/W	19.8	25.0	29.2	27	17
CYBERTEK	28.6	28.3	28.8	-1	2
CONSILIUM	30.9	31.6	27.4	3	-14
BGS SYSTEMS	21.1	22.4	27.3	6	22
DATA TRANSMISSION	18.0	21.5	26.8	20	25
VERDIX	13.4	16.5	24.2	23	47
XYVISION	29.1	23.9	23.6	-18	-1
SAZTEC INT'L.	20.8	24.2	21.9	16	-9
COMPUTER SERVICES	16.4	18.8	21.2	15	13
TECHNALYSIS	20.5	18.4	19.1	-10	4
FDP	16.8	16.3	17.8	-3	9
BARRISTER INFO.	26.4	18.8	16.2	-29	-14
TIMBERLINE S/W	12.7	12.7	14.9	0	17
SYNERCOM TECH.	12.6	14.8	12.2	17	-17
COMPUTRAC	10.7	12.2	11.9	14	-2
INERSON	49.5	37.8	11.0	-24	-71
PC QUOTE	10.0	10.2	11.0	2	8
ALTAI	7.3	8.8	10.8	21	22
SILVAR-LISCO	10.4	10.0	10.5	-3	5
INFODATA SYS	12.2	12.0	9.0	-2	-24
INTELLICORP	17.4	11.8	9.0	-32	-24
SANDATA	11.9	9.9	8.8	-17	-12
TERRANO	6.6	8.7	8.8	32	0
RABBIT S/W	8.5	6.8	6.6	-20	-3
COMPUTER RESEARCH	11.3	10.7	6.5	-5	-40
PAY-FONE	5.3	5.2	4.9	-3	-5
GENESEE	1.9	2.0	2.1	5	3
S/W SVC AMER.	3.0	2.8	1.1	-7	-61
Total	26,284.1	29,990.9	34,752.8	14.1	15.877

## EXHIBIT II-2 (CONT.)

## Public Information Services Vendors—Financial Overview

Company	Net Income (\$ Millions)			90-91 Change (%)	91-92 Change (%)	1990 Profit Margin (%)	1991 Profit Margin (%)	1992 Profit Margin (%)
	1990	1991	1992					
MICROSOFT	355.6	581.5	833.9	64	43	24	26	26
CSC	68.0	65.5	75.7	-4	16	4	3	3
ADP	219.7	238.9	272.1	9	14	13	13	13
COMPUTER ASSOC.	162.0	173.0	200.6	7	16	12	12	11
FIRST FIN. MGMT.	47.7	58.3	15.8	22	-73	6	6	1
ORACLE	36.4	33.6	45.5	-8	36	4	3	3
INTERGRAPH	62.6	71.1	8.4	14	-88	6	6	1
EQUIFAX INC.	63.9	54.1	85.3	-15	58	6	5	8
NOVELL	109.7	184.2	267.7	68	45	21	26	27
LOTUS DEVELOP	23.3	43.1	80.4	85	86	3	5	9
CUC INT'L	17.5	25.1	58.9	43	134	4	4	8
REYNOLDS & REYNOLDS	22.7	25.6	42.5	13	66	4	4	6
POLICY MGMT.	37.2	47.6	59.4	28	25	11	11	12
SHARED MEDICAL	22.7	25.3	28.4	12	12	6	6	6
BORLAND	24.4	-75.1	-81.2	N/A	N/A	12	N/A	N/A
ASK	4.7	-56.6	6.4	N/A	N/A	2	N/A	1
LEGENT	38.2	39.0	34.2	2	-12	12	11	8
CADENCE DESIGN	-6.9	-22.4	55.4	N/A	N/A	N/A	N/A	13
AUTODESK	56.8	57.8	43.9	2	-24	24	20	12
AMER. MGMT. SYS.	11.0	12.6	17.5	15	38	4	4	5
FISERV	13.8	18.3	23.0	33	25	8	7	7
SUNGARD DATA	20.5	21.5	25.8	5	20	8	8	8
LOGICON	8.6	12.3	14.9	44	21	3	4	5
COMP. TASK GROUP	7.2	0.9	5.6	-88	529	3	0	2
CORPORATE S/W	3.6	4.8	5.9	34	21	2	2	2
INFORMIX	-23.1	12.2	47.8	N/A	292	N/A	7	17
INFO. RESOURCES	6.2	15.4	19.2	146	25	3	7	7
STERLING S/W	11.9	13.1	14.9	10	14	6	6	6
ADOBE SYSTEMS	40.1	51.6	43.6	29	-15	24	22	16
BBN	42.5	6.6	-20.6	-85	N/A	16	3	N/A
GERBER SCIENTIFIC	15.1	7.3	7.2	-51	-2	5	3	3
SYSTEM SOFT ASSOC	17.1	20.7	19.8	21	-4	13	12	9
BMC SOFTWARE	27.8	43.2	67.4	55	56	22	25	30
C3	-0.4	-5.7	5.7	N/A	N/A	N/A	N/A	3
SYMANTEC	9.1	17.6	-3.5	94	N/A	9	9	N/A
NATL. DATA	-6.1	-14.6	6.4	N/A	N/A	N/A	N/A	3
SEI	12.1	16.0	11.3	33	-29	7	9	5
HBO	7.8	-2.9	13.1	N/A	N/A	4	N/A	6
COMDATA HOLDINGS	-40.8	-10.5	2.4	N/A	N/A	N/A	N/A	1
PAYCHEX	8.9	11.1	16.8	25	51	7	8	10
ALDUS	23.8	23.8	6.8	0	-72	18	14	4



EXHIBIT II-2 (CONT.)

## Public Information Services Vendors—Financial Overview

Company	Net Income (\$ Millions)			90-91 Change (%)	91-92 Change (%)	1990 Profit Margin (%)	1991 Profit Margin (%)	1992 Profit Margin (%)
	1990	1991	1992					
STRUCTURAL DYNAM	13.3	17.9	14.5	35	-19	11	12	9
COMPUTER DATA SYS.	3.4	3.4	4.5	0	32	3	3	3
SOFTWARE PUB	20.6	-20.4	0.6	N/A	N/A	13	N/A	0
TRIAD SYSTEMS	3.4	2.3	46.6	-31	1,895	2	2	31
ANALYSTS INT'L.	6.2	5.2	6.9	-16	32	5	4	5
C.A.C.I.	3.3	2.0	3.1	-39	52	2	1	2
FILENET	3.8	8.1	-8.0	116	N/A	4	7	N/A
SYSTEMS CENTER	-38.3	3.6	-11.2	N/A	N/A	N/A	3	N/A
TOTAL SYS. SVCS.	12.7	15.2	17.6	20	15	15	14	14
CONTINUUM	8.1	7.7	9.1	-4	18	8	6	7
KNOWLEDGEWARE	11.7	6.1	5.4	-48	-12	13	5	4
INTERLEAF	-2.1	3.9	9.2	N/A	134	N/A	4	8
COMSHARE	6.4	4.4	-8.8	-31	N/A	6	4	N/A
BOOLE & BABBAGE	3.2	-1.0	6.4	N/A	N/A	3	N/A	6
COMPUTER LANG. RES.	-4.5	3.8	5.5	N/A	43	-4	3	5
AMERICAN S/W	17.2	20.4	8.0	18	-61	17	18	7
ACXIOM	4.7	1.2	5.6	-74	353	5	1	5
DYNAMICS RES.	3.3	3.6	4.0	11	11	4	4	4
COMP. HORIZONS	3.3	2.3	2.0	-32	-11	3	2	2
KEANE	5.2	5.9	6.3	14	7	6	6	6
CERNER	2.6	4.7	9.9	78	112	5	6	10
SYS. & COMP. TECH.	0.5	5.6	-2.5	1,005	N/A	1	8	N/A
WARNER COMPUTER SYS.	-0.2	2.0	3.7	N/A	86	N/A	3	4
INTERSOLV	5.7	-23.3	5.9	N/A	N/A	9	N/A	7
CYCARE	-11.7	0.6	1.5	N/A	145	N/A	0	2
PHOENIX TECH	-18.4	0.2	2.7	N/A	1,120	N/A	0	4
M/A/R/C	2.8	3.4	1.3	-72	-60	4	5	2
COMPTEK RESEARCH	1.4	1.7	1.4	16	-14	3	3	2
CONCORD COMP.	5.1	7.3	9.0	42	23	14	15	14
MACNEAL SCHWENDLER	11.2	-1.5	12.2	N/A	N/A	20	N/A	19
INTERMETRICS	1.8	2.3	2.0	31	-14	3	4	3
AUTO-TROL TECH.	-2.1	-7.1	-10.6	N/A	N/A	N/A	N/A	N/A
HOGAN SYSTEMS	0.1	4.1	4.7	5,118	15	0	7	9
DELPHI INFO. SYSTEMS	1.5	-0.9	2.6	N/A	N/A	6	N/A	5
BRANDON SYSTEMS	2.3	2.1	2.7	-10	27	6	5	5
SOFTECH	-4.8	-3.0	1.7	N/A	N/A	N/A	N/A	3
LCS INDUSTRIES	0.4	0.9	1.3	124	40	0	2	3
WORDSTAR	-3.2	-8.8	-9.1	N/A	N/A	N/A	N/A	N/A
ASA INT'L	0.8	0.1	0.4	-84	220	4	0	1
SPINNAKER S/W	-3.3	1.2	-4.2	N/A	N/A	N/A	5	N/A
SCIENTIFIC S/W	7.0	1.1	1.4	-85	28	35	4	5
CYBERTEK	3.3	3.3	2.4	0	-27	11	12	8

Net income for the entire group grew from \$5.8 billion in 1991 to \$6.6 billion in 1992, a 12% annual increase. The sharp upturn of the net income growth rate (5% between 1991 and 1990, compared to 12% between 1992 and 1991) is partially due to a greater number of companies generating a profit rather than a net loss in the subsequent time period. In 1991, thirty public information services vendors tracked within this publication reported a net loss; these losses amounted to approximately \$300 million. However, during 1992 the number of companies within this same list that reported a net loss shrank to twenty, and the aggregate net loss decreased to \$200 million.

In addition to an increase in the number of vendors that generated a positive bottom line, higher profitability posted by larger vendors (such as ADP, Computer Associates, CSC, Equifax, and Oracle) also influence the improved annual net income change.

Vendors such as Computer Associates, Microsoft, Novell, and Oracle contributed to a strong System Software Product market segment. This particular segment generated \$10.1 billion in revenue during 1992 which resulted in net income of \$1.5 billion (see Exhibit II-3 ). Refer to Exhibit II-4 for a listing of information services vendors and the corresponding industry in which they operate.

