



**ASSOCIATION OF DATA PROCESSING
SERVICE ORGANIZATIONS**

**COMPUTER SERVICES INDUSTRY
1982**

INPUT

ABOUT ADAPSO

The Association of Data Processing Service Organizations (ADAPSO), founded in 1961, is a nonprofit business organization committed to meeting the needs of the multibillion dollar computer services industry. More than 550 members represent all phases of the industry — data centers, software products, professional services, timesharing, facilities management and integrated systems companies. Corporate members range from large publicly owned companies, and conglomerates with both national and international operations to small companies that serve local, regional, or specialty market segments of the industry.

ADAPSO's programs are designed to protect the interests of the computer services industry from unlawful competition and unwise governmental regulations and legislation while helping to improve industry standards and management performance. As the industry voice, it is dedicated to identifying the industry to the customer as being professional and capable; to the financial community for its growth and stability; and to government to support a vigorous, independent computer services industry.

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ABOUT INPUT

INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions and office products and services.

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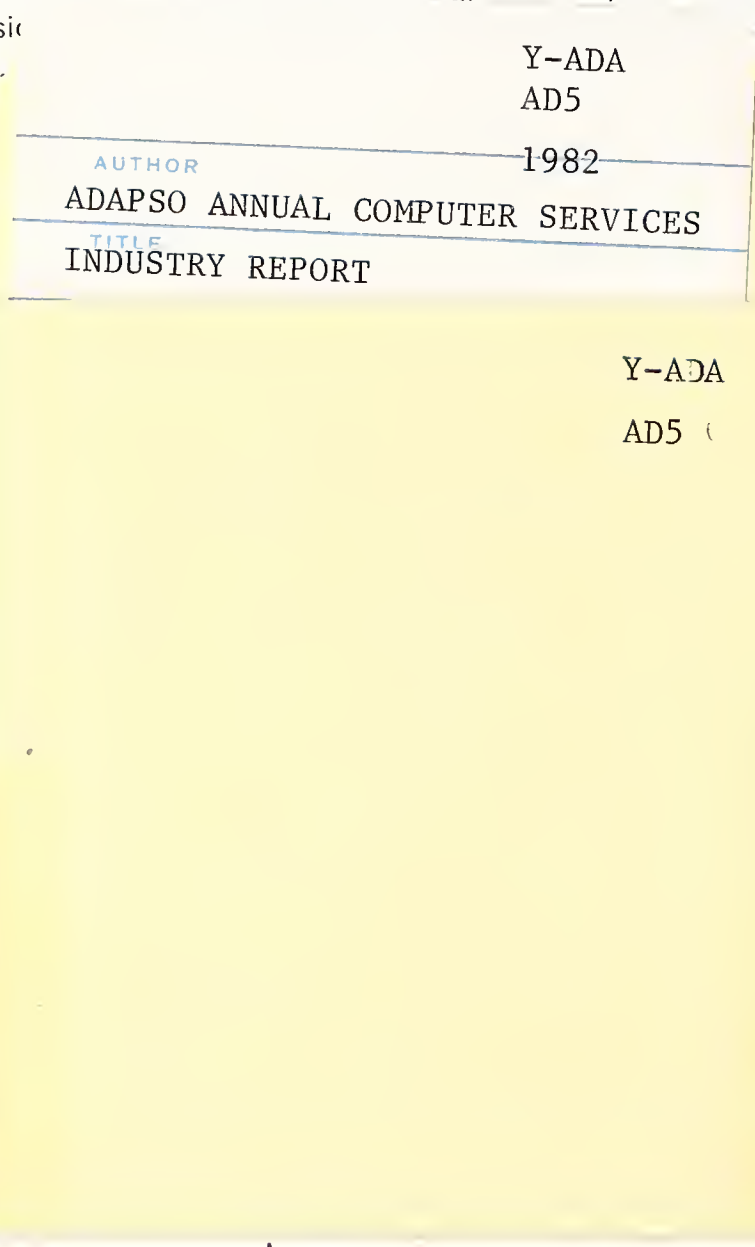
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ASSOCIATION OF DATA PROCESSING
SERVICE ORGANIZATIONS, INC.
(ADAPSO)

SIXTEENTH ANNUAL SURVEY
OF
THE COMPUTER SERVICES INDUSTRY

Based On Data For The Year 1981

Published AUGUST 1982

BY
INPUT

ANNUAL COMPUTER SERVICES INDUSTRY REPORT FOR 1981

CONTENTS

	<u>Page</u>
I INTRODUCTION	1
II EXECUTIVE SUMMARY	5
A. Market Size And Growth Of Computer Services Companies	5
B. Growth Rates By Service Mode	7
C. Productivity	10
D. Profitability	12
III TOTAL COMPUTER SERVICES INDUSTRY	15
A. Industry Analysis	15
B. Public Company Analysis	25
C. Trends In Computer Services Companies	32
IV PROCESSING SERVICES COMPANIES	41
A. Industry Analysis	41
B. Trends In Processing Services Companies	46
V SOFTWARE PRODUCTS COMPANIES	53
A. Industry Analysis	53
B. Trends In Software Products Companies	58
VI PROFESSIONAL SERVICES COMPANIES	69
A. Industry Analysis	69
B. Trends In Professional Services Companies	73
VII INTEGRATED SYSTEMS COMPANIES	81
A. Industry Analysis	81
B. Trends In Integrated Systems Companies	85
VIII VENDOR PERFORMANCE	93
APPENDIX A: DEFINITION OF TERMS	107
A. Revenue	107
B. Service Modes	108
C. Trends And Issues	111
D. Balance Sheet Data	112
E. Definitions Of Financial Ratios	112

	<u>Page</u>
APPENDIX B: METHODOLOGY AND RECONCILIATION	115
APPENDIX C: DATA BASE	121
APPENDIX D: QUESTIONNAIRES	125
INDEX	135

ANNUAL COMPUTER SERVICES INDUSTRY REPORT

EXHIBITS

		<u>Page</u>
II	-1 U.S. Computer Services Industry By Company Type	6
	-2 U.S. Computer Services Industry By Service Mode	9
	-3 Computer Services Industry Productivity, 1980-1981	11
	-4 Pretax Profit Margins Of Public Companies	13
III	-1 U.S. Computer Services Industry By Company Type And Size	16
	-2 Revenue By Company Type And Service Mode	18
	-3 Market Share By Type And Size Of Company	19
	-4 Revenue Distribution Of Service Modes By Type Of Company	20
	-5 Revenue Growth Of Service Modes By Type Of Company	22
	-6 Productivity By Type And Size Of Company	23
	-7 Foreign Revenue By Service Mode, Companies Over \$10 Million In U.S. Revenue	24
	-8 Pretax Profit Margins Of Public Companies By Type And Size	26
	-9 Financial Ratios For Public Companies, 1980-1981	27
	-10 Balance Sheet Items Of Public Companies, 1980	29
	-11 Balance Sheet Items Of Public Companies, 1981	30
	-12 Change In Balance Sheet Items Of Public Companies, 1980-1981	31
	-13 Revenue Distribution Of Responding Computer Services Companies	33
	-14 Respondents' Targeted And Actual Growth Rates, U.S. Noncaptive Revenue	34
	-15 Impact Of Price Increases And Acquisitions On Respondents' Growth	35
	-16 Application Growth Of Responding Computer Services Companies	37
	-17 Hardware Specialization Of Respondents By Computer Manufacturer	39
IV	-1 Revenue Distribution By Service Modes Of Processing Services Companies, 1981	43
	-2 Revenue Growth By Service Modes Of Processing Services Companies, 1980-1981	45

		<u>Page</u>
	-3 Revenue Distribution Of Responding Processing Services Companies, 1981	47
	-4 Use Of Processing Services Sold By Responding Processing Companies	48
	-5 Percent Of Revenue From Top 10 Clients - Processing Services Company Respondents	50
	-6 Pretax Profits Of Responding Processing Services Companies	51
V	-1 Revenue Distribution By Service Modes Of Software Products Companies, 1981	54
	-2 Revenue Growth By Service Modes Of Software Products Companies, 1980-1981	56
	-3 Revenue Distribution Of Responding Software Products Companies, 1981	59
	-4 Software Product Revenue From Applications/Systems Software - Responding Software Products Companies	60
	-5 Software Revenue By Category Of Responding Software Products Companies	62
	-6 Software Revenue By Size Of Computer - Responding Software Products Companies	64
	-7 Respondents' Sales Distribution Channels, 1981 - Software Companies	65
	-8 Pretax Profits Of Responding Software Companies	67
VI	-1 Revenue Distribution By Service Modes Of Professional Services Companies, 1981	70
	-2 Revenue Growth By Service Modes Of Professional Services Companies, 1980-1981	72
	-3 Revenue Distribution Of Responding Professional Services Companies, 1981	74
	-4 Respondents' Revenue From Government/Commercial Clients - Professional Services Companies	75
	-5 Respondents' Revenue Distribution By Activity - Professional Services Companies	77
	-6 Respondents' Percent Of Revenue From Top 10 Clients - Professional Services Companies	78
	-7 Pretax Profits Of Responding Professional Services Companies	79
VII	-1 Revenue Distribution By Service Modes Of Integrated Systems Companies, 1981	82
	-2 Revenue Growth By Service Modes Of Integrated Systems Companies, 1980-1981	84
	-3 Revenue Distribution Of Responding Integrated Systems Companies, 1981	86
	-4 Respondents' Revenue Distribution By Hardware/Services - Integrated Systems Companies	87
	-5 Systems Sold By Respondents - Integrated Systems Companies	88