EXHIBIT II-3

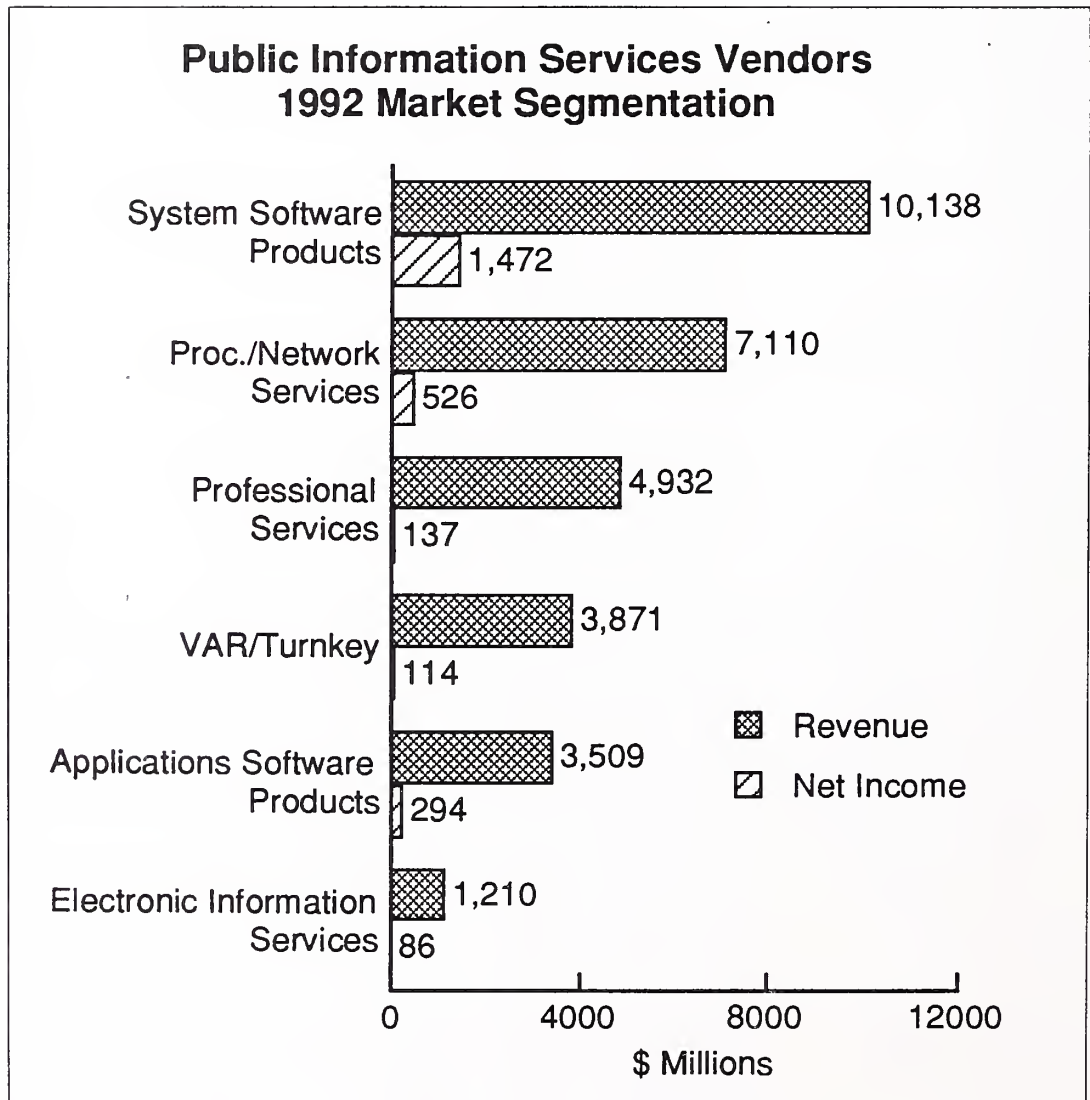


EXHIBIT II-4

**Information Services Vendors**

	Proc./ Netwrk Svcs.	Elec. Svcs.	Sys. SW	Appl. SW Products	Personal Comp. Prod.	Other SW Products	VAR/ Turnkey	Gov't Prof. Svcs.	Comm. Prof. Svcs.
ACXIOM		X							
ADOBE SYSTEMS			X		X				
ADP	X								
ALDUS				X	X				
ALTAI			X			X			
AMER. MGMT. SYS.									X
AMERICAN S/W				X		X			
ANALYSTS INTL.									X
ASA INT'L							X		
ASK COMP. SYS.							X		
AUTO-TROL TECH.							X		
AUTODESK				X	X				
BARRISTER INFO..							X		
BBN								X	
BGS SYSTEMS			X			X			
BMC SOFTWARE			X			X			
BOOLE & BABBAGE			X			X			
BORLAND			X		X				
BRANDON SYSTEMS									X
C.A.C.I.								X	
C3							X		
CADENCE DESIGN				X		X			
CERNER							X		
COMDATA HOLDINGS	X								
COMP-U-CHECK	X								
COMP. HORIZONS									X
COMP. TASK GROUP									X
COMPTEK RESEARCH								X	
COMPUTER ASSOC.			X			X			
COMPUTER DATA SYS.								X	
COMPUTER LANG. RES.	X								
COMPUTER RESEARCH							X		
COMPUTER SERVICES	X								
COMPUTRAC									

EXHIBIT II-4 (CONT.)

**Information Services Vendors**

	Proc./ Netwrk Svcs.	Elec. Svcs.	Sys. SW	Appl. SW Products	Personal Comp. Prod.	Other SW Products	VAR/ Turnkey	Gov't Prof. Svcs.	Comm. Prof. Svcs.
COMSHARE				X		X			
CONCORD EFS	X								
CONSILIUM				X		X			
CONTINUUM									X
CORPORATE SW							X		
CSC								X	
CUC INT'L		X							
CYBERTEK				X		X			
CYCARE	X								
DATA TRANSMISSION		X							
DELPHI INFO. SYSTEMS							X		
DYNAMICS RES.								X	
EQUIFAX INC.	X								
FDP				X		X			
FILENET							X		
FIRST FIN. MGMT.	X								
FISERV	X								
GENESEE				X		X			
GERBER SCIENTIFIC							X		
GOAL SYSTEMS			X			X			
HBO							X		
HOGAN SYSTEMS				X		X			
INERSON							X		
INFO. SCIENCE				X		X			
INFO. RESOURCES		X							
INFODATA SYS			X			X			
INFORMIX S/W			X			X			
INTELLICORP			X			X			
INTERGRAPH							X		
INTERLEAF				X		X			
INTERMETRICS								X	
INTERSOLV			X			X			
KEANE									X
KNOWLEDGEWARE			X			X			
LCS INDUSTRIES		X							

EXHIBIT II-4 (CONT.)

**Information Services Vendors**

	Proc./ Netwrk Svcs.	Elec. Svcs.	Sys. SW	Appl. SW Products	Personal Comp. Prod.	Other SW Products	VAR/ Turnkey	Gov't Prof. Svcs.	Comm. Prof. Svcs.
LEGENT			X			X			
LOGICON								X	
LOTUS DEVELOP				X	X				
M/A/R/C	X								
MACNEAL SCHWENDLER				X		X			
MICROSOFT			X		X				
NAT'L. DATA	X								
NOVELL			X		X				
ORACLE			X			X			
PAY-FONE	X								
PAYCHEX	X								
PC QUOTE		X							
PHOENIX TECH			X		X				
POLICY MGMT				X		X			
RABBIT S/W			X		X				
REYNOLDS & REYNOLDS							X		
S/W SVC AMER.				X		X			
SANDATA	X								
SAZTEC INT'L.	X								
SCIENTIFIC S/W									X
SEI	X								
SHARED MEDICAL	X								
SILVAR-LISCO				X		X			
SOFTECH								X	
SOFTWARE PUB				X	X				
SPINNAKER S/W			X		X				
STERLING S/W			X			X			
STRUCTURAL SYNAM				X		X			
SUNGARD DATA	X								
SYMANTEC			X		X				
SYNERCOM TECH.			X			X			

## EXHIBIT II-4 (CONT.)

**Information Services Vendors**

	Proc./ Netwrk Svcs.	Elec. Svcs.	Sys. SW	Appl. SW Products	Personal Comp. Prod.	Other SW Products	VAR/ Turnkey	Gov't Prof. Svcs.	Comm. Prof. Svcs.
SYS. & COMP. TECH.									X
SYSTEM SOFT ASSOC				X		X			
SYSTEMS CENTER			X			X			
TECHNALYSIS									X
TERRANO							X		
TIMBERLINE SW				X	X				
TOTAL SYS. SVCS.	X								
TRIAD SYSTEMS							X		
VERDIX			X			X			
WARNER INSURANCE SVS	X								
WORDSTAR				X	X				
XYVISION							X		

Vendors within the information services industry are currently operating in a highly competitive and changing market that is heavily impacted by several influential factors: business re-engineering, increased end-user sophistication, growing international competition, and new technological advancements. Consequently, information service and product vendors are attempting to create new solutions that address the changing needs of both the organization and the individual user. Successful vendors are creating services and products that support one or more of the following:

- Database/application development
- Distributed networks/internetworks (client/server architecture; LANs; WANs)
- Heterogeneous platform integration
- Multimedia
- Network management
- Transparent operating systems

Resulting from the complexity of the information services solutions that are being demanded within the marketplace, vendor alliances have become an important strategic tool, used to quickly mesh several different solution pieces. For example, in May 1993, Oracle and U. S. West announced an agreement whereby both companies will jointly develop multimedia messaging services.

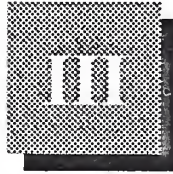
In addition to alliances, companies continue to pursue mergers and acquisitions as a vehicle to attain different solution components while effectively increasing market share. Exhibit II-5 presents a partial listing of mergers, acquisitions and dispositions within the information services industry.

## EXHIBIT II-5

**Mergers and Acquisitions**

Company	Date	Action	Company
ADP	1992 1992 1992	Acquisition Acquisition Acquisition	Bank of America Payroll Services Autonom Computer The Independent Election Corporation of America (IECA)
Alltel	1990	Acquisition	Systematics
ASK Group	1990	Acquisition	Ingres Corp.
Borland	1991	Merger	Ashton-Tate
C3	1992	Acquisition	Telos Corp.
Cadence Design Systems	1991	Merger	Valid Logic
Computer Associates	1992 1991 1991	Acquisition Acquisition Acquisition	Information Sciences On-line Software International, Inc. Pansophic Systems, Inc.
CUC International	1992	Merger	Entertainment Publishing Company
Equifax	1992 1991 1991 1990	Acquisition Acquisition Acquisition Acquisition	Health Economics Corporation Credit Bureau of Mobile Remaining 50% of Wescot Decision Systems Telecredit
First Financial Management	1992 1992 1992 1992 1991 1990 1990	Acquisition Acquisition Disposition Disposition Acquisition Acquisition Acquisition	ALTA Health Strategies, Inc. TeleCheck Services First Family Financial Services Georgia Federal Kalvar Corp. Nationwide Credit Zytron Corp.
Fiserv	1992 1992 1991	Acquisition Acquisition Acquisition	Data Holdings, Inc. BMS On-Line Services, Inc. Citicorp Information Resources
INTERSOLV	1991	Merger	Index Tech. and Sage Software
Legent	1992	Merger	Goal
Lotus Development	1991 1990	Acquisition Acquisition	cc:Mail, Inc. Samna Corp.
NYNEX	1990	Acquisition	Stockholder Systems
Phoenix Technologies	1992	Acquisition	Quadtel Corp.



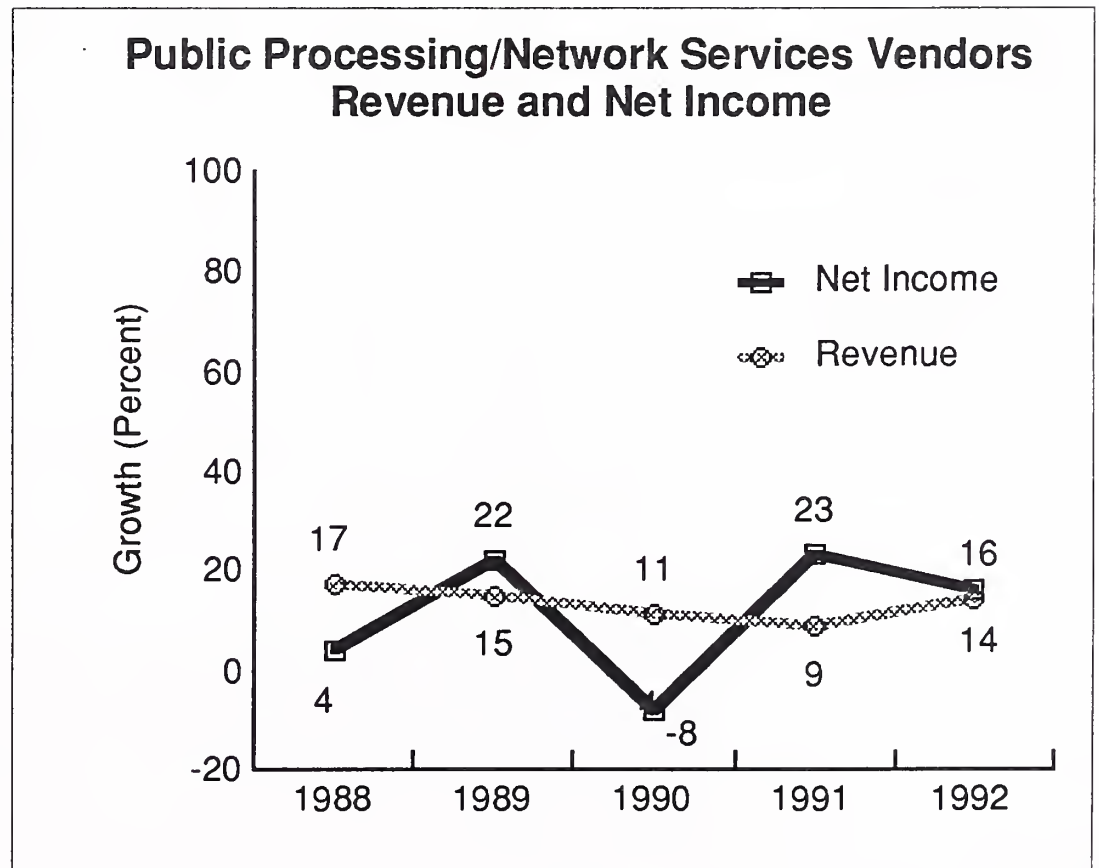


## Processing/Network Services Trends Analysis

Following are significant financial results within the processing/network services industry sector:

- Annual revenue growth steadily declined from 17% in 1988 to 9% in 1991; however, this trend was reversed in 1992 as revenue expanded to 14% (see Exhibit III-1). Acquisitions of private companies within the sector helped boost this figure.

EXHIBIT III-1



- Net income has fluctuated dramatically during the period between 1988 and 1992; however, the profit margin applicable to the industry as a whole has remained relatively flat.
- During 1992, industry revenue amounted to \$7.1 billion and net income amounted to \$525 million (see Exhibit III-2).

## EXHIBIT III-2

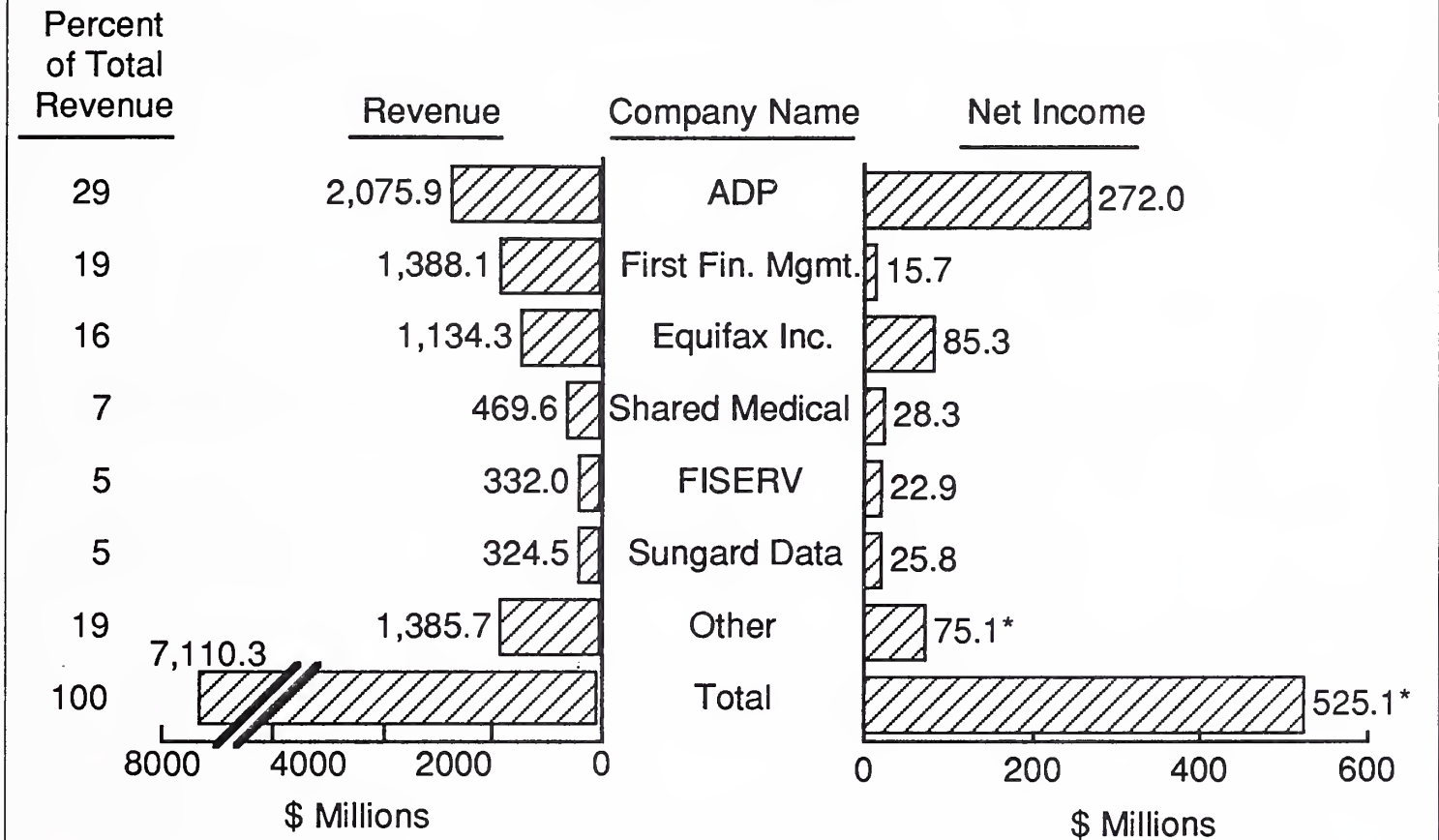
**Public Processing/Network Services Companies**

Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
ADP	1,736.0	1,810.8	2,075.9	4	15
COMDATA HOLDINGS	189.8	184.5	193.1	-3	5
COMPUTER LANG. RES.	119.4	115.7	111.0	-3	-4
COMPUTER SERVICES	16.4	18.8	21.2	15	13
CONCORD COMP.	37.2	48.1	65.6	29	36
CYCARE	77.7	74.5	74.8	-4	0
EQUIFAX INC.	1,078.8	1,093.8	1,134.3	1	4
FIRST FIN. MGMT.	814.5	1,034.2	1,388.1	27	34
FISERV	183.2	281.3	332.1	54	18
M/A/R/C	73.1	71.3	66.7	-2	-7
NAT'L. DATA	249.6	220.6	212.0	-12	-4
PAY-FONE	5.3	5.2	4.9	-3	-5
PAYCHEX	128.8	147.7	175.1	15	19
SANDATA	11.9	9.9	8.8	-17	-12
SAZTEC INT'L.	20.8	24.2	21.9	16	-9
SEI	171.9	187.9	208.7	9	11
SHARED MEDICAL	403.1	438.7	469.6	9	7
SUNGARD DATA	262.1	283.6	324.6	8	14
TOTAL SYS. SVCS.	83.9	112.4	129.7	34	15
WARNER COMPUTER SYS	46.8	63.3	92.3	35	46
Total	5,710.1	6,226.3	7,110.3	9	14

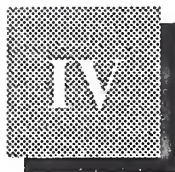
- The top three vendors, in terms of 1992 revenue generation, were ADP, First Financial Management, and Equifax; collectively, the revenue of these vendors represented 65% of the total revenues of the processing/network services vendors listed within this VFW (see Exhibit III-3).

EXHIBIT III-3

### Public Processing/Network Services Companies 1992 Market Leaders



\* Includes net losses amounting to \$2.9 million



## Electronic Information Services Trends Analysis

The following list summarizes activity within the electronic information services industry sector:

- Annual revenue growth has fluctuated during the past five years, and recently dropped from a growth rate of 29% in 1991 to 17% in 1992 (see Exhibit IV-1).
- Net income is growing from a relatively small base, thus dramatic growth rate changes have occurred during the past five years—the growth rate in 1992 was 98%.
- During 1992, industry revenue amounted to \$1.2 billion and net income amounted to \$86.4 million (see Exhibit IV-2).
- The top three vendors, in terms of 1992 revenue generation, were CUC International, Information Resources, and Acxiom; collectively, the revenue of these vendors represented 93% of the total revenue pertaining to the electronic information services vendors listed within this VFW (see Exhibit IV-3).

EXHIBIT IV-1

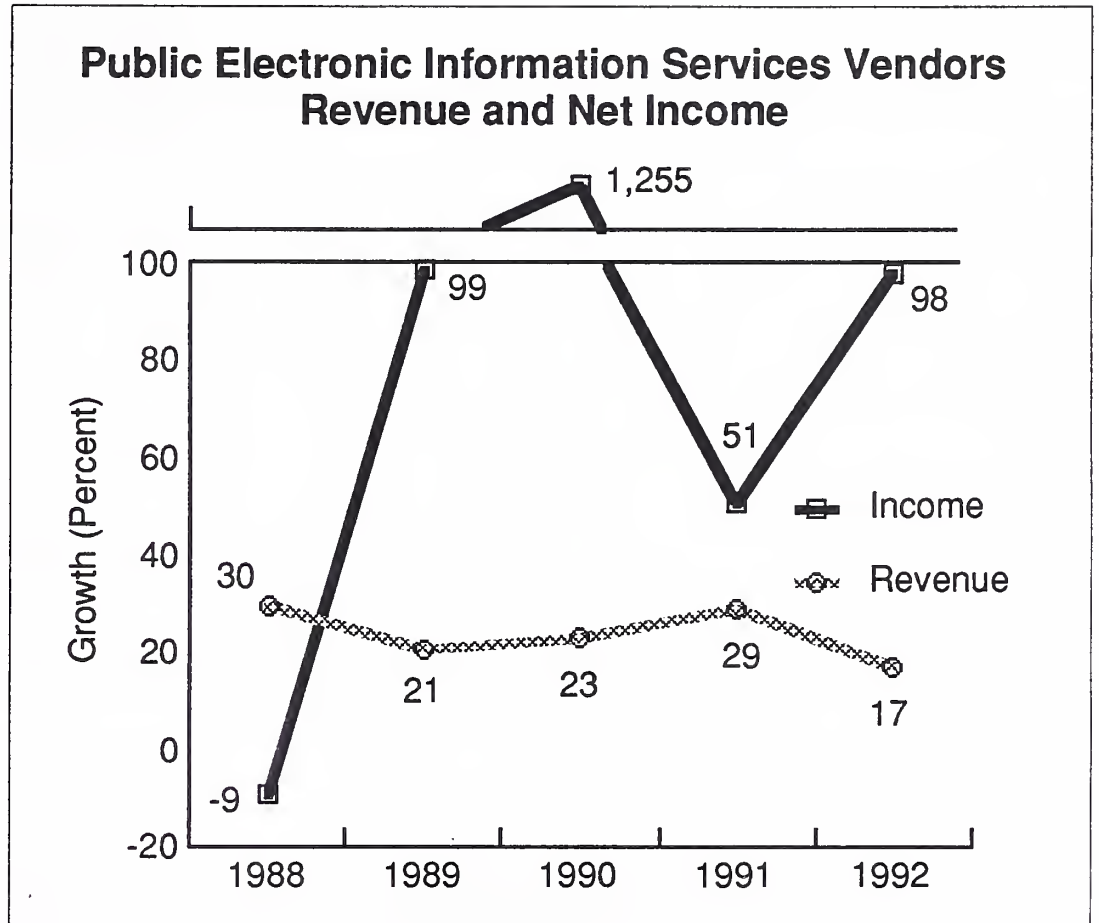


EXHIBIT IV-2

### Public Electronic Information Services Companies

Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
ACXIOM	99.5	90.9	106.1	-9	17
CUC INT'L	453.6	644.6	742.3	42	15
DATA TRANSMISSION	18.0	21.5	26.8	20	25
INFO. RESOURCES	179.8	222.7	276.4	24	24
LCS INDUSTRIES	42.5	43.1	47.2	1	10
PC QUOTE	10.0	10.2	11.0	2	8
<b>Total</b>	<b>803.4</b>	<b>1,032.9</b>	<b>1,209.8</b>	<b>29</b>	<b>17</b>

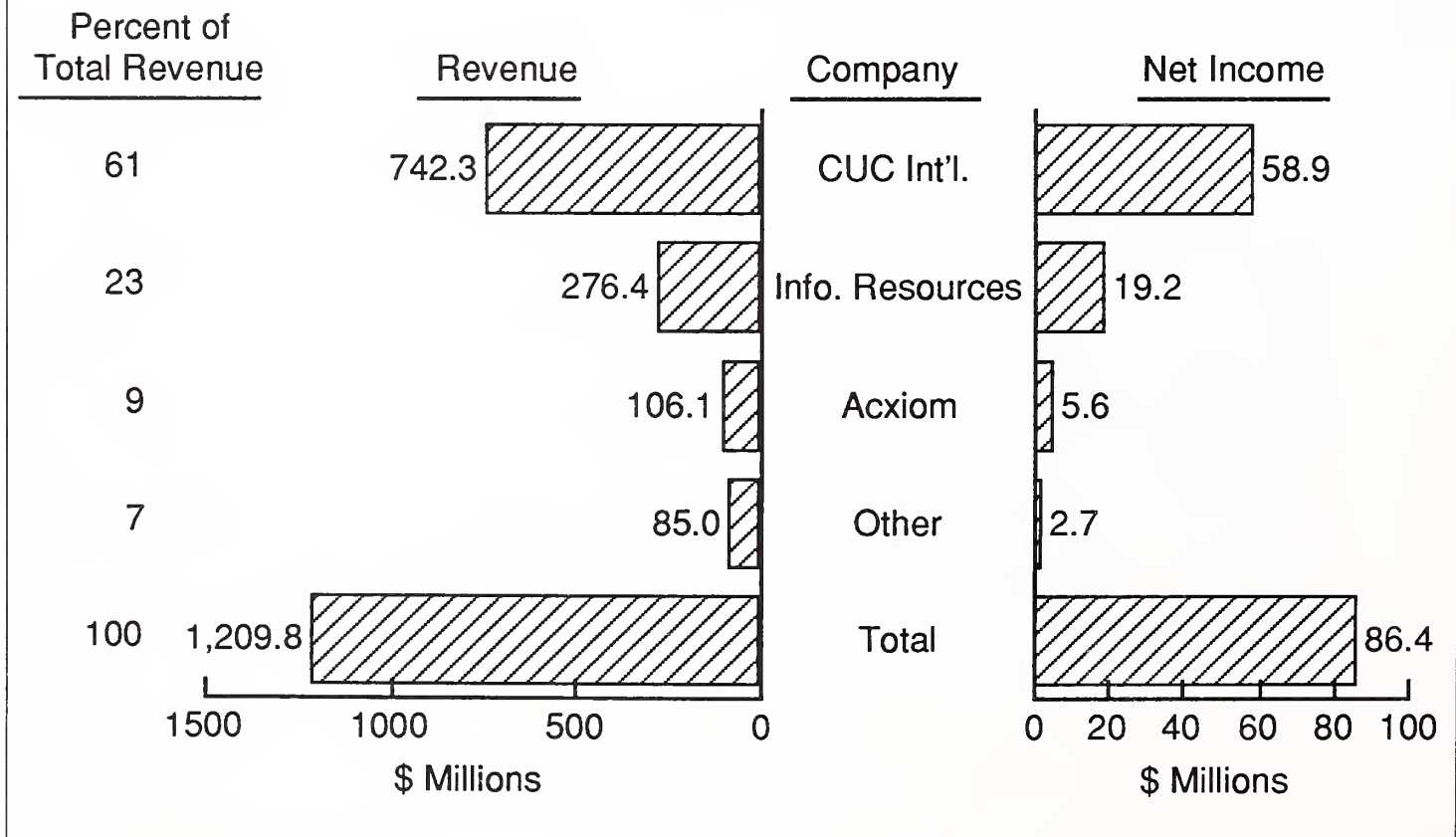
EXHIBIT IV-2 (CONT.)