		<u>Page</u>
	-6 Respondents' Sales Distribution Channels, 1981 - Integrated Systems Companies	90
	-7 Pretax Profits Of Responding Integrated Systems Companies	91
VIII	-1 Published Results Of Public Companies - Summary	94
	-2 Published Results Of Public Companies' Processing Services	96
	-3 Published Results Of Public Companies' Software Products	100
	-4 Published Results Of Public Companies' Professional Services	101
	-5 Published Results Of Public Companies' Integrated Systems	103
B	-1 Reconciliation Of Number Of Companies In 1980, In 1981, And 1982 Reports	117
	-2 Reconciliation Of 1980 Revenue In 1981 and 1982 Reports	118
	-3 Reconciliation Summary - Computer Services Industry, 1980-1981	120
C	-1 Revenue Distribution By Company Type And Service Mode	121
	-2 U.S. Computer Services Employees By Type And Size Of Company	122
	-3 Number Of Questionnaires Used By Survey Type And Size Of Company	123
	-4 Survey Respondents And Total Industry Statistics	124



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I INTRODUCTION

I INTRODUCTION

- This 16th annual report of the computer services industry has been prepared by INPUT under a commission from the Association of Data Processing Service Organizations (ADAPSO). It is designed for use by industry management and financial analysts.
 - ADAPSO consists of over 550 member companies and represents the interests of the computer services industry in areas such as industry statistics, government relations, legal representation, and communications to the financial community.
 - INPUT is a leading international planning services and market research company which specializes in the information industry. INPUT has studied the computer services industry in depth since 1974, and maintains several consulting programs for the industry.
- As in past years, the report analyzes industry activity by primary service modes - processing services, software products and services, and professional services. In addition to these three categories, this year's definition of the industry has been expanded to include integrated systems as a primary service mode.
 - Revenue from integrated systems sales by other primary service vendors is included in the results for the years 1980 and 1981.

- Inclusion of these services added \$2.9 billion to 1981 industry revenue, and \$2.1 billion to 1980 industry revenue.
- The scope of the research for this year's report was extended significantly, making it the most comprehensive report to date.
 - A census of all companies with more than \$10 million in noncaptive U.S. computer services revenue was conducted.
 - More than 400 companies were interviewed or researched.
 - Two hundred forty-three companies qualified for the final list.
 - A stratified random sample of companies earning less than \$10 million in noncaptive U.S. computer services revenue was conducted.
 - Three hundred companies were interviewed by telephone.
 - One hundred forty-two of these companies met the criteria for inclusion in the report.
 - Research was conducted on all publicly held U.S.-based computer services companies.
 - One hundred thirty companies were initially analyzed.
 - Seventy-four companies were selected for inclusion in the study.
 - A mail questionnaire was sent to over 3,200 computer services companies. One hundred seventy usable responses were included in the study.
- For purposes of statistical validity, only the random sample survey and the over \$10 million company census were used to generate industry totals.

- This methodology resulted in revenue, employee, and productivity data which have a 90% confidence level for industry totals within 10%.
- The above improvement in methodology resulted in an upward revision of 1980 industry revenue of \$500 million.
- To qualify for the financial ratio analysis in Chapter III, public companies had to have:
 - Seventy-five percent of revenue from U.S. noncaptive computer services activities.
 - Fifty percent or more of revenue concentrated in one of the four service modes.
- Eight companies are not included in the financial ratio analysis in Chapter III but are included in the revenue and profit exhibits in Chapter VIII. These companies all derive more than 75% of their revenue from computer services. However, either foreign revenue exceeded 25% of their total, or 50% of their revenue was not concentrated in one primary service.
- The reader should note that whenever data are referred to in the text or in exhibits as "respondent" the information refers specifically to the respondents of the mail survey, and does not represent the industry as a whole. To emphasize the distinction from industry data, the word "respondent" appears as shaded in all exhibits.
 - If a reference is to "public companies," the information pertains only to them.
 - In all other cases the information refers to all or part of the industry as developed from the random sample survey and the over \$10 million company census, and is accurate within the confidence limits given above.

- All revenue is presented as noncaptive U.S. revenue unless specifically labeled otherwise.
- The data for this study were gathered from March to May of 1982.
- Definitions of terms used in the report are incorporated, where appropriate, in the text. A list of definitions is included as Appendix A.
- Appendix B contains a reconciliation of last year's report and this year's report of the 1980 market size.
- A data base of industry statistics is included in Appendix C.
- Copies of the mail and public company analysis questionnaires are included in Appendix D.

II EXECUTIVE SUMMARY

II EXECUTIVE SUMMARY

A. MARKET SIZE AND GROWTH OF COMPUTER SERVICES COMPANIES

- The computer services industry continued its high rate of revenue growth by growing at 24% in 1981, as shown in Exhibit II-1.
- Total noncaptive U.S. computer services revenue exceeded \$22 billion in 1981.
 - Eighty-seven percent of this revenue was generated by the three service modes previously studied by ADAPSO: processing services, software products, and professional services.
 - Integrated systems, included for the first time in this year's survey, contributed the remaining 13% of revenue.
- Inclusion of integrated systems increased the revenue base of the industry but did not have a significant impact on growth. Industry growth without integrated systems was 23% versus the inclusive growth rate of 24%.
- Although there are over 6,000 computer services firms in the industry, 57% of the industry's revenue is generated by 243 companies.
 - The over \$10 million firms have a market share in excess of 50% for all service modes with the exception of integrated systems.

EXHIBIT II-1

U.S. COMPUTER SERVICES INDUSTRY BY COMPANY TYPE

TYPE OF COMPANY	NUMBER OF COMPANIES	NONCAPTIVE U.S. REVENUE (\$ million)		REVENUE GROWTH 1980-1981 (percent)	NUMBER OF EMPLOYEES (thousands)	EMPLOYEE GROWTH 1980-1981 (percent)
		1980	1981			
Processing Services	2,259	\$9,407	\$11,111	18%	216	9%
Software Products	1,605	2,601	3,704	42	51	25
Professional Services	1,284	3,715	4,491	21	103	11
Integrated Systems	1,030	2,125	2,795	32	43	24
TOTAL	6,178	\$17,848	\$22,101	24%	413	12%

- Companies in the \$1-\$10 million range hold 32% of the market, but grew at a faster rate (26%).
- The under \$1 million companies are many (61% of all firms) but low in market share (11%). These are the local firms and startup enterprises. They generate a steady base of revenue and sometimes provide the most innovative products and services in the industry.
- Growth leaders in the industry were the software products companies, recording an exceptional growth rate of 42% in 1981. Integrated systems companies followed with a 32% gain. Both services are responding to and benefiting from:
 - User organizations eager to purchase packaged solutions rather than commit scarce EDP personnel to the development of applications or systems software.
 - Decreases in hardware prices enabling small and medium-sized businesses to buy in-house systems and software products for the first time.
 - The proliferation of personal computers.
- Companies most affected by the economy were processing and professional services companies providing generalized services. Companies with industry specialization raised the growth rates for these two segments to 18% and 21% respectively.

B. GROWTH RATES BY SERVICE MODE

- In addition to measuring the performance of companies by their primary service offering, a measurement of growth rates by service mode, regardless of who sells it, is taken in the industry.

- Generally companies specializing in one service mode will outperform other companies who offer the same service as a supplementary service.
 - This is true, as shown in Exhibit II-2, of processing services, which grew 16% in 1981 as a service mode, but achieved an 18% growth rate in companies who specialized in these services.
 - Professional services achieved an equal growth rate by service mode and company growth (21%).
 - Software products and integrated systems, however, achieved higher growth rates by service mode than company growth rates.
 - Offering packaged solutions, for economic reasons cited previously, is forcing more companies into these service modes.
 - Higher growth rates indicate many of the firms have been successful in marketing alternative services.
- In addition to the four major service modes, growth rates for seven submodes of delivery are presented.
 - In processing services, remote computing grew the fastest with 17%.
 - Batch services achieved a 15% overall growth rate. This significant increase over last year can be attributed to high growth rates achieved in some of the specialized firms.
 - Lower growth rates in facilities management processing services may reflect a reluctance, in today's economy, for companies to commit to long-term contractual agreements.
 - Software products by service mode grew 45% in 1981.

EXHIBIT II-2

U.S. COMPUTER SERVICES INDUSTRY BY SERVICE MODE

SERVICE MODE	NONCAPTIVE U.S. REVENUE (\$ million)		
	1980	1981	GROWTH 1980-1981 (percent)
Remote Computing Services	\$4,374	\$5,117	17%
Batch Services	3,332	3,830	15
Facilities Management	989	1,114	13
Processing Services Subtotal*	\$8,695	\$10,060	16%
Applications Software Products	1,443	2,191	52
Systems Software Products	1,436	1,974	37
Software Products Subtotal*	\$2,879	\$4,164	45%
Government Professional Services	1,806	2,110	17
Commercial Professional Services	2,311	2,882	25
Professional Services Subtotal*	\$4,117	\$4,993	21%
Integrated Systems	\$2,157	\$2,884	34%
TOTAL*	\$17,848	\$22,101	24%

* May not total due to rounding.