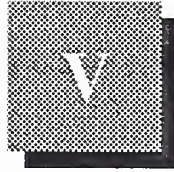
**Public Electronic Information Services Companies**

Company	Net Income (\$ Millions)			90-91 Change (%)	91-92 Change (%)	1990 Profit Margin (%)	1991 Profit Margin (%)	1992 Profit Margin (%)
	1990	1991	1992					
ACXIOM	4.7	1.2	5.6	-74	353	5	1	5
CUC INT'L	17.5	25.1	58.9	43	134	4	4	8
DATA TRANSMISSION	1.4	1.4	1.4	2	-5	8	7	5
INFO. RESOURCES	6.2	15.4	19.2	146	25	3	7	7
LCS INDUSTRIES	0.4	0.9	1.3	124	40	1	2	3
PC QUOTE	-1.4	-0.5	0.0	N/A	N/A	N/A	N/A	1
<b>Total</b>	<b>28.9</b>	<b>43.6</b>	<b>86.4</b>	<b>51</b>	<b>98</b>	<b>4</b>	<b>4</b>	<b>7</b>

EXHIBIT IV-3

**Public Electronic Information Services Companies  
1992 Market Leaders**





# Software Products Trends Analysis

This chapter presents analysis of the systems software and applications software products vendors. The chapter also segments the combination of these software vendors into two factions: i) personal computer software products vendors and ii) “other” software products vendors. The personal computer faction includes only those companies that receive the dominant portion of their revenue from true personal computer software products; the other category represents a list of vendors that mainly supply products tied to the mainframe and minicomputer systems.

## A

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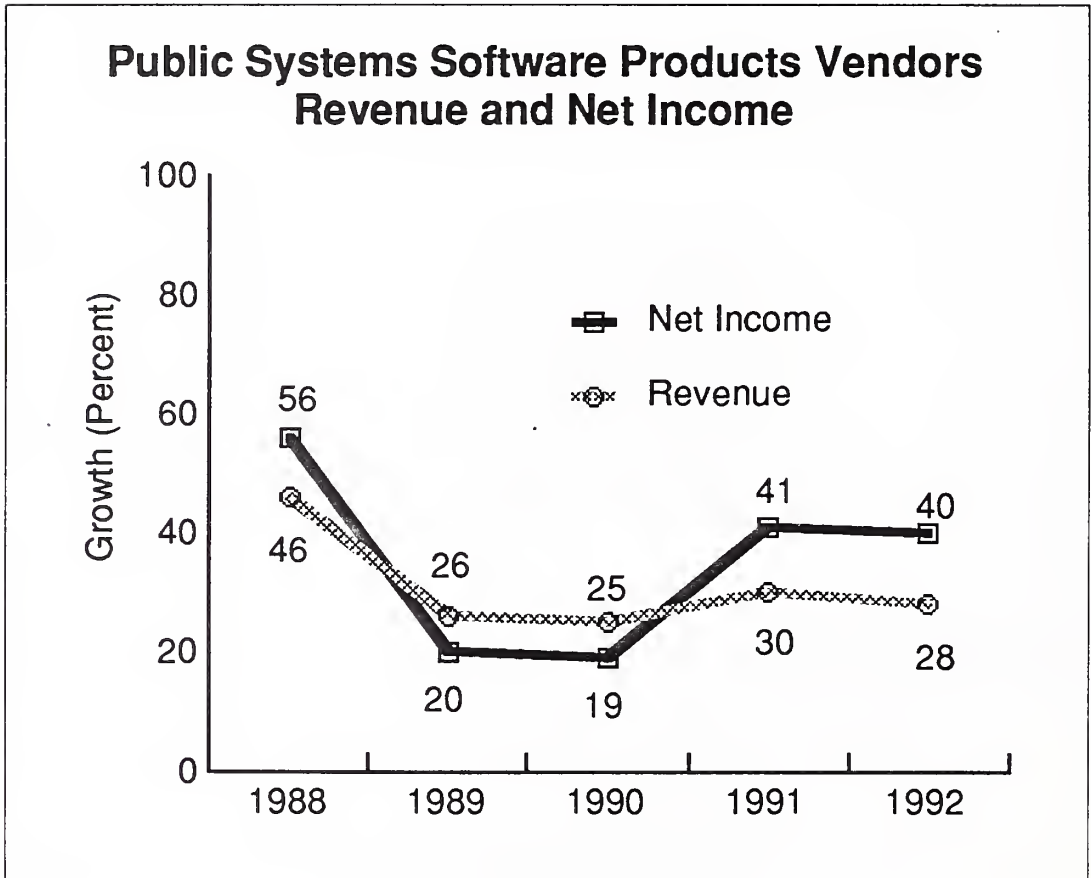
### Systems Software Products

The following list summarizes activity within the systems software products industry sector:

- Annual revenue grew at a healthy double-digit rate during the past five years; in 1991 and 1992 the rate amounted to 30% and 28%, respectively (see Exhibit V-1).

- During 1991 and 1992, net income grew at the impressive rates of 41% and 40%.
- During 1992, industry revenue amounted to \$10.1 billion and net income amounted to \$1.5 billion (see Exhibit V-2).
- The top three vendors, in terms of 1992 revenue generation, were Microsoft, Computer Associates and Oracle; collectively, the revenue of these vendors represented 62% of the total revenue of the systems software products vendors listed in this VFW (see Exhibit V-3).

EXHIBIT V-1





## EXHIBIT V-2

**Public Systems Software Products Companies**

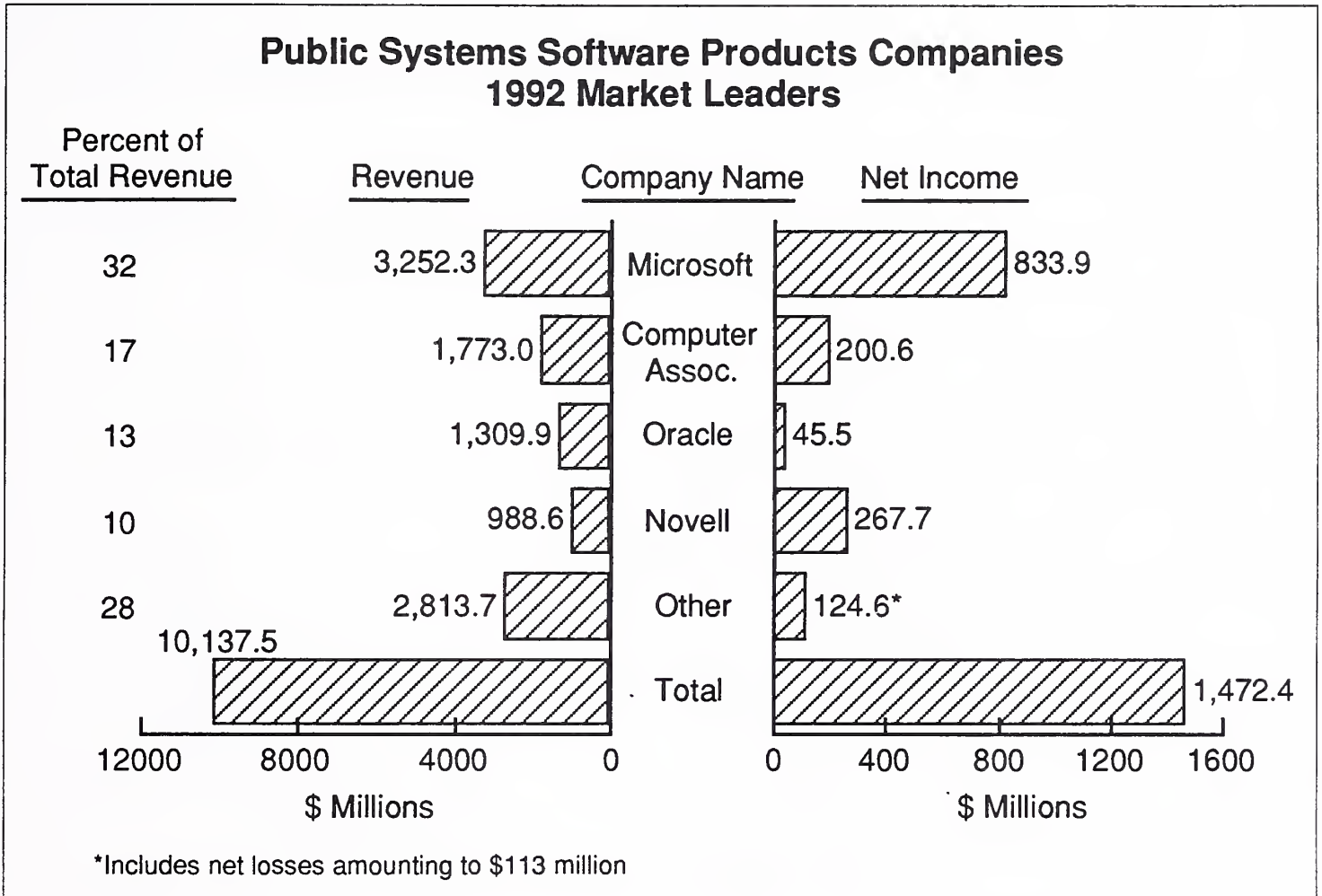
Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
ADOBE SYSTEMS	168.7	229.7	265.9	36	16
ALTAI	7.3	8.8	10.8	21	22
BGS SYSTEMS	21.1	22.4	27.3	6	22
BMC SOFTWARE	125.0	176.2	224.9	41	28
BOOLE & BABBAGE	97.0	99.2	112.6	2	14
BORLAND	208.5	436.5	463.7	109	6
COMPUTER ASSOC.	1310.7	1437.8	1773.0	10	23
INFODATA SYS	12.2	12.0	9.0	-2	-24
INFORMIX	146.1	179.8	283.6	23	58
INTELLICORP	17.4	11.8	9.0	-32	-24
INTERSOLV	62.6	71.8	79.1	15	10
KNOWLEDGEWARE	92.3	125.3	121.7	36	-3
LEGENT	308.8	364.3	446.1	18	22
MICROSOFT	1477.8	2276.0	3252.3	54	43
NOVELL	526.3	710.4	988.6	35	39
ORACLE	1027.8	1085.3	1309.9	6	21
PHOENIX TECH	38.8	58.0	72.9	49	26
RABBIT S/W	8.5	6.8	6.6	-20	-3
SPINNAKER S/W	11.2	25.9	29.5	132	14
STERLING S/W	206.1	228.9	268.7	11	17
SYMANTEC	104.6	189.3	214.9	81	14
SYNERCOM TECH.	12.6	14.8	12.2	17	-17
SYSTEMS CENTER	94.7	122.8	131.0	30	7
VERDIX	13.4	16.5	24.2	23	47
Total	6,099.5	7,910.2	10,137.5	30	28

EXHIBIT V-2 (CONT.)