- Applications software products took the lead in 1981 with a 52% increase, followed by systems software at 37%.
- Growth rates in this segment were exceptional and although they should remain high in future years, they may not reach 1981 levels. Budget cutbacks and high labor costs have forced many companies into buying products, especially for large mainframes, as opposed to developing products internally. This may change as the economy improves.
- Professional services sold to governments grew at a lower rate than commercial services in 1981.

C. PRODUCTIVITY

- Productivity, measured by revenue generated per employee, increased 12% in the computer services industry in 1981, as shown in Exhibit II-3.
 - Productivity increases were highest in software products companies (\$72 thousand per employee). The limited supply of good software products, the high value added component, a recessionary economy, and mature product lines with established customer bases, all contributed to increased productivity in software companies.
 - Integrated systems companies, second to software products in revenue per employee, had the smallest increase in productivity.
- Many processing services and professional services companies, concerned that sales were coming in at a lower rate, froze hiring and systematically reduced costs wherever possible. These measures paid off.

EXHIBIT II-3

COMPUTER SERVICES INDUSTRY PRODUCTIVITY,
1980-1981

TYPE OF COMPANY	AVERAGE REVENUE PER EMPLOYEE (\$ thousands)		PERCENT CHANGE
	1980	1981	
Processing Services	\$47	\$51	9%
Software Products	63	72	14
Professional Services	40	44	10
Integrated Systems	60	64	7
Weighted Average	\$49	\$55	12%

- Processing services companies increased their productivity by 9%, to \$51 thousand per employee.
- Professional services companies' revenue per employee was \$44 thousand, up 10%.

D. PROFITABILITY

- Profit margins of the 74 public computer services companies analyzed declined slightly from 1980 to 1981, as shown in Exhibit II-4.
- Software products companies were the only public companies to show increased margins over the previous year.
 - Pretax margins increased over six percentage points for software firms.
 - The high increase was attributed to the abnormal number of companies going public in 1981 (six of the eight firms analyzed).
- Processing services, professional services, and integrated systems companies were all affected by reduced profit margins, presumably because of economic declines.

EXHIBIT II-4

PRETAX PROFIT MARGINS OF PUBLIC COMPANIES
(percent)

TYPE OF COMPANY	PRETAX PROFIT MARGINS		PROFIT GROWTH* 1980-1981
	1980	1981	
Processing Services	13.8%	13.3%	19%
Software Products	10.7	16.8	128
Professional Services	8.4	7.1	10
Integrated Systems	15.5	14.9	29
Weighted Average	12.8%	12.5%	25%

74 Companies

* Based on Total Pretax Revenue Generated.

III TOTAL COMPUTER SERVICES INDUSTRY

III TOTAL COMPUTER SERVICES INDUSTRY

A. INDUSTRY ANALYSIS

- The industry continued its strong growth in 1981, at a rate of 24%, and revenue exceeding \$22 billion, as shown in Exhibit III-1.
 - Dominating the industry are the 243 firms with revenue exceeding \$10 million. These firms generated \$12.6 billion in revenue, or 57% of the industry's total.
 - These companies hold 50% or more of their primary service markets with the exception of integrated systems.
- Companies in the \$1-\$10 million range represent 35% of the firms and generate 32% of the industry's revenue, or \$7.1 billion.
 - These firms had the highest growth rates (26%) of the three size classifications.
 - Software products companies registered record growth rates of 66% in the \$1 to \$10 million firms, closely followed by integrated systems with 36%.

EXHIBIT III-1

U.S. COMPUTER SERVICES INDUSTRY BY COMPANY TYPE AND SIZE

TYPE OF COMPANY ● SIZE (\$ millions)	NUMBER OF COMPANIES	REVENUE (\$ millions)		REVENUE GROWTH 1980 - 1981 (percent)	NUMBER OF EMPLOYEES (thousands)	EMPLOYEE GROWTH 1980 - 1981 (percent)
		1980	1981			
Processing Services						
● \$0.25 - 1	1,100	\$687	\$791	15%	—	—
● 1 - 10	1,050	3,008	3,458	15	—	—
● 10 - 25	50	620	732	19	—	—
● > 25	59	5,091	6,130	20	—	—
Subtotal*	2,259	\$9,407	\$11,111	18%	216	9%
Software Products						
● \$0.25 - 1	1,180	558	712	28	—	—
● 1 - 10	390	668	1,109	66	—	—
● > 10	35	1,375	1,883	37	—	—
Subtotal*	1,605	\$2,601	\$3,704	42%	51	25%
Professional Services						
● \$0.25 - 1	905	423	526	25	—	—
● 1 - 10	310	939	1,164	24	—	—
● > 10	69	\$2,353	2,802	20	—	—
Subtotal*	1,284	\$3,715	\$4,491	21%	103	11%
Integrated Systems						
● \$0.25 - 1	600	279	376	35	—	—
● 1 - 10	400	990	1,351	36	—	—
● > 10	30	857	1,069	25	—	—
Subtotal*	1,030	\$2,125	\$2,795	32%	43	24%
Total Computer Services						
● \$0.25 - 1	3,785	1,947	2,404	23	—	—
● 1 - 10	2,150	5,606	7,081	26	—	—
● > 10	243	10,296	12,616	23	—	—
TOTAL*	6,178	\$17,848	\$22,101	24%	413	12%

* May not total due to rounding.

- The under \$1 million firms, representing 61% of the firms in the industry, generated the lowest amount of industry revenue, 11%.
 - Integrated systems companies in this size range performed the best with 35% growth, followed by software products with 28%.
 - This group of companies consists of startup and local firms. Failures are high; financial resources are limited, and few succeed in capturing a position in the market in a short time.
- Revenue and growth within the computer services industry are measured in two dimensions, as shown in Exhibit III-2.
 - Generally, companies who concentrate in one of the service modes outperform other firms offering the same service as an alternative delivery mode.
 - This is true of processing services companies who achieved an overall growth rate of 18%, while processing, as a service mode, grew at 16% across all companies.
 - Software products and integrated systems showed opposite results. Growth by service mode exceeded the growth of companies specializing in this mode, indicating the success other companies have had in selling these products.
 - Professional services showed a constant growth rate of 21% by both company type and service mode.
- Software products and integrated systems companies are increasing their market share within the computer services industry, as shown in Exhibit III-3.
- All four types of company derive most of their revenue from their principal line of business, as shown in Exhibit III-4.

EXHIBIT III-2

REVENUE BY COMPANY TYPE AND SERVICE MODE

(\$ millions)

SERVICE MODE	REVENUE BY COMPANY TYPE						TOTAL COMPANY REVENUE BY PRIMARY SERVICE		GROWTH BY COMPANY TYPES
	PROCESSING SERVICES COMPANIES		SOFTWARE PRODUCTS COMPANIES		PROFESSIONAL SERVICES COMPANIES		INTEGRATED SYSTEMS COMPANIES		
	1980	1981	1980	1981	1980	1981	1980	1981	
Processing Services	\$8,125	\$9,445	\$393	\$567	\$656	\$794	\$9,407	\$11,111	18%
Software Products	48	44	2,222	3,266	320	373	2,601	3,704	42%
Professional Services	368	400	226	280	3,081	3,747	3,715	4,491	21%
Integrated Systems	153	170	38	52	60	79	2,125	2,795	32%
Total Revenue by Service Mode	\$8,695	\$10,060	\$2,879	\$4,164	\$4,117	\$4,993	\$17,848	\$22,101	
Growth by Service Mode	16%		45%		21%		34%		

May not total due to rounding.

EXHIBIT III-3

MARKET SHARE BY TYPE AND SIZE OF COMPANY

TYPE OF COMPANY ● SIZE (\$ millions)	PERCENT OF MARKET SERVED	
	1980	1981
Processing Services		
● \$0.25-1	4%	4%
● 1-10	17	16
● 10-25	3	3
● >25	29	28
Subtotal*	53%	50%
Software Products		
● \$0.25-1	3	3
● 1-10	4	5
● >10	8	9
Subtotal*	15%	17%
Professional Services		
● \$0.25-1	2	2
● 1-10	5	5
● >10	13	13
Subtotal*	21%	20%
Integrated Systems		
● \$0.25-1	2	2
● 1-10	6	6
● >10	5	5
Subtotal*	12%	13%
TOTAL*	100%	100%

* May not total due to rounding.

EXHIBIT III-4

REVENUE DISTRIBUTION OF SERVICE MODES
BY TYPE OF COMPANY
(percent)

SERVICE MODE	TYPE OF COMPANY				
	PROCES- SING SERVICES	SOFT- WARE PRODUCTS	PROFES- SIONAL SERVICES	INTE- GRATED SYSTEMS	TOTAL*
Remote Computing Services	44%	0%	4%	2%	23%
Batch Services	32	1	3	4	17
Facilities Management	9	0	2	0	5
Processing Services Subtotal*	85%	1%	9%	6%	45%
Applications Software Products	4	42	4	1	10
Systems Software Products	1	46	2	1	9
Software Products Subtotal*	5%	88%	6%	2%	19%
Government Professional Services	3	4	37	1	10
Commercial Professional Services	4	6	46	2	13
Professional Services Subtotal*	7%	10%	83%	3%	23%
Integrated Systems	3	1	1	89	13
TOTAL*	100%	100%	100%	100%	100%

* May not total due to rounding.

- Growth rates of alternate delivery modes, as shown in Exhibit III-5, indicate movement by some firms to these other modes.
 - The highest growth rates for other delivery modes were in software products and integrated systems.
 - User demands for packaged solutions, especially in the small and medium-sized firms, are driving this growth.

- As shown in Exhibit III-6, productivity in the industry, measured as average revenue per employee, increased 12% for the industry as a whole in 1981.
 - Highest gains were made in software products companies, with a 14% increase.
 - Lowest gains were in the under \$1 million software and integrated system companies where many startup companies are concentrated.
 - Gains in productivity in some firms were affected by reductions in their labor force in late 1981 to compensate for business declines.

- Revenue generated by the over \$10 million computer services firms in overseas markets increased 21% in 1981, as shown in Exhibit III-7.
 - Highest growth leaders, although lowest in revenue generation, were integrated systems. Most of the export revenue came from CAD/CAM systems.
 - Foreign market acceptance of U.S.-developed software products has pushed this segment into a leadership role in total revenue generated overseas.

EXHIBIT III-5

REVENUE GROWTH OF SERVICE MODES
BY TYPE OF COMPANY
(percent)

SERVICE MODE	TYPE OF COMPANY				
	PROCES- SING SERVICES	SOFT- WARE PRODUCTS	PROFES- SIONAL SERVICES	INTE- GRATED SYSTEMS	TOTAL
Remote Computing Services	18%	-16%	2%	11%	17%
Batch Services	15	3	29	11	15
Facilities Management	14	0	-2	0	13
Processing Services Subtotal	16%	-7%	9%	11%	16%
Applications Software Products	60	51	39	49	52
Systems Software Products	14	43	7	14	37
Software Products Subtotal	44%	47%	24%	37%	45%
Government Professional Services	11	10	18	46	17
Commercial Professional Services	27	20	24	29	25
Professional Services Subtotal	21%	16%	22%	31%	21%
Integrated Systems	31	91	62	33	34%
TOTAL	18%	42%	21%	32%	24%

EXHIBIT III-6

PRODUCTIVITY BY TYPE AND SIZE OF COMPANY

TYPE OF COMPANY ● SIZE (\$ millions)	AVERAGE REVENUE PER EMPLOYEE (\$ thousands)		PERCENT CHANGE
	1980	1981	
Processing Services			
● < \$10	\$41	\$45	10%
● > \$10	52	56	8
Subtotal	\$47	\$51	9%
Software Products			
● < \$10	62	65	5
● > \$10	64	80	25
Subtotal	\$63	\$72	14%
Professional Services			
● < \$10	42	45	7
● > \$10	39	43	10
Subtotal	\$40	\$44	10%
Integrated Systems			
● < \$10	56	59	5
● > \$10	69	75	9
Subtotal	\$60	\$64	7%
Total Computer Services			
● < \$10	46	51	11
● > \$10	53	60	13
TOTAL *	\$49	\$55	12%

* May not total due to rounding.

EXHIBIT III-7

FOREIGN REVENUE BY SERVICE MODE,
COMPANIES OVER \$10 MILLION IN U.S. REVENUE

SERVICE MODE	TOTAL FOREIGN REVENUE 1980 (\$ millions)	PERCENT OF TOTAL REVENUE 1980	TOTAL FOREIGN REVENUE 1981 (\$ millions)	PERCENT OF TOTAL REVENUE 1981	REVENUE GROWTH 1980-1981
Processing Services	\$1,005	10%	\$1,127	10%	12%
Software Products	933	24	1,141	22	22
Professional Services	353	8	428	8	21
Integrated Systems	158	7	267	8	69
TOTAL	\$2,449	12%	\$2,963	12%	21%

243 Companies

- Vendors of processing services in foreign markets were more affected by declining economies in many of the countries, and grew at the lowest rate, 12%.

B. PUBLIC COMPANY ANALYSIS

- Total profits generated by publicly held computer services companies increased 25% in 1981, as shown in Exhibit III-8.
 - Leaders in profit growth and improved pretax margins were the software companies.
 - Processing services companies under \$25 million showed high profit growth and improved margins.
 - Processing services over \$25 million, integrated systems, and professional services showed declines in pretax margins.
- The biggest drop in pretax margins occurred in professional services companies. Possible reasons for this decline are:
 - The mix of business in these firms may be higher in government contracts (where profit levels are controlled) than in commercial services.
 - Overhead costs may have been increased to retain key personnel. Companies are often reluctant, even in a depressed economy, to let go of programmers and systems analysts because replacements are difficult and costly.
- Selected financial ratios for public companies are presented in Exhibit III-9.

EXHIBIT III- 8

PRETAX PROFIT MARGINS OF
PUBLIC COMPANIES BY TYPE AND SIZE
(percent)

TYPE OF COMPANY ● SIZE (\$ millions)	PRETAX PROFIT MARGINS*		PROFIT GROWTH 1980-1981
	1980	1981	
Processing Services			
● \$1-10	12.5%	13.3%	33%
● 10-25	7.8	10.8	45
● >25	14.1	13.4	18
Processing Subtotal	13.8%	13.3%	19%
Software Products	10.7	16.8	128
Professional Services	8.4	7.1	10
Integrated Systems	15.5	14.9	29
Weighted Average	12.8%	12.5%	25%

74 Companies

* Based on Total Pretax Revenue Generated

EXHIBIT III-9

FINANCIAL RATIOS FOR PUBLIC COMPANIES,
1980-1981

ITEM	FINANCIAL RATIOS				
	PROCESSING SERVICES COMPANIES	SOFTWARE PRODUCTS COMPANIES	PROFESSIONAL SERVICES COMPANIES	INTEGRATED SYSTEMS COMPANIES	INDUSTRY AVERAGE
Current Ratio					
1980	1.86	1.68	1.46	2.43	1.78
1981	2.05	2.97	1.57	2.37	2.01
Percent Change	10.20%	77.50%	7.40%	(2.50%)	13.00%
Return on Equity, After Tax					
1980	17.7%	49.9%	25.1%	23.6%	20.7%
1981	16.6%	16.4%	17.7%	14.1%	16.5%
Percent Change	(6.3%)	(67.1%)	(29.5%)	(40.3%)	(20.3%)
Long Term Debt as a Percent of Equity					
1980	17.5%	19.0%	50.9%	33.9%	23.7%
1981	22.8%	10.8%	32.3%	18.2%	22.7%
Percent Change	30.3%	(43.3%)	(36.6%)	(46.3%)	(4.5%)
Trade Receivables Turnover (Days)					
1980	54.7	85.1	79.9	75.0	65.5
1981	58.1	77.9	78.2	90.4	68.3
Percent Change	6.3%	(8.5%)	2.1%	20.5%	4.4%
Asset Turnover					
1980	1.37	1.49	1.93	1.18	1.47
1981	1.25	1.00	2.01	1.00	1.35
Percent Change	(8.4%)	33.00%	4.10%	(15.50%)	(8.50%)
Return on Assets					
1980	11.1%	26.3%	8.6%	11.1%	11.2%
1981	10.1%	10.9%	7.7%	7.3%	9.3%
Percent Change	(9.1%)	(58.4%)	(10.7%)	(34.0%)	(16.9%)
Working Capital as a Percent of Total Assets					
1980	19.6%	22.9%	22.1%	40.3%	22.7%
1981	22.8%	46.0%	24.0%	40.4%	26.9%
Percent Change	16.1%	101.1%	8.5%	0.3%	18.6%

66 Companies

- Current ratio improved in 1981, bringing the total industry up to a two-to-one ratio.
 - Return on equity declined in 1981. However, a 17% ratio is still excellent when 12% is considered good in most industries.
 - Long-term debt was reduced in all company segments except processing, which requires additional capital to finance hardware upgrades.
 - Trade receivables increased overall but are the lowest in processing. Their customers depend on applications which the processing services company can decline to run if a customer doesn't pay a bill promptly.
 - Working capital went up due to increases in current assets and reductions in long-term debt.
- Balance sheet items for public companies are presented in Exhibits III-10 through III-12.