## Public Systems Software Products Companies

Company	Net Income (\$ Millions)			90-91 Change (%)	91-92 Change (%)	1990 Profit Margin (%)	1991 Profit Margin (%)	1992 Profit Margin (%)
	1990	1991	1992					
ADOBE SYSTEMS	40.1	51.6	43.6	29	-15	24	22	16
ALTAI	-0.4	-0.3	0.4	N/A	N/A	N/A	N/A	3
BGS SYSTEMS	5.1	5.8	6.7	13	16	24	26	25
BMC SOFTWARE	27.8	43.2	67.4	55	56	22	25	30
BOOLE & BABBAGE	3.2	-1.0	6.4	N/A	N/A	3	N/A	6
BORLAND	24.4	-75.1	-81.2	N/A	N/A	12	N/A	N/A
COMPUTER ASSOC.	162.0	173.0	200.6	7	16	12	12	11
INFODATA SYS	0.1	0.0	-2.8	-75	N/A	1	0	N/A
INFORMIX	-23.1	12.2	47.8	N/A	292	N/A	7	17
INTELLICORP	-9.3	-13.1	-7.0	N/A	N/A	N/A	N/A	N/A
INTERSOLV	5.7	-23.3	5.9	N/A	N/A	9	N/A	7
KNOWLEDGEWARE	11.7	6.1	5.4	-48	-12	13	5	4
LEGENT	38.2	39.0	34.2	2	-12	12	11	8
MICROSOFT	355.6	581.5	833.9	64	43	24	26	26
NOVELL	109.7	184.2	267.7	68	45	21	26	27
ORACLE	36.4	33.6	45.5	-8	36	4	3	3
PHOENIX TECH	-18.4	0.2	2.7	N/A	1120	N/A	0	4
RABBIT S/W	-3.3	-2.6	-0.6	N/A	N/A	N/A	N/A	N/A
SPINNAKER S/W	-3.3	1.2	-4.2	N/A	N/A	N/A	5	N/A
STERLING S/W	11.9	13.1	14.9	10	14	6	6	6
SYMANTEC	9.1	17.6	-3.5	94	N/A	9	9	N/A
SYNERCOM TECH.	-0.9	-1.4	-2.5	N/A	N/A	N/A	N/A	N/A
SYSTEMS CENTER	-38.3	3.6	-11.2	N/A	N/A	N/A	3	N/A
VERDIX	1.5	1.3	2.2	-16	75	11	8	9
Total	745.4	1,050.4	1,472.4	41	40	12	13	15

EXHIBIT V-3



**B**

**Applications Software Products**

The following list summarizes activity within the applications software products industry sector:

- Annual revenue has increased at a declining rate between 1989 and 1992; the rate decreased from 15% in 1991 to 12% in 1992 (see Exhibit V-4).
- Net income has remained unstable between the five-year period, as exemplified by a decline of 13% in 1991 and an increase of 52% in 1992.
- During 1992, industry revenue amounted to \$3.5 billion and net income amounted to \$294.3 million (see Exhibit V-7);

- The top three vendors, in terms of 1992 revenue generation, were Lotus Development, Policy Management and Cadence Design; collectively, the revenue of these vendors represented 52% of the total revenue of the applications software products vendors listed in this VFW (see Exhibit V-6).

EXHIBIT V-4

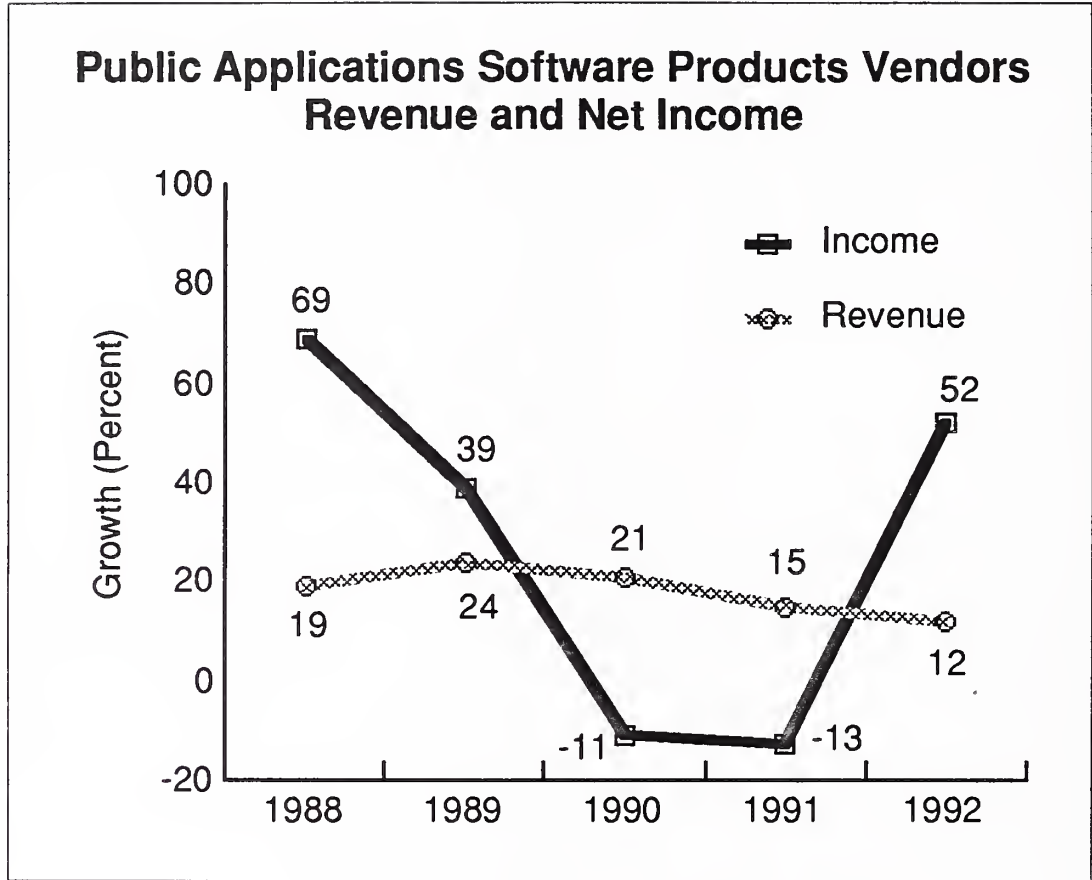
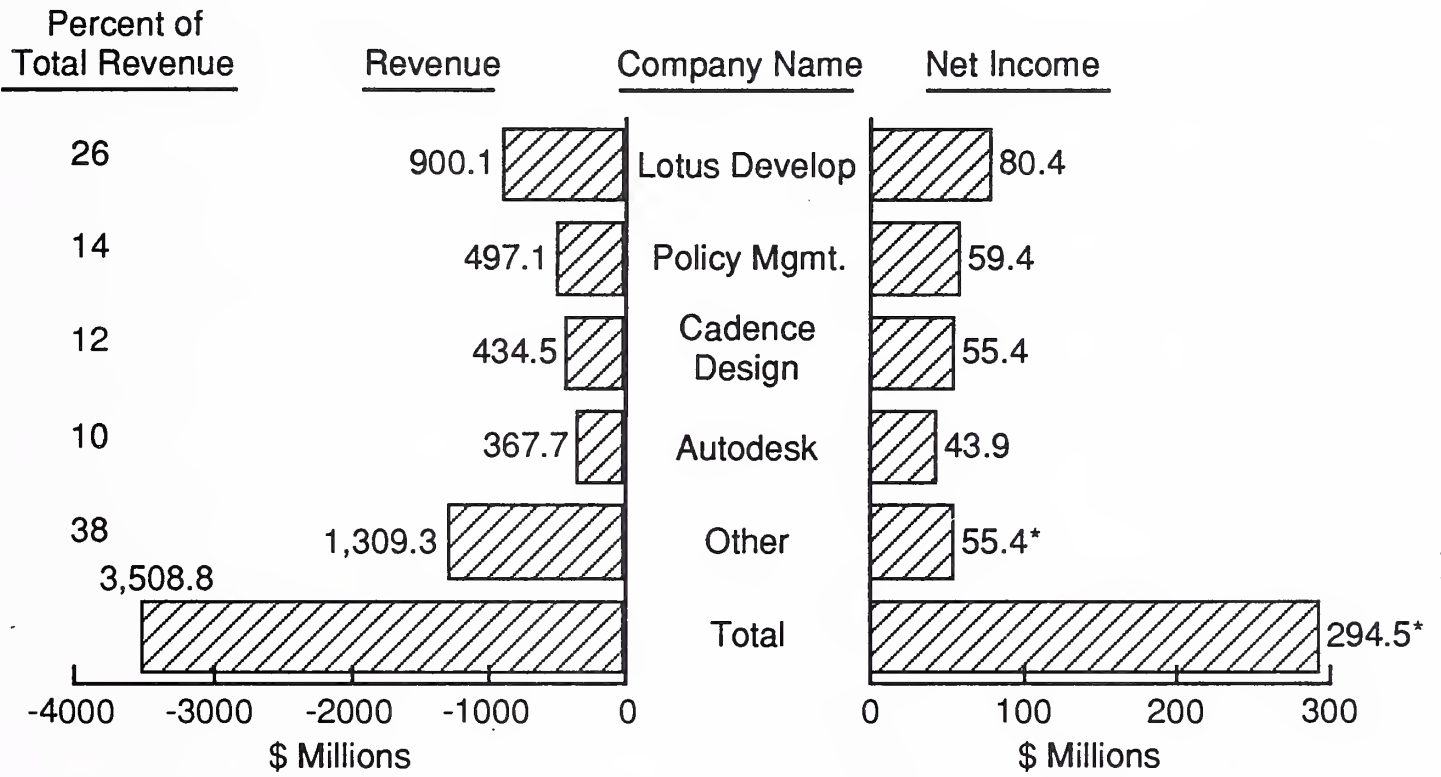


EXHIBIT V-5

**Public Applications Software Products Companies  
1992 Market Leaders**



\*Includes net losses amounting to \$24.5 million

EXHIBIT V-6

### Public Applications Software Products Companies

Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
ALDUS	135.0	167.5	174.1	24	4
AMERICAN S/W	99.1	114.0	109.2	15	-4
AUTODESK	237.9	284.9	367.7	20	29
CADENCE DESIGN	389.1	391.6	434.5	0	11
COMSHARE	115.9	124.1	113.1	7	-9
CONSILIUM	30.9	31.6	27.4	3	-14
CYBERTEK	28.6	28.3	28.8	-1	2
FDP	16.8	16.3	17.8	-3	9
GENESEE	1.9	2.0	2.1	5	3
HOGAN SYSTEMS	40.0	57.4	53.9	44	-6
INTERLEAF	84.1	94.0	115.4	12	23
LOTUS DEVELOP	692.2	828.9	900.1	20	9
MACNEAL SCHWEND	56.6	55.8	65.5	-1	17
POLICY MGMT.	346.1	415.4	497.1	20	20
S/W SVC AMER.	3.0	2.8	1.1	-7	-61
SILVAR-LISCO	10.4	10.0	10.5	-3	5
SOFTWARE PUB	153.5	141.3	151.9	-8	8
STRUCTURAL DYNAM	118.6	146.3	163.6	23	12
SYSTEM SOFT ASSOC.	129.6	171.3	225.6	32	32
TIMBERLINE S/W	12.7	12.7	14.9	0	17
WORDSTAR	35.7	40.6	34.5	14	-15
Total	2,737.5	3,136.8	3,508.8	15	12

## EXHIBIT V-6 (CONT.)

**Public Applications Software Products Companies**

Company	Net Income (\$ Millions)			90-91 Change (%)	91-92 Change (%)	1990 Profit Margin (%)	1991 Profit Margin (%)	1992 Profit Margin (%)
	1990	1991	1992					
ALDUS	23.8	23.8	6.8	0	-72	18	14	4
AMERICAN S/W	17.2	20.4	8.0	18	-61	17	18	7
AUTODESK	56.8	57.8	43.9	2	-24	24	20	12
CADENCE DESIGN	-6.9	-22.4	55.4	N/A	N/A	N/A	N/A	13
COMSHARE	6.4	4.4	-8.8	-31	N/A	6	4	N/A
CONSILIUM	3.4	1.8	-6.2	-46	N/A	11	6	N/A
CYBERTEK	3.3	3.3	2.4	0	-27	11	12	8
FDP	0.5	-0.3	0.6	N/A	N/A	3	N/A	3
GENESEE	0.1	0.0	0.0	-90	156	3	0	1
HOGAN SYSTEMS	0.1	4.1	4.7	5,118	15	0	7	9
INTERLEAF	-2.1	3.9	9.2	N/A	134	N/A	4	8
LOTUS DEVELOP	23.3	43.1	80.4	85	86	3	5	9
MACNEAL SCHWEND	11.2	-1.5	12.2	N/A	N/A	20	N/A	19
POLICY MGMT	37.2	47.6	59.4	28	25	11	11	12
S/W SVC AMER.	-1.1	-0.4	-0.4	N/A	N/A	N/A	N/A	-34
SILVAR-LISCO	0.0	-1.8	0.8	N/A	N/A	0	N/A	7
SOFTWARE PUB	20.6	-20.4	0.6	N/A	N/A	13	N/A	0
STRUCTURAL DYNAM	13.3	17.9	14.5	35	-19	11	12	9
SYSTEM SOFT ASSOC	17.1	20.7	19.8	21	-4	13	12	9
TIMBERLINE S/W	0.4	0.0	0.3	-96	1,950	3	0	2
WORDSTAR	-3.2	-8.8	-9.1	N/A	N/A	N/A	N/A	N/A
<b>Total</b>	<b>221.2</b>	<b>193.3</b>	<b>294.3</b>	<b>-13</b>	<b>52</b>	<b>8</b>	<b>6</b>	<b>8</b>

**C****Personal Computer Software/Other Software Products**

The following two exhibits present vendors that provide personal software products and other (mainframe and minicomputer) software products. Each of these vendors have also appeared in either the public systems software products category or the public applications software products categories. Exhibit V-7 describes personal computer software products vendors, and Exhibit V-8 covers other software products vendors.