EXHIBIT III-10

BALANCE SHEET ITEMS OF PUBLIC COMPANIES, 1980
(percent)

ITEM	BALANCE SHEET ITEM COMPARISONS - 1980				
	PROCESSING SERVICES COMPANIES	SOFTWARE PRODUCTS COMPANIES	PROFESSIONAL SERVICES COMPANIES	INTEGRATED SYSTEMS COMPANIES	1980 INDUSTRY AVERAGE
Selected Assets					
• Trade receivables as a percent of total assets	23.7%	42.4%	49.9%	33.0%	31.1%
• Current assets as a percent of total assets	42.4	56.8	69.8	68.4	51.9
Selected Liabilities					
• Current liabilities as a percent of total liabilities	60.6	71.7	72.7	53.1	63.8
• Long-term debt less current portion as a percent of total liabilities	29.0	21.2	26.8	30.1	28.1
• Deferred taxes as a percent of current liabilities	10.4	7.0	0.5	16.8	8.1
Equity					
• Equity as a percent of total assets	62.4	52.8	34.5	47.0	54.2

66 Companies

EXHIBIT III-11

BALANCE SHEET ITEMS OF PUBLIC COMPANIES, 1981

(percent)

ITEM	BALANCE SHEET ITEM COMPARISONS					1981 INDUSTRY AVERAGE
	PROCESSING SERVICES COMPANIES	SOFTWARE PRODUCTS COMPANIES	PROFESSIONAL SERVICES COMPANIES	INTEGRATED SYSTEMS COMPANIES		
Selected Assets						
• Trade receivables as a percent of total assets	22.6%	27.1%	50.1%	29.2%		29.0%
• Current assets as a percent of total assets	44.5	69.3	65.8	69.9		53.6
Selected Liabilities						
• Current liabilities as a percent of total liabilities	54.9	69.8	74.3	61.4		61.4
• Long-term debt less current portion as a percent of total liabilities	34.9	21.5	25.0	19.7		29.5
• Deferred taxes as a percent of current liabilities	10.2	8.7	0.7	18.9		9.1
Equity						
• Equity as a percent of total assets	60.5	66.6	43.6	52.0		56.6

66 Companies

EXHIBIT III-12
CHANGE IN BALANCE SHEET ITEMS OF PUBLIC COMPANIES,
1980-1981

ITEM	PERCENT CHANGE IN BALANCE SHEET ITEM COMPARISONS 1980-1981				
	PROCESSING SERVICES COMPANIES	SOFTWARE PRODUCTS COMPANIES	PROFESSIONAL SERVICES COMPANIES	INTEGRATED SYSTEMS COMPANIES	INDUSTRY AVERAGE
Selected Assets					
● Trade receivables as a percent of total assets	(4.5%)	(36.2%)	0.3%	(11.4%)	(6.8%)
● Current assets as a percent of total assets	4.8	22.1	(5.6)	2.1	3.3
Selected Liabilities					
● Current liabilities as a percent of total liabilities	(9.4)	(2.7)	2.2	15.6	(3.7)
● Long-term debt less current portion as a percent of total liabilities	20.4	1.3	(6.6)	(34.5)	5.0
● Deferred taxes as a percent of current liabilities	(1.9)	24.0	42.9	12.2	11.7
Equity					
● Equity as a percent of total assets	(3.0)	26.2	26.7	10.6	4.3

66 Companies

C. TRENDS IN COMPUTER SERVICES COMPANIES

- The revenue distribution of responding computer services companies is shown in Exhibit III-13.
 - Foreign revenue accounted for nine percent of all noncaptive computer services revenue for 1981.
 - Highest in foreign revenue were respondent software companies with 22% of their revenue coming from overseas markets.
 - Overall, there were very few changes in revenue distribution of respondent companies in 1980 and 1981.
- Exhibit III-14 shows that respondents generally expected higher growth rates than what occurred in their service industries from 1980 to 1981.
 - Processing services and software products companies appear to be more knowledgeable of market trends, since their targeted growth rates were closer to the rates achieved.
 - Professional services and integrated systems vendors, in most cases, were overly optimistic about their performance. Both performed considerably lower than levels targeted.
- The combined growth target of 34% for 1982 shows the respondents' continued optimism that the economy will improve.
- Nearly one-fifth of the respondents' growth in revenue in 1980 and 1981 came from price increases, as shown in Exhibit III-15.

EXHIBIT III-13

REVENUE DISTRIBUTION OF RESPONDING COMPUTER SERVICES COMPANIES

TYPE OF COMPANY	REVENUE TYPE AS PERCENT OF TOTAL COMPANY REVENUE					
	COMPUTER SERVICES			TOTAL COMPUTER SERVICES	OTHER	TOTAL
	CAPTIVE	NONCAPTIVE	U.S.			
		FOREIGN				
Processing Services						
1980	8%	8%	73%	89%	11%	100%
1981	9	8	72	89	11	100
Software Products						
1980	0	23	75	98	2	100
1981	0	22	76	98	2	100
Professional Services						
1980	2	1	72	75	25	100
1981	2	0	69	71	29	100
Integrated Systems						
1980	0	13	68	81	19	100
1981	0	11	68	79	21	100
TOTAL						
1980	5%	9%	72%	86%	14%	100%
1981	5	9	71	85	15	100

170 Respondents

EXHIBIT III-14

RESPONDENTS' TARGETED AND ACTUAL GROWTH RATES
U.S. NONCAPTIVE REVENUE

TYPE OF COMPANY ● SIZE (\$ millions)	WEIGHTED AVERAGE PERCENT GROWTH RATES		
	ACTUAL	TARGETED	
	1981	1981	1982
Processing Services			
● \$0.25-1	24%	25%	29%
● 1-10	22	29	36
● 10-25	26	28	25
● >25	23	24	24
Subtotal	23%	25%	25%
Software Products			
● \$0.25-1	78	33	120
● 1-10	69	73	84
● > 10	40	34	39
Subtotal	44%	40%	48%
Professional Services			
● \$0.25-1	47	51	81
● 1-10	28	42	52
● > 10	15	28	31
Subtotal	17%	30%	36%
Integrated Systems			
● \$0.25-1	77	65	452
● 1-10	34	40	53
● > 10	17	55	38
Subtotal	18%	54%	41%
TOTAL	23%	33%	34%

147 Respondents

EXHIBIT III-15

IMPACT OF PRICE INCREASES AND ACQUISITIONS ON
RESPONDENTS' GROWTH

TYPE OF COMPANY ● GROWTH FACTOR	REVENUE GROWTH, 1980-1981 (percent)		
	ACTUAL		FORECAST
	1980	1981	1982
Processing Services ● Price Increases ● Acquisitions ● Real Growth	16% 3 81	19% 3 78	17% 4 79
Total	100%	100%	100%
Software Products ● Price Increases ● Acquisitions ● Real Growth	18 2 80	17 2 81	16 4 80
Total	100%	100%	100%
Professional Services ● Price Increases ● Acquisitions ● Real Growth	18 5 77	20 4 76	19 2 79
Total	100%	100%	100%
Integrated Systems ● Price Increases ● Acquisitions ● Real Growth	4 6 90	5 1 94	6 4 90
Total	100%	100%	100%
Total Computer Services ● Price Increases ● Acquisitions ● Real Growth	15 4 81	17 3 80	16 4 80
TOTAL	100%	100%	100%

143 Respondents

- The largest increase over 1980 was in processing services with 3%, a necessary move to counter increased communications costs levied by AT&T in 1981.
- Integrated systems companies held price increases to minimum levels and reported the lowest increases of the four company types.
- Acquisitions contributed less to respondent growth levels in 1981 than 1980. This is expected to increase, however, to a 4% level in 1982.
- Respondents reported higher growth rates in industry-specific applications than in cross-industry applications in 1981, as shown in Exhibit III-16.
 - Highest gains were in the distribution industry with a 75% growth rate, primarily in processing and integrated systems.
 - Growth rates in the medical, manufacturing, and banking industries all showed strong gains of 30% or more in respondent companies. The main beneficiaries in these industries were:
 - Manufacturing: processing and professional services.
 - Banking: processing services.
 - Medical: processing services.
 - Professional services and integrated systems companies reported a higher degree of industry specialization than processing or software companies.
- Cross-industry applications, although lower in growth rates, are the major source of revenue from processing and software companies.

EXHIBIT III-16
APPLICATION GROWTH OF RESPONDING COMPUTER SERVICES COMPANIES

APPLICATION	AVERAGE GROWTH 1980-1981	NUMBER OF RESPONSES					TOTAL NUMBER OF RESPONSES
		PROCESSING	SOFTWARE	PROFESSIONAL SERVICES	INTEGRATED SYSTEMS		
Industry-Specific							
Manufacturing	43%	14	9	12	8	43	
Transportation	22	4	-	-	-	4	
Utilities	10	1	-	3	-	4	
Banking	32	26	-	8	6	40	
Insurance	21	3	7	3	-	13	
Medical	46	6	2	2	2	12	
Education	-	-	-	-	-	-	
Distribution	75	6	2	3	7	18	
Federal Government	10	-	-	2	-	2	
State & Local Government	29	2	-	5	-	7	
Services	-	-	-	-	-	-	
Industry-Specific Subtotal	32%	62	20	38	23	143	
Cross-Industry							
Accounting/Financial Services	36	73	20	19	17	129	
Human Resources	4	6	1	1	-	8	
Marketing & Sales	48	10	2	-	-	12	
Purchasing	11	2	2	3	1	8	
Management	23	3	2	2	2	9	
Other	37	12	3	9	-	24	
Cross-Industry Subtotal	27%	106	30	34	20	190	
Total	30%	168	50	72	43	333	

- Over 60% of the processing and software applications mentioned were cross-industry applications.
- Highest were accounting and financial services applications, with 39% of all applications mentioned, and a growth of 36%.
- Respondents' specialization in providing services based on hardware manufacturers varied according to services offered, as shown in Exhibit III-17.
 - Overall, IBM received the highest number of mentions with 41% of all responses.
 - Vendors benefiting the most from IBM's large installed mainframe base were professional services (61%) and software products (49.5%).
 - IBM was not the major vendor in integrated systems, however, where it received only three mentions, or 5%.
- Digital Equipment, second to IBM in total number of responses (10%), was the major hardware vendor for integrated systems with 29% of all mentions. Second to Digital Equipment in this category was Data General with 16% of the responses.
- Hewlett-Packard ranked second to IBM in software products and fourth overall with 7% of all mentions.
- Of the large mainframe manufacturers, both Honeywell and NCR received 4% of the total mentions, followed by Univac and Burroughs.

HARDWARE SPECIALIZATION OF RESPONDENTS BY
COMPUTER MANUFACTURER

HARDWARE MANUFACTURER	SOFTWARE PRODUCTS		PROFESSIONAL SERVICES		INTEGRATED SYSTEMS		TOTAL	
	NUMBER OF RESPONSES	PERCENT OF TOTAL	NUMBER OF RESPONSES	PERCENT OF TOTAL	NUMBER OF RESPONSES	PERCENT OF TOTAL	NUMBER OF RESPONSES	PERCENT OF TOTAL
Basic Four	1	1.0%	2	3.0%	4	6.5%	7	3.0%
Burroughs	2	1.5	-	-	1	1.5	3	1.0
Data General	6	5.0	5	7.5	10	16.0	21	9.0
Digital Equipment	4	3.5	3	4.5	18	29.0	25	10.0
Honeywell	3	2.5	2	3.0	5	8.0	10	4.0
Hewlett Packard	9	8.0	2	3.0	6	10.0	17	7.0
IBM	57	49.5	40	61.0	3	5.0	100	41.0
Microdata	-	-	-	-	2	3.0	2	1.0
NCR	4	3.5	5	7.5	-	-	9	4.0
Prime	-	-	-	-	3	5.0	3	1.0
Texas Instruments	-	-	-	-	2	3.0	2	1.0
Univac	-	-	3	4.5	1	1.5	4	1.5
Wang	4	3.5	-	-	1	1.5	5	2.0
Multiple Microcomputers	6	5.0	1	1.5	-	-	7	3.0
Multiple Minicomputers	9	8.0	2	3.0	6	10.0	17	7.0
Multiple Mainframes	10	9.0	1	1.5	-	-	11	4.5
Total	115	100%	66	100%	62	100%	243	100%

IV PROCESSING SERVICES COMPANIES

IV PROCESSING SERVICES COMPANIES

A. INDUSTRY ANALYSIS

- Processing services companies continue to be the leaders in the computer services industry.
 - Fifty percent of the industry's \$22.1 billion in revenue is generated by processing companies.
 - Of the 6,178 services firms, 2,259 or 37% are processing companies.
 - Fifty-two percent of the workforce in the industry is employed in processing companies.
 - Forty-five percent of companies with U.S. revenue exceeding \$10 million are processing companies.
 - Twenty-two of these firms have revenue exceeding \$100 million.
 - Two have revenue exceeding \$500 million.
- Well-established processing services companies are often acquisition targets for larger corporations seeking investment opportunities or the means to deliver information or services electronically.

- Forty-seven of the over \$10 million processing firms (43%) are owned by larger corporations in industries such as banking, publishing, financial services, diversified manufacturing, and oil.
- There has been little foreign penetration in the U.S. processing market as only three of the over \$10 million firms have foreign parents: two are Canadian and one is French.
- The remaining 59 firms over \$10 million are independents.
- Although the importance of this group of companies cannot be underestimated, they are beginning to lose market share to software products and integrated systems companies.
 - In 1980, processing companies generated 53% of total industry revenue.
 - In 1981, this declined to 50%.
- The economic recession had an impact on processing companies about mid-1981. Although this caused revenue to slow, these companies still finished the year with an overall growth rate of 18%.
- Remote computing services (RCS) is the leading processing mode with 44% of the revenue as shown in Exhibit IV-1.
 - Nearly half the revenue of the over \$10 million companies came from RCS.
 - The under \$10 million firms have a larger share of their revenue coming from batch services.
- Diversification into other service modes occurs as companies increase in size.

EXHIBIT IV-1

REVENUE DISTRIBUTION BY SERVICE MODES OF
PROCESSING SERVICES COMPANIES, 1981

SERVICE MODE	PERCENT OF TOTAL REVENUE				
	SIZE OF COMPANY (\$ millions)				
	\$0.25-1	\$1-10	\$10-25	>\$25	TOTAL*
Remote Computing Services	27%	43%	48%	46%	44%
Batch Services	64	39	24	25	32
Facilities Management	0	6	15	11	9
Processing Services Subtotal*	91%	88%	87%	82%	85%
Applications Software Products	3	7	3	2	4
Systems Software Products	0	0	1	2	1
Software Products Subtotal*	3%	7%	4%	4%	5%
Government Professional Services	0	3	1	3	3
Commercial Professional Services	6	2	2	6	4
Professional Services Subtotal*	6%	5%	4%	9%	7%
Integrated Systems	0	0	6	4	3
TOTAL*	100%	100%	100%	100%	100%

* May not total due to rounding.

- Professional services is the largest of the other service modes with 7% of the total.
 - Software products and integrated systems followed with 5% and 3% of total revenue.
- Exhibit IV-2 shows revenue growth within processing services companies for all services offered.
 - RCS services grew the fastest of the three processing modes, showing an 18% increase; growth was down, however, from 24% in 1980.
 - Batch services grew 15% in 1981, more than doubling the 7% growth rate reported in 1980. Most of this growth came from the over \$25 million firms providing seismic, accounting, tax, and mail list services.
 - Facilities management processing grew at a faster rate in the over \$25 million companies (16%) versus the combined rate for all companies of 14%. This was a decline from 19% growth in 1980, possibly reflecting companies' reluctance, in today's economy, to commit to long-term contractual agreements.
 - Although software products and integrated systems represent a small portion of processing companies' total revenue, they experienced the highest growth rates, 44% and 31% respectively. High growth rates in both service modes should continue as the cost of hardware declines and vendors increase development of user site hardware services and integrated systems.

EXHIBIT IV-2

REVENUE GROWTH BY SERVICE MODES OF
PROCESSING SERVICES COMPANIES, 1980-1981

SERVICE MODE	REVENUE GROWTH 1980-1981 (percent)				
	SIZE OF COMPANY (\$ millions)				TOTAL
	\$0.25-1	\$1-10	\$10-25	> \$25	
Remote Computing Services	28%	16%	25%	17%	18%
Batch Services	9	10	13	21	15
Facilities Management	N/A	14	1	16	14
Processing Services Subtotal	14%	13%	17%	18%	16%
Applications Software Products	50	51	53	88	60
Systems Software Products	N/A	N/A	66	12	14
Software Products Subtotal	50%	51%	55%	37%	44%
Government Professional Services	N/A	0	0	18	11
Commercial Professional Services	11	17	21	32	27
Professional Services Subtotal	11%	7%	12%	27%	21%
Integrated Systems	N/A	100	23	32	31
TOTAL	15%	15%	18%	20%	18%

B. TRENDS IN PROCESSING SERVICES COMPANIES

- Processing services respondents reported an overall company growth rate of 23% in U.S. revenue in 1981, as shown in Exhibit IV-3. This was a higher growth rate than the industry performance of 18% for processing companies.
 - Processing companies in the \$10 to \$25 million range grew the fastest in the U.S. (26%), in foreign markets (36%), and for total computer services (28%).
 - Foreign revenue from the over \$25 million companies grew at 12%, reflecting the economic decline in Europe.
- The largest and fastest-growing use of processing services, according to respondents, is transaction processing services, as shown in Exhibit IV-4.
 - Representing 59% of respondents' revenue, transaction processing grew 23% in 1981.
 - This high concentration of revenue and a high growth rate are expected, since most business accounting and specialized industry applications are in this category.
- Other trends in processing are:
 - Vendor data bases services, although representing only 4% of processing companies' revenue, grew at the second highest rate of 21%.
 - Problem solving and data base management services, with a marginal growth rate of 15%, appear to be losing to the more application-oriented transaction services.