## EXHIBIT V-7

**Public Personal Computer Software Products Companies**

Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
ADOBE SYSTEMS	168.7	229.7	265.9	36	16
ALDUS	135.0	167.5	174.1	24	4
AUTODESK	237.9	284.9	367.7	20	29
BORLAND	208.5	436.5	463.7	109	6
LOTUS DEVELOP	692.2	828.9	900.1	20	9
MICROSOFT	1,477.8	2,276.0	3,252.3	54	43
NOVELL	526.3	710.4	988.6	35	39
PHOENIX TECH	38.8	58.0	72.9	49	26
RABBIT S/W	8.5	6.8	6.6	-20	-3
SOFTWARE PUB	153.5	141.3	151.9	-8	8
SPINNAKER S/W	11.2	25.9	29.5	132	14
SYMANTEC	104.6	189.3	214.9	81	14
TIMBERLINE S/W	12.7	12.7	14.9	0	17
WORDSTAR	35.7	40.6	34.5	14	-15
Total	3,811.2	5,408.4	6,937.7	42	28

**Public Personal Computer Software Products Companies**

Company	Net Income (\$ Millions)			90-91 Change (%)	91-92 Change (%)	1990 Profit Margin (%)	1991 Profit Margin (%)	1992 Profit Margin (%)
	1990	1991	1992					
ADOBE SYSTEMS	40.1	51.6	43.6	29	-15	24	2	16
ALDUS	23.8	23.8	6.8	0	-72	18	14	4
AUTODESK	56.8	57.8	43.9	2	-24	24	20	12
BORLAND	24.4	-75.1	-81.2	N/A	N/A	12	N/A	N/A
LOTUS DEVELOP	23.3	43.1	80.4	85	86	3	5	9
MICROSOFT	355.6	581.5	833.9	64	43	24	26	26
NOVELL	109.7	184.2	267.7	68	45	21	26	27
PHOENIX TECH	-18.4	0.2	2.7	N/A	1,120	N/A	0	4
RABBIT S/W	-3.3	-2.6	-0.6	N/A	N/A	N/A	N/A	-9
SOFTWARE PUB	20.6	-20.4	0.6	N/A	N/A	13	N/A	0
SPINNAKER S/W	-3.3	1.2	-4.2	N/A	N/A	N/A	5	N/A
SYMANTEC	9.1	17.6	-3.5	94	N/A	9	9	N/A
TIMBERLINE S/W	0.4	0.0	0.3	-96	1,950	3	0	2
WORDSTAR	-3.2	-8.8	-9.1	N/A	N/A	N/A	N/A	N/A
Total	635.5	854.2	1,181.3	34	38	17	16	17



## EXHIBIT V-8

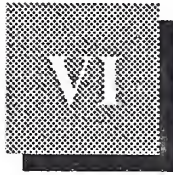
## Other Public Software Products Companies

Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
ALTAI	7.3	8.8	10.8	21	22
AMERICAN S/W	99.1	114.0	109.2	15	-4
BGS SYSTEMS	21.1	22.4	27.3	6	22
BMC SOFTWARE	125.0	176.2	224.9	41	28
BOOLE & BABBAGE	97.0	99.2	112.6	2	14
CADENCE DESIGN	389.1	391.6	434.5	0	11
COMPUTER ASSOC.	1,310.7	1,437.8	1,773.0	10	23
COMSHARE	115.9	124.1	113.1	7	-9
CONSILIUM	30.9	31.6	27.4	3	-14
CYBERTEK	28.6	28.3	28.8	-1	2
FDP	16.8	16.3	17.8	-3	9
GENESEE	1.9	2.0	2.1	5	3
HOGAN SYSTEMS	40.0	57.4	53.9	44	-6
INFODATA SYS	12.2	12.0	9.0	-2	-24
INFORMIX	146.1	179.8	283.6	23	58
INTELLICORP	17.4	11.8	9.0	-32	-24
INTERLEAF	84.1	94.0	115.4	12	23
INTERSOLV	62.6	71.8	79.1	15	10
KNOWLEDGEWARE	92.3	125.3	121.7	36	-3
LEGENT	308.8	364.3	446.1	18	22
MACNEAL SCHWEND	56.6	55.8	65.5	-1	17
ORACLE	1,027.8	1,085.3	1,309.9	6	21
POLICY MGMT	346.1	415.4	497.1	20	20
S/W SVC AMER.	3.0	2.8	1.1	-7	-61
SILVAR-LISCO	10.4	10.0	10.5	-3	5
STERLING S/W	206.1	228.9	268.7	11	17
STRUCTURAL DYNAM	118.6	146.3	163.6	23	12
SYNERCOM TECH.	12.6	14.8	12.2	17	-17
SYSTEM SOFT ASSOC	129.6	171.3	225.6	32	32
SYSTEMS CENTER	94.7	122.8	131.0	30	7
VERDIX	13.4	16.5	24.2	23	47
Total	5,025.8	5,638.7	6,708.7	12	19

## EXHIBIT V-8 (CONT.)

## Other Public Software Products Companies

Company	Net Income (\$ Millions)			90-91 Change (%)	91-92 Change (%)	1990 Profit Margin (%)	1991 Profit Margin (%)	1992 Profit Margin (%)
	1990	1991	1992					
ALTAI	-0.4	-0.3	0.4	N/A	N/A	N/A	N/A	3
AMERICAN S/W	17.2	20.4	8.0	18	-61	17	18	7
BGS SYSTEMS	5.1	5.8	6.7	13	16	24	26	25
BMC SOFTWARE	27.8	43.2	67.4	55	56	22	25	30
BOOLE & BABBAGE	3.2	-1.0	6.4	N/A	N/A	3	N/A	6
CADENCE DESIGN	-6.9	-22.4	55.4	N/A	N/A	N/A	N/A	13
COMPUTER ASSOC	162.0	173.0	200.6	7	16	12	12	11
COMSHARE	6.4	4.4	-8.8	-31	N/A	6	4	N/A
CONSILIUM	3.4	1.8	-6.2	-46	N/A	11	6	N/A
CYBERTEK	3.3	3.3	2.4	0	-27	11	12	8
FDP	0.5	-0.3	0.6	N/A	N/A	3	N/A	3
GENESEE	0.1	0.0	0.0	-90	156	3	0	1
HOGAN SYSTEMS	0.1	4.1	4.7	5118	15	0	7	9
INFODATA SYS	0.1	0.0	-2.8	-75.0	N/A	1	0	N/A
INFORMIX	-23.1	12.2	47.8	N/A	292	N/A	7	17
INTELLICORP	-9.3	-13.1	-7.0	N/A	N/A	N/A	N/A	N/A
INTERLEAF	-2.1	3.9	9.2	N/A	134	N/A	4	8
INTERSOLV	5.7	-23.3	5.9	N/A	N/A	9	N/A	7
KNOWLEDGEWARE	11.7	6.1	5.4	-48	-12	13	5	4
LEGENT	38.2	39.0	34.2	2	-12	12	11	8
MACNEAL SCHWEND	11.2	-1.5	12.2	N/A	-933	20	N/A	19
ORACLE	36.4	33.6	45.5	-8	36	4	3	3
POLICY MGMT.	37.2	47.6	59.4	28	25	11	11	12
S/W SVC AMER.	-1.1	0.4	-0.4	N/A	N/A	N/A	N/A	-34
SILVAR-LISCO	0.0	-1.8	0.8	N/A	N/A	0	N/A	7
STERLING S/W	11.9	13.1	14.9	10	14	6	6	6
STRUCTURAL DYNAM	13.3	17.9	14.5	35	-19	11	12	9
SYNERCOM TECH.	-0.9	-1.4	-2.5	N/A	N/A	N/A	N/A	N/A
SYSTEM SOFT ASSOC.	17.1	20.7	19.8	21	-4	13	12	9
SYSTEMS CENTER	-38.3	3.6	-11.2	N/A	N/A	N/A	3	N/A
VERDIX	1.5	1.3	2.2	-16	75	11	8	9
Total	331.2	389.5	585.5	18	50	7	7	9

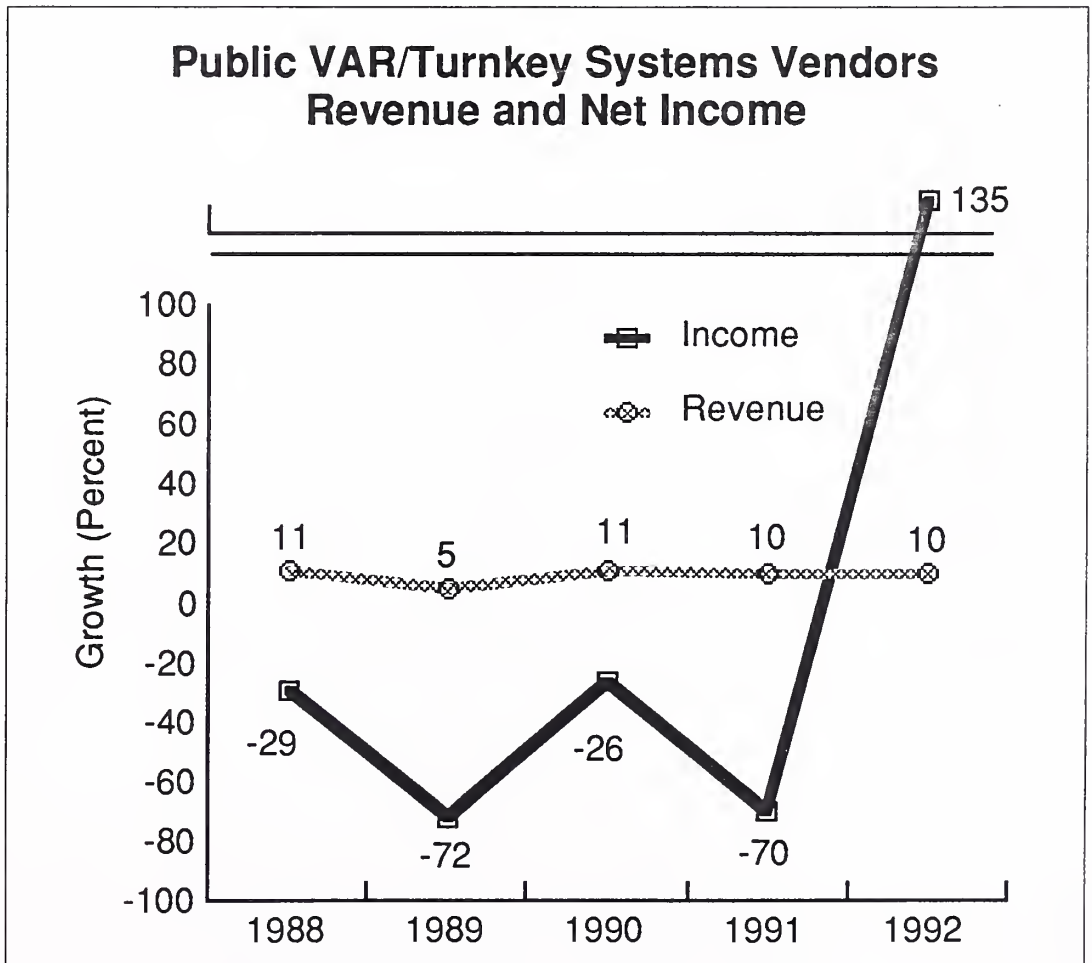


## VAR/Turnkey Systems Trends Analysis

The following list summarizes activity within the VAR/turnkey systems industry sector:

- Annual revenue growth has continued at a stable rate; for the past three years, growth has remained at approximately the 10% level (see Exhibit VI-1).

EXHIBIT VI-1



- Aggregate net income declined during the period between 1988 and 1991 and turn sharply upward during 1992, reflecting a 135% net income change.
- During 1992, industry revenue amounted to \$3.9 billion and net income amounted to \$113.6 million (see Exhibit VI-2).
- The top three vendors, in terms of 1992 revenue generation, were Intergraph, Reynolds & Reynolds, and The ASK Group; collectively, the revenue of these vendors represented 59% of the total revenue of the VAR/turnkey vendors listed within this VFW (see Exhibit VI-3).

## EXHIBIT VI-2

**Public VAR/Turnkey Systems Vendors**

Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
ASA INT'L	18.7	23.5	31.4	25	34
ASK GROUP	249.7	395.1	448.2	58	13
AUTO-TROL TECH.	77.2	64.0	54.1	-17	-16
BARRISTER INFO.	26.4	18.8	16.2	-29	-14
C3	90.3	91.0	224.9	0	147
CERNER	55.3	75.0	98.3	36	31
COMPUTER RESEARCH	11.3	10.7	6.5	-5	-40
COMPUTRAC	10.7	12.2	11.9	14	-2
CORPORATE S/W	197.0	226.9	301.1	15	33
DELPHI INFO. SYSTEMS	23.1	39.3	49.8	70	27
FILENET	102.9	122.5	138.3	19	13
GERBER SCIENTIFIC	279.8	257.0	251.5	-8	-2
HBO	174.1	170.7	202.2	-2	18
INERSON	49.5	37.8	11.0	-24	-71
INTERGRAPH	1044.6	1195.4	1176.7	14	-2
REYNOLDS & REYNOLDS	607.3	591.7	664.6	-3	12
TERRANO	6.6	8.7	8.8	32	0
TRIAD SYSTEMS	143.7	140.4	151.8	-2	8
XYVISION	29.1	23.9	23.6	-18	-1
Total	3,197.3	3,504.4	3,870.7	10	10

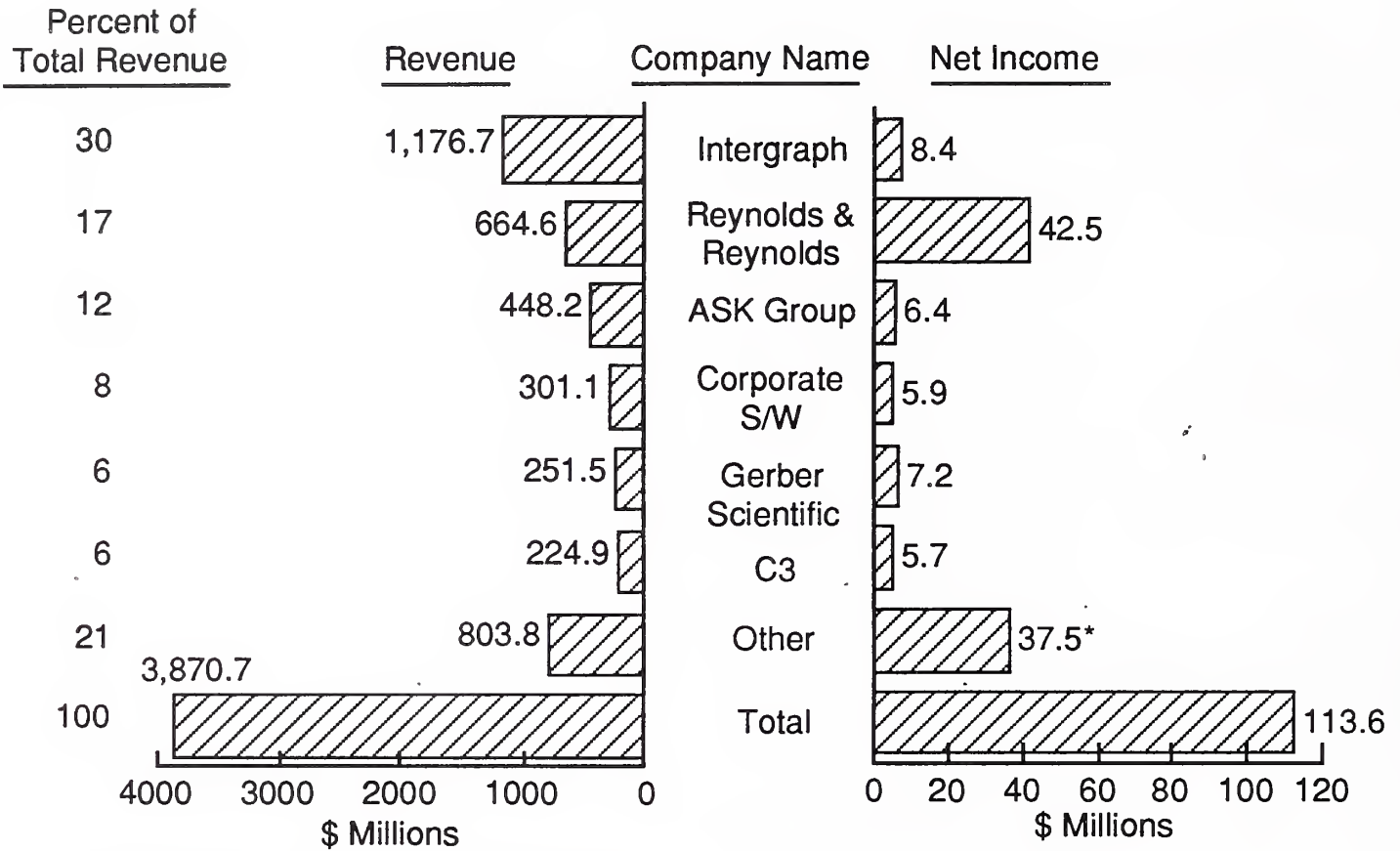
## EXHIBIT VI-2 (CONT.)

## Public VAR/Turnkey Systems Vendors

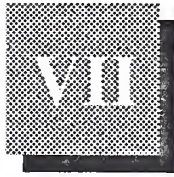
Company	Net Income (\$ Millions)			90-91 Change (%)	91-92 Change (%)	1990 Profit Margin (%)	1991 Profit Margin (%)	1992 Profit Margin (%)
	1990	1991	1992					
ASA INT'L	0.8	0.1	0.4	-84	220	4	1	1
ASK	4.7	-56.6	6.4	N/A	N/A	2	N/A	1
AUTO-TROL TECH.	-2.1	-7.1	-10.6	N/A	N/A	N/A	-11	N/A
BARRISTER INFO.	-3.5	-6.7	-1.3	N/A	N/A	N/A	N/A	N/A
C3	-0.4	-5.7	5.7	N/A	N/A	N/A	N/A	3
CERNER	2.6	4.7	9.9	78	112	5	6	10
COMPUTER RESEARCH	-0.3	-0.3	-0.7	N/A	N/A	N/A	N/A	N/A
COMPUTRAC	0.2	-1.2	0.3	N/A	N/A	1	N/A	2
CORPORATE S/W	3.6	4.8	5.9	34	21	2	2	2
DELPHI INFO. SYSTEMS	1.5	-0.9	2.6	N/A	N/A	6	N/A	5
FILENET	3.8	8.1	-8.0	116	N/A	4	7	N/A
GERBER SCIENTIFIC	15.1	7.3	7.2	-51	-2	5	3	3
HBO	7.8	-2.9	13.1	N/A	N/A	4	N/A	6
INERSON	-6.1	-7.3	-14.7	N/A	N/A	N/A	N/A	N/A
INTERGRAPH	62.6	71.1	8.4	14	-88	6	6	1
REYNOLDS & REYNOLDS	22.7	25.6	42.5	13	66	4	4	6
TERRANO	0.8	1.1	-1.8	31	N/A	12	12	N/A
TRIAD SYSTEMS	3.4	2.3	46.6	-31	1,895	2	2	31
XYVISION	-18.1	-7.1	1.6	N/A	N/A	N/A	N/A	7
Total	99.0	29.4	113.6	-70	286	3	1	3

EXHIBIT VI-3

**Public VAR/Turnkey Systems Vendors  
1992 Market Leaders**



\*Includes net losses amounting to \$6.9 million



## Professional Services Trends Analysis

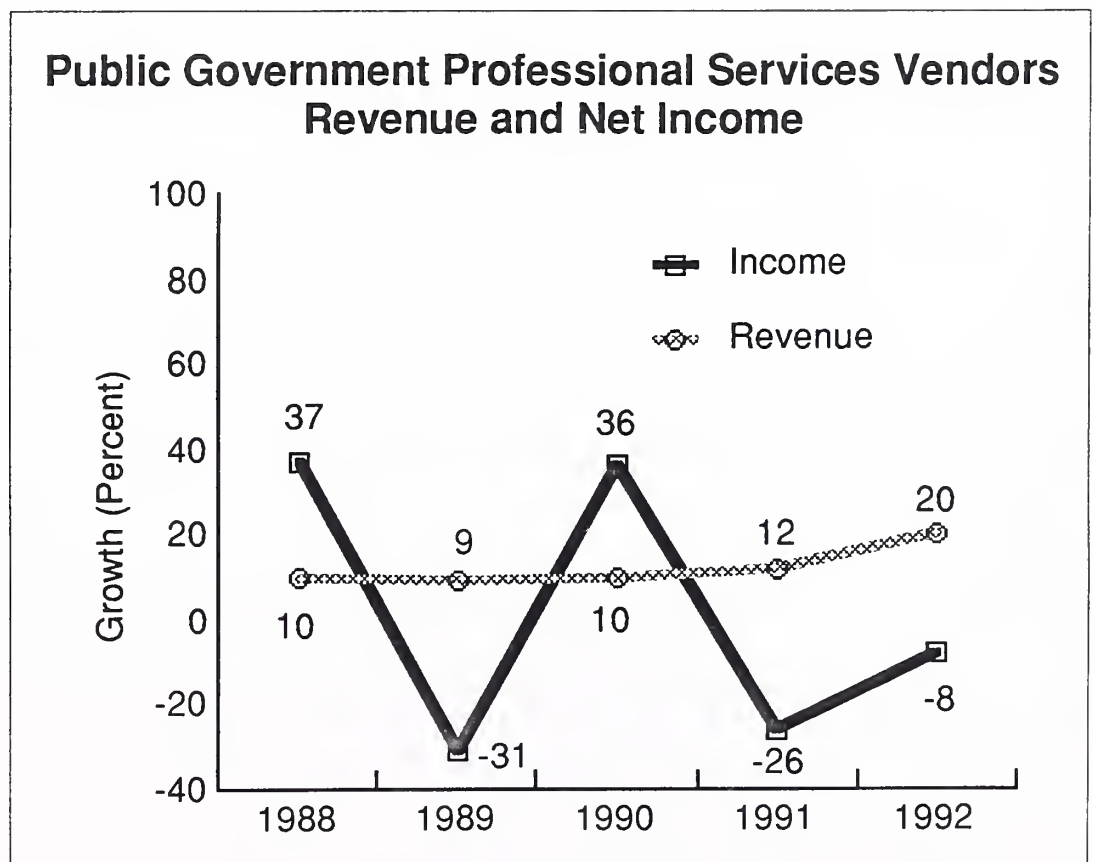
### A

#### Government Professional Services

The following list summarizes activity within the government professional services industry sector:

- Annual revenue growth remained relatively stable between 1988 and 1991 at approximately 10% (see Exhibit VII-1); however, in 1992, as a result of CSC's 27% growth rate, the industry growth rate jumped to 20%.

EXHIBIT VII-1



- Net income during the past five years has decreased. In 1991, the annual change was a decline of 26% and in 1992, the decline was 8%.
- During 1992, industry revenue amounted to \$3.6 billion and net income was \$86.6 million (see Exhibit VII-2).

EXHIBIT VII-2

**Public Government Professional Services Companies**

Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
BBN	266.4	262.9	257.9	-1	-2
C.A.C.I.	148.1	134.7	143.1	-9	6
COMPTTEK RESEARCH	51.0	61.5	65.9	20	7
COMPUTER DATA SYS.	126.1	134.0	157.0	6	17
CSC	1,679.3	1,944.7	2474.4	16	27
DYNAMICS RES.	90.5	97.7	102.6	8	5
INTERMETRICS	52.4	60.8	60.2	16	0
LOGICON	257.3	287.4	320.5	12	11
SOFTECH	49.4	52.8	47.3	7	-11
<b>Total</b>	<b>2,720.5</b>	<b>3,036.5</b>	<b>3,628.9</b>	<b>12</b>	<b>20</b>

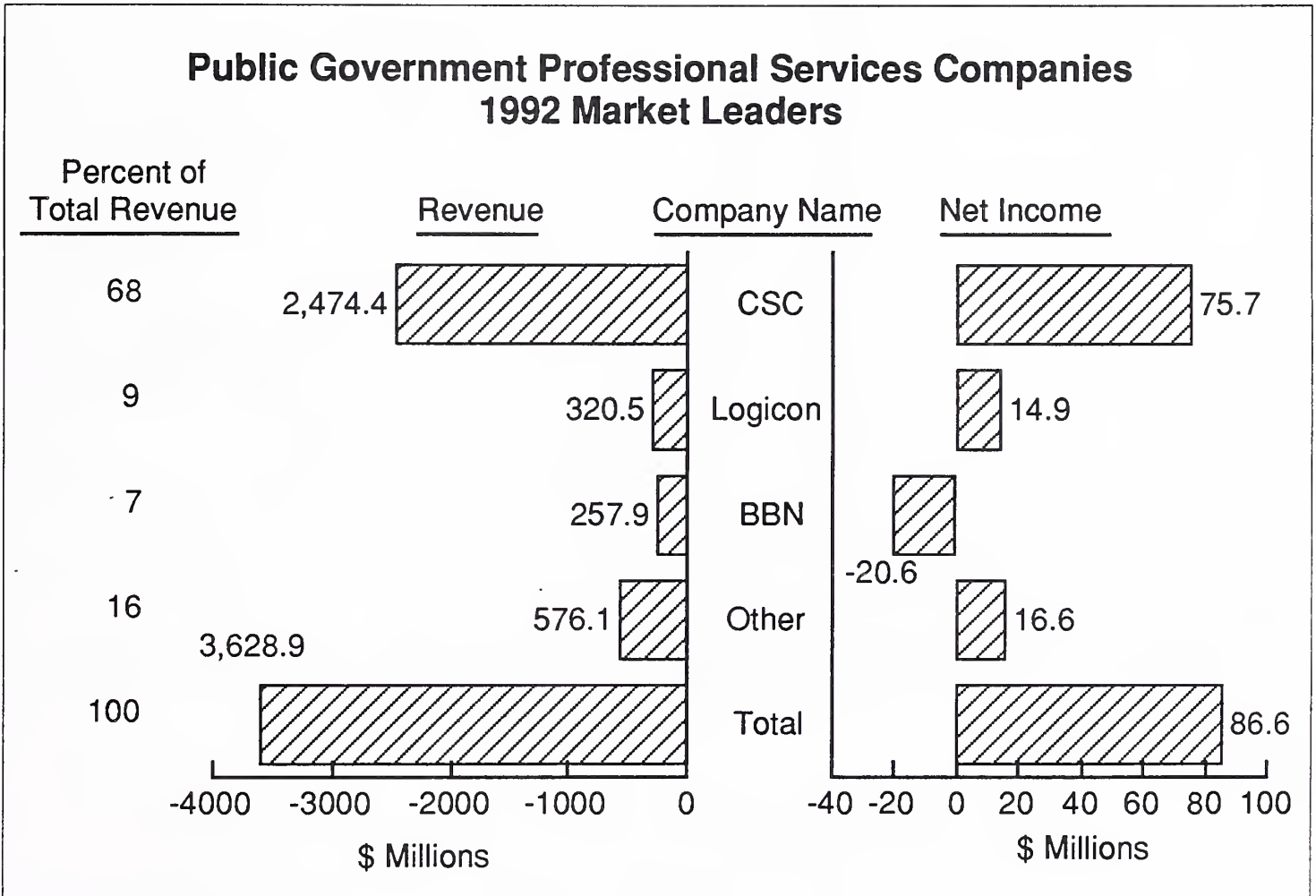
**Public Government Professional Services Companies**