EXHIBIT IV-3
 REVENUE DISTRIBUTION OF RESPONDING
 PROCESSING SERVICES COMPANIES, 1981

SIZE OF COMPANY (\$ millions)	REVENUE TYPE AS A PERCENT OF TOTAL COMPANY REVENUE					
	COMPUTER SERVICES			TOTAL COMPUTER SERVICES	OTHER	TOTAL
	CAPTIVE	FOREIGN	NONCAPTIVE U.S.			
\$0.25 - 1 ● 1981 ● Growth 1980 - 1981	0	0	98%	98%	2%	100%
	0	0	24	24	8	24
\$1 - 10 ● 1981 ● Growth 1980 - 1981	10%	1%	83	94	6	100
	18	11	22	21	11	20
\$10 - 25 ● 1981 ● Growth 1980 - 1981	2	17	47	66	34	100
	18	36	26	28	13	22
\$ > 25 ● 1981 ● Growth 1980 - 1981	11	7	76	94	6	100
	35	12	23	23	56	25
TOTAL ● 1981 ● Growth 1980 - 1981	9%	8%	72%	89%	11%	100%
	32%	20%	23%	24%	28%	24%

69 Respondents

EXHIBIT IV-4

USE OF PROCESSING SERVICES SOLD BY
RESPONDING PROCESSING COMPANIES

USE OF PROCESSING SERVICES	PERCENT OF PROCESSING SERVICES REVENUE		1980/1981 PERCENT GROWTH
	1980	1981	
Problem Solving and Data Base Management Services	26%	25%	15%
Transaction Processing Services	57	59	23
Vendor Data Base Services	4	4	21
Utility Services	13	12	13
TOTAL	100%	100%	19%

66 Respondents

- Utility processing services declined as a percent of processing revenue and grew at the slowest rate (13%).
- Companies responding to the mail survey were asked what percent of their revenue came from processing services in competition with IBM's Network Information Services.
 - Only 10 of the 69 respondents (14%) stated they had revenue in direct competition. The overall potential loss of revenue to these 10 respondents represented 20% of their total processing revenue.
 - The majority of the respondents, 44 companies, believed none of their revenue was in direct competition.
 - The remaining 15 respondents did not answer the question or indicated they didn't know, reflecting some firms' uncertainty about IBM's intentions.
- Respondents were asked what percent of their processing revenue came from facilities management services. Only nine of the 69 respondents replied and indicated this mode of delivery grew 25% in 1981.
- Smaller processing services companies depend on a few clients for most of their revenue, as shown in Exhibit IV-5.
 - Over 40% of revenue from the under \$10 million processing firms comes from their top 10 clients.
 - This proportion declines as companies become larger and more diverse; 33% for companies in the \$10-\$25 million range and 19% for companies over \$25 million in revenue.
- Exhibit IV-6 shows that respondents reported lower pretax profits in 1981 than in 1980, as expected in a recessionary economy.

EXHIBIT IV-5

PERCENT OF REVENUE FROM TOP 10 CLIENTS -
 PROCESSING SERVICES COMPANY RESPONDENTS

COMPANY SIZE (\$ millions)	PERCENT OF 1980 REVENUE	PERCENT OF 1981 REVENUE
\$0.25-1	43%	47%
\$1-10	46	40
\$10-25	36	33
> \$25	18	19
Total	26%	25%

60 Respondents

EXHIBIT IV-6

PRETAX PROFITS OF RESPONDING PROCESSING SERVICES COMPANIES

SOURCE	1980 PRETAX PROFITS	1981 PRETAX PROFITS	NUMBER OF RESPONDENTS
U.S. Noncaptive Revenue	11.8%	11.3%	48
Foreign Noncaptive Revenue	2.0	2.5	5
Total Computer Services Revenue	11.4	10.2	50

- Pretax profits on U.S. noncaptive revenue averaged 11.3% in 1981 versus 11.8% in 1980.
- Foreign pretax profits showed a slight gain; however, profits of 2.5% are not impressive.

V SOFTWARE PRODUCTS COMPANIES

V SOFTWARE PRODUCTS COMPANIES

A. INDUSTRY ANALYSIS

- Software products companies were the fastest growing of the computer services companies in 1981.
 - The 42% growth rate for these firms was the highest in the industry.
 - Software products companies generated 17% of the total revenue in the industry, or \$3.7 billion in 1981.
 - Second to processing in terms of number of firms, software companies have the largest concentration of firms in the under \$1 million size (74%).
 - The largest software companies consist of nine hardware companies and 26 independents. Dominant among them is IBM.
- U.S.-based software companies in the over \$10 million size have found world markets for their products. Foreign revenue represents over 30% of these firms' total revenue.
- As shown in Exhibit V-1, software products companies derive most revenue (88%) from their primary service mode.

EXHIBIT V-1

REVENUE DISTRIBUTION BY SERVICE MODES
OF SOFTWARE PRODUCTS COMPANIES, 1981

SERVICE MODE	PERCENT OF TOTAL REVENUE			
	SIZE OF COMPANY (\$ millions)			
	\$0.25-1	\$1-10	>\$10	TOTAL*
Remote Computing Services	0%	0%	1%	0%
Batch Services	0	1	1	1
Facilities Management	0	0	0	0
Processing Services Subtotal*	0%	1%	2%	1%
Applications Software Products	57	61	26	42
Systems Software Products	30	36	57	46
Software Products Subtotal*	87%	97%	83%	88%
Government Professional Services	3	0	6	4
Commercial Professional Services	9	2	8	6
Professional Services Subtotal*	12%	2%	14%	10%
Integrated Systems	0	0	1	1
TOTAL*	100%	100%	100%	100%

* May not total due to rounding.

- Companies under \$10 million have more application product revenue.
 - Companies over \$10 million derive most of their revenue from systems products.
 - Revenue from professional services is an important source of income to the small and large software products companies, but of much less importance to the medium-sized firms.
 - Integrated systems revenue, a small percentage of the total, is concentrated in the larger firms.
 - Systems software products continue to generate the most revenue (46%) but application products are gaining: 42% in 1981 versus 39% in 1980.
- Exhibit V-2 shows the impressive growth rates between 1980 and 1981 for the three size classifications of software products companies.
 - As a composite, software revenue grew 47% between 1980 and 1981.
 - The range of revenue growth was from 31% to 75%, with the \$1-10 million companies showing the highest gains.
- Application software products grew the fastest at 51%, versus 43% for systems software.
 - Growth in application software should continue to be strong as hardware prices decline and first-time users seek application solutions to avoid the high costs of developing custom software.
 - The highest growth markets for systems and application software will come from products for minicomputers and personal computers.

EXHIBIT V-2

REVENUE GROWTH BY SERVICE MODES OF
SOFTWARE PRODUCTS COMPANIES, 1980-1981

SERVICE MODE	REVENUE GROWTH, 1980-1981 (percent)			
	SIZE OF COMPANY (\$ millions)			TOTAL
	\$0.25-1	\$1-10	>\$10	
Remote Computing Services	N/A	N/A	(16%)	(16%)
Batch Services	N/A	0	10	3
Facilities Management	N/A	N/A	N/A	N/A
Processing Services Subtotal	0%	0%	(11%)	(7%)
Applications Software Products	31	75	43	51
Systems Software Products	35	61	39	43
Software Products Subtotal	32%	70%	40%	47%
Government Professional Services	0	0	13	10
Commercial Professional Services	0	0	34	20
Professional Services Subtotal	0%	0%	25%	16%
Integrated Systems	100	0	160	91
TOTAL	28%	66%	37%	42%

- Processing services declined by 7% between 1980 and 1981, but this did not have a significant impact on revenue growth of these firms since it only contributed 1% of total revenue.
- Software firms' revenue from the sale of integrated systems is small (1%), but growing at 91%.
 - Growth is occurring in the under \$1 million and over \$10 million firms. The under \$1 million firms need it to enhance sales, whereas the over \$10 million firms view it as an alternate delivery mode and revenue source.
 - Absence of revenue or growth in the \$1-\$10 million size companies may be due to the high growth rates these companies achieved in product sales, leaving them less time to concentrate on new delivery modes.
 - Migration towards integrated systems should continue as the product lines of the software firms expand, giving them more sales leverage in offering hardware/software solutions. Companies offering industry-specific applications to small and mid-sized organizations should experience higher growth levels.

B. TRENDS IN SOFTWARE PRODUCTS COMPANIES

- Twenty-two percent of the respondents' noncaptive revenue came from foreign sources in 1981, as shown in Exhibit V-3.
 - Not surprisingly, the over \$10 million firms reported the largest percent, with 24% of their total revenue coming from foreign markets.
 - All companies recorded strong growth rates in foreign sales, with the under \$10 million firms growing at higher rates.
- Responding software products companies (all were independents) have a higher concentration of their revenue in computer services activities (98%) than the other three company types.
- The 44% growth rate reported by respondents is close to the 42% growth rate for all software companies in the industry.
- As shown in Exhibit V-4, respondent software products companies derived almost two-thirds of their revenue from applications software.
 - This trend was consistent across all company sizes with a range from 63% to 73%.
 - As would be expected, the smallest companies had the largest amount of applications software revenue, since they focus in the micro and mini market where opportunities are greater.
- The 46% composite growth from 1980 to 1981 is impressive. This should be followed in future years with equally impressive profit margins as the base is expanded and development costs are recovered.