Company	Net Income (\$ Millions)			90-91 Change (%)	91-92 Change (%)	1990 Profit Margin (%)	1991 Profit Margin (%)	1992 Profit Margin (%)
	1990	1991	1992					
BBN	42.5	6.6	-20.6	-85	N/A	16	3	N/A
C.A.C.I.	3.3	2.0	3.1	-39	52	2	1	2
COMPTTEK RESEARCH	1.4	1.7	1.4	16	-14	3	3	2
COMPUTER DATA SYS.	3.4	3.4	4.5	0	32	3	3	3
CSC	68.0	65.5	75.7	-4	16	4	3	3
DYNAMICS RES.	3.3	3.6	4.0	11	11	4	4	4
INTERMETRICS	1.8	2.3	2.0	31	-14	3	4	3
LOGICON	8.6	12.3	14.9	44	21	3	4	5
SOFTECH	-4.8	-3.0	1.7	N/A	N/A	N/A	N/A	3
<b>Total</b>	<b>127.4</b>	<b>94.5</b>	<b>86.6</b>	<b>-26</b>	<b>-8</b>	<b>5</b>	<b>3</b>	<b>2</b>



- The top three vendors, in terms of 1992 revenue generation, were CSC, Logicon, and Bolt Beranek & Newman (BBN); collectively, the revenue of these vendors represented 84% of the total revenues of government professional services vendors listed in this VFW (see Exhibit VII-3).

EXHIBIT VII-3



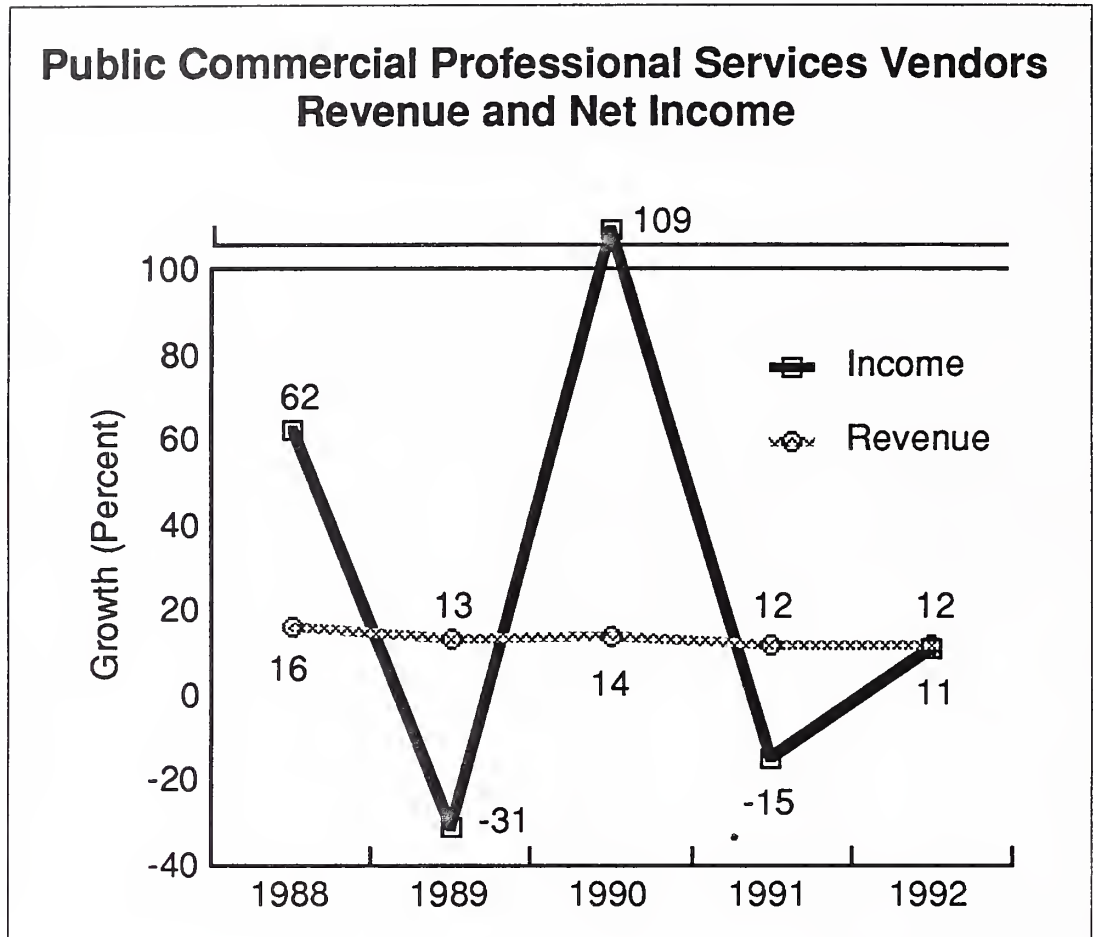
**B**

**Commercial Professional Services**

The following list summarizes activity within the commercial professional services industry sector:

- The growth of annual revenue has remained flat over the past five years at a rate of approximately 13% (see Exhibit VII-4).
- The growth of net income has been unstable, swinging from a net income shrinkage to expansion; in 1991, the industry experienced a declining rate of 15% and in 1992, profits grew by 11%.

EXHIBIT VII-4



- During 1992, industry revenue amounted to \$1.3 billion and net income amounted to \$50.1 million (see Exhibit VII-5).

EXHIBIT VII-5

### Public Commercial Professional Services Companies

Company	Revenue (\$ Millions)			1990-1991 Change (Percent)	1991-1992 Change (Percent)
	1990	1991	1992		
AMER. MGMT. SYS.	260.3	284.4	332.5	9	17
ANALYSTS INTL.	114.2	119.6	146.8	5	23
BRANDON SYSTEMS	37.1	38.3	48.5	3	26
COMP. HORIZONS	99.4	94.5	102.2	-5	8
COMP. TASK GROUP	243.9	285.1	302.7	17	6
CONTINUUM	97.1	128.8	125.9	33	-2
KEANE	93.0	95.6	99.3	3	4
SCIENTIFIC S/W	19.8	25.0	29.2	27	17
SYS. & COMP. TECH.	50.4	72.0	96.5	43	34
TECHNALYSIS	20.5	18.4	19.1	-10	4
<b>Total</b>	<b>1,035.8</b>	<b>1,161.8</b>	<b>1,302.7</b>	<b>12</b>	<b>12</b>

## EXHIBIT VII-5 (CONT.)

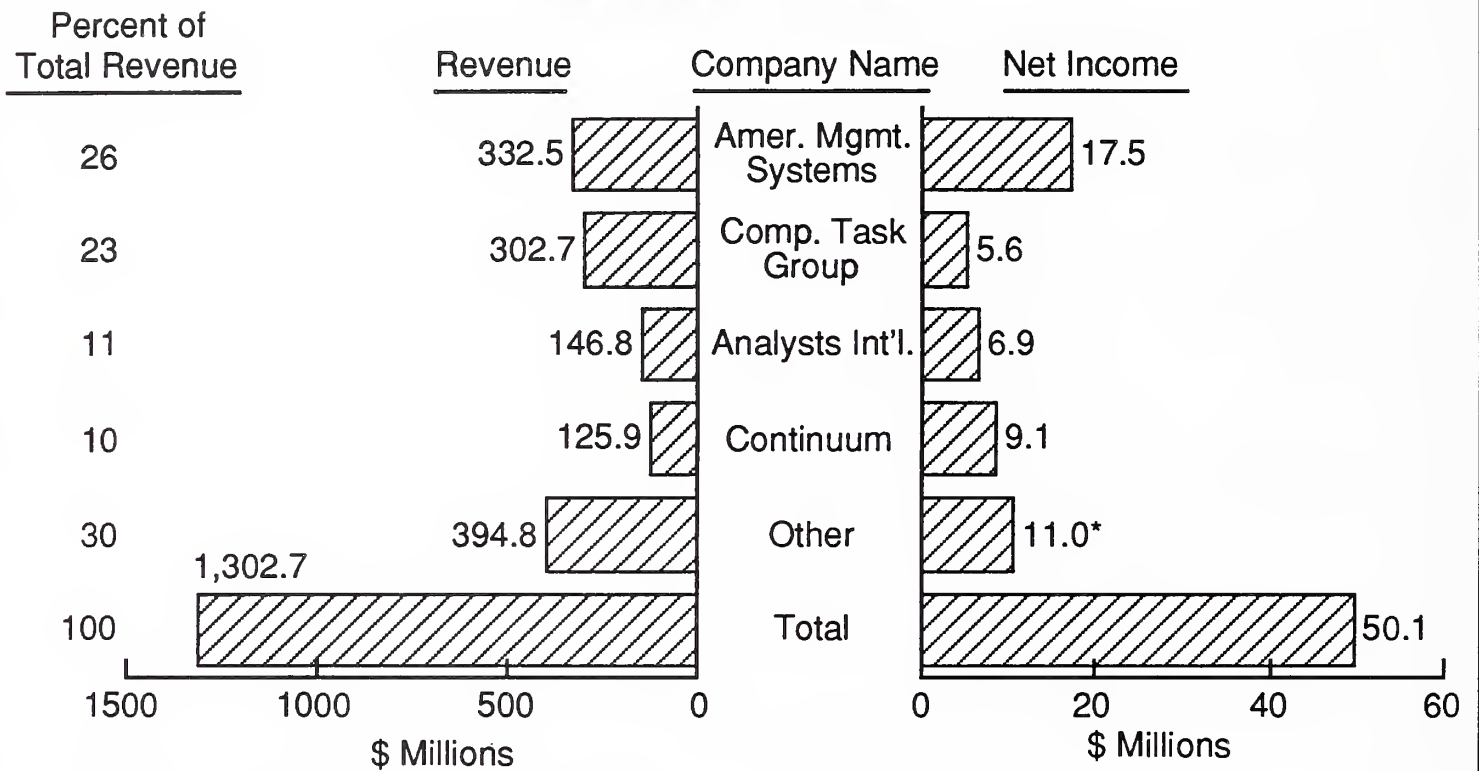
**Public Commercial Professional Services Companies**

Company	Net Income (\$ Millions)			90-91 Change (%)	91-92 Change (%)	1990 Profit Margin (%)	1991 Profit Margin (%)	1992 Profit Margin (%)
	1990	1991	1992					
AMER. MGMT. SYS.	11.0	12.6	17.5	15	38	4	4	5
ANALYSTS INTL.	6.2	5.2	6.9	-16	32	5	4	5
BRANDON SYSTEMS	2.3	2.1	2.7	-10	27	6	5	5
COMP. HORIZONS	3.3	2.3	2.0	-32	-11	3	2	2
COMP. TASK GROUP	7.2	0.9	5.6	-88	529	3	0	2
CONTINUUM	8.1	7.7	9.1	-4	18	8	6	7
KEANE	5.2	5.9	6.3	14	7	6	6	6
SCIENTIFIC S/W	7.0	1.1	1.4	-85	28	35	4	5
SYS. & COMP. TECH.	0.5	5.6	-2.5	1005	N/A	1	8	N/A
TECHNALYSIS	2.2	1.9	1.2	-13	-36	11	10	6
Total	53.1	45.3	50.1	-15	11	5	4	4

- The top three vendors, in terms of 1992 revenue generation, were American Management Systems, Computer Task Group, and Analysts International; collectively, the revenue of these vendors represented 60% of the revenue associated with the total revenue of the commercial professional services vendors listed in this VFW (see Exhibit VII-6).

EXHIBIT VII-6

### Public Commercial Professional Services Companies 1992 Market Leaders



\*Includes net losses amounting to \$2.5 million

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  - Forecasts
  - Awards (FAIT)
- **Commercial Application LEADS**

## CUSTOM PROJECTS

For Vendors—analyze:

- **Market strategies and tactics**
- **Product/service opportunities**
- **Customer satisfaction levels**
- **Competitive positioning**
- **Acquisition targets**

For Buyers—evaluate:

- **Specific vendor capabilities**
- **Outsourcing options**
- **Systems plans**
- **Peer position**

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