EXHIBIT V-3

REVENUE DISTRIBUTION OF
RESPONDING SOFTWARE PRODUCTS COMPANIES, 1981

SIZE OF COMPANY (\$ millions)	REVENUE TYPE AS A PERCENT OF TOTAL COMPANY REVENUE						
	COMPUTER SERVICES			TOTAL COMPUTER SERVICES	OTHER	TOTAL	
	CAPTIVE	NONCAPTIVE					
		FOREIGN	U.S.				
\$0.25 - 1 ● 1981 ● Growth 1980 - 1981	0	10%	89%	99%	1%	100%	
	0	119	78	82	20	72	
\$1 - 10 ● 1981 ● Growth 1980 - 1981	1%	9	78	88	12	100	
	N/A	73	69	70	80	71	
> \$10 ● 1981 ● Growth 1980 - 1981	0	24	76	100	0	100	
	0	30	40	37	0	37	
TOTAL ● 1981 ● Growth 1980 - 1981	0%	22%	76%	98%	2%	100%	
	N/A	32%	44%	41%	102%	42%	

32 Respondents

EXHIBIT V-4

SOFTWARE PRODUCT REVENUE FROM APPLICATIONS/SYSTEMS SOFTWARE -
 RESPONDING SOFTWARE PRODUCTS COMPANIES

SOFTWARE TYPE COMPANY SIZE (\$ millions)	PERCENT OF 1980 REVENUE	PERCENT OF 1981 REVENUE	PERCENT REVENUE GROWTH 1980-1981
Applications Software			
\$0.25-1	73%	63%	56%
\$1-10	60	64	82
> \$10	63	62	40
Applications Software Subtotal	63%	62%	44%
Systems Software			
\$0.25-1	27	37	146
\$1-10	40	36	55
> \$10	37	38	48
Systems Software Subtotal	37%	38%	49%
Total	100%	100%	46%

29 Respondents

- This expanding installed base of software will continue to increase the revenue of the software products companies through annual fees for maintenance and support.
- Among responding software products companies, product sales generate three-fourths of their revenue, as shown in Exhibit V-5.
 - Although respondents reported a 3% decline between 1980 and 1981, this change is not significant.
 - Losses are offset by gains in maintenance and training fees.
- The amount of revenue that software maintenance generates ranges significantly from 4% to 21%, with the larger companies at the high end of the range.
 - The respondent data do not show whether this is due to the higher maintenance fees on the larger firms' software products or the larger installed base. It may be both.
 - It is apparent, however, that the smaller companies who have more microsoftware products have the least maintenance revenue. This is understandable because maintenance is often not required on these products.
- Custom modification of software products dropped dramatically from 1980 to 1981 among the under \$1 million software product respondents, with a five-fold decrease to only 6% of revenue. As software products mature, there is less need to modify them.
- Training and documentation are merely a necessity of doing business for software products companies, and continue to contribute only 5% of revenue among respondents.

EXHIBIT V-5

SOFTWARE REVENUE BY CATEGORY OF
RESPONDING SOFTWARE PRODUCTS COMPANIES

SOURCE OF REVENUE COMPANY SIZE (\$ millions)	PERCENT OF 1980 REVENUE	PERCENT OF 1981 REVENUE
Product Sales		
\$0.25-1	55%	81%
\$1-10	84	83
> \$10	76	73
Product Sales Subtotal	77%	74%
Maintenance		
\$0.25-1	8	4
\$1-10	9	8
> \$10	18	21
Maintenance Subtotal	17%	19%
Custom Modifications		
\$0.25-1	30	6
\$1-10	4	5
> \$10	2	1
Custom Modifications Subtotal	2%	2%
Training and Documentation		
\$0.25-1	7	9
\$1-10	3	4
> \$10	4	5
Training and Documentation Subtotal	4%	5%
Total	100%	100%

29 Respondents

- Although the trade journals would lead us to believe that "the second car in the garage" has been replaced with "a personal computer in the familyroom," software product respondents did not find this a fruitful market.
 - Exhibit V-6 clearly demonstrates that respondent companies are still dependent upon the installed base of large mainframes for their revenue.
 - The distribution of revenue was unchanged from 1980 to 1981 with software product companies deriving 86% of their revenue share from these work horses of the marketplace.
- The smaller respondent companies, however, clearly depend on the personal and microcomputer market for revenue share.
- The personal and microcomputer market has not yet matured, and for every Visicalc success, probably 100 microsoftware products have caused an entrepreneurial programmer to reenter the professional services market as a journeyman programmer.
- This market is further cluttered by the emerging barter economy, clever high-school students, and the expanding number of local, regional, and national computer swap meets and retail outlets that are becoming part of the information-oriented society of the 1980s.
- The selling methods of respondent software companies is a function of the size of company and product price, as shown in Exhibit V-7.
 - The smallest companies showed the most variety in the types of sales channels employed, reporting the use of all options except user groups/conferences/seminars.
 - Only 38% of the total sales for these companies were derived from employing a direct sales staff.

EXHIBIT V-6

SOFTWARE REVENUE BY SIZE OF COMPUTER -
 RESPONDING SOFTWARE PRODUCTS COMPANIES

COMPUTER SIZE / COMPANY SIZE (\$ millions)	PERCENT OF 1980 REVENUE	PERCENT OF 1981 REVENUE
Personal and Microcomputers		
\$0.25-1	48%	65%
\$1-10	0	0
> \$10	1	1
Personal and Microcomputer Subtotal (Weighted Average)	1%	2%
Minicomputers		
\$0.25-1	49	29
\$1-10	18	18
> \$10	12	11
Minicomputers Subtotal (Weighted Average)	13%	12%
Mainframes		
\$0.25-1	3	6
\$1-10	82	82
> \$10	87	88
Mainframe Subtotal (Weighted Average)	86%	86%
Total	100%	100%

29 Respondents

EXHIBIT V-7

RESPONDENTS' SALES DISTRIBUTION CHANNELS, 1981 -
SOFTWARE COMPANIES

SALES METHOD	PERCENT OF REVENUE BY COMPANY SIZE			WEIGHTED AVERAGE OF TOTAL RESPONDENTS
	\$0.25 - 1	\$1 - 10	>\$10	
Direct Sales	38%	79%	96%	93%
Mail /Telephone	22	6	0	1
Retail Stores	11	0	0	1
User Groups /Conferences / Seminars	0	3	1	1
Distributors	28	5	3	3
Other	1	7	0	1
TOTAL	100%	100%	100%	100%

29 Respondents

- . Most of the smaller firms are selling microsoftware products, which, because of their low price, can easily be sold by other methods.
- The two larger company size groups still depend on a direct sales approach.
 - . Some minor activity is indicated via distributors and telephone sales.
 - . Other sales methods mentioned were mainly referrals.
- Direct sales will still be needed for software products as long as the price tag is high and there is a requirement for a long selling cycle involving many people in both technical and business decisions within the potential market.
- Responding software companies, as in the public companies analysis, were the only group who increased their pretax profit margins in 1981, as shown in Exhibit V-8.
- Foreign profits increased to 7.1%, but are still low in comparison to U.S. profits of 13.5%.
- Respondents' total profit gains were slightly over 2% between 1980 and 1981.

EXHIBIT V-8

PRETAX PROFITS OF RESPONDING SOFTWARE COMPANIES

SOURCE	1980 PRETAX PROFITS	1981 PRETAX PROFITS	NUMBER OF RESPONDENTS
U.S. Noncaptive Revenue	12.6%	13.5%	14
Foreign Noncaptive Revenue	4.8	7.1	10
Total Computer Services Revenue	9.0	11.3	17

VI PROFESSIONAL SERVICES COMPANIES

VI PROFESSIONAL SERVICES COMPANIES

A. INDUSTRY ANALYSIS

- In 1981, professional services firms produced \$4.5 billion in revenue, or 20% of the industry total.
 - These firms are second to processing services in revenue size and number of employees.
 - The 69 firms with revenue over \$10 million accounted for 62% of the revenue for all professional services firms.
 - Five of the professional services firms over \$10 million have revenue exceeding \$100 million, and one is over \$500 million.
 - Revenue growth of professional services firms was 21% in 1981, down from 27% in 1980.

- As in other company types, professional services companies have a high concentration of their revenue (83%) from their primary service offering, as shown in Exhibit VI-1.

EXHIBIT VI-1

REVENUE DISTRIBUTION BY SERVICE MODES
OF PROFESSIONAL SERVICES COMPANIES, 1981

SERVICE MODE	PERCENT OF TOTAL REVENUE			
	SIZE OF COMPANY (\$ millions)			
	\$0.25-1	\$1-10	>\$10	TOTAL*
Remote Computing Services	0%	0%	6%	4%
Batch Services	0	6	2	3
Facilities Management	0	7	1	2
Processing Services Subtotal*	0%	13%	9%	9%
Applications Software Products	14	3	2	4
Systems Software Products	10	0	2	2
Software Products Subtotal*	24%	3%	4%	6%
Government Professional Services	0	16	53	37
Commercial Professional Services	76	68	32	46
Professional Services Subtotal*	76%	84%	85%	83%
Integrated Systems	0	0	2	1
TOTAL *	100%	100%	100%	100%

* May not total due to rounding.

- Revenue from government professional services (37%) was lower than from commercial services (46%), but remained a higher percentage in the over \$10 million firms (53%).
- Regional or local firms under \$10 million in revenue have a higher concentration of commercial clients.
- The under \$1 million companies have more revenue coming from software products than the larger firms.
- Integrated systems revenue represents the lowest source of revenue from professional services firms with only 1%.
- Government professional services grew at a slower rate (18%) than commercial services (24%) in 1981, as shown in Exhibit VI-2.
 - This was a decline from the 1980 growth rate of 28% for government professional services.
 - The lower overall growth rate of 21% in 1981 for professional services might be attributed to:
 - Reductions in government spending.
 - A recessionary economy in which organizations have deferred all but essential expenditures.
 - Increased use of packaged software.
- Growth rates in other service modes for professional services companies were high in integrated systems (62%) and software products (24%) firms.
- Processing services offered by professional services companies grew at the lowest rate, 9%, and may have been affected by reductions in the government sector.

EXHIBIT VI-2

REVENUE GROWTH BY SERVICE MODES OF
PROFESSIONAL SERVICES COMPANIES, 1980-1981

SERVICE MODE	REVENUE GROWTH, 1980-1981 (percent)			
	SIZE OF COMPANY (\$ millions)			TOTAL
	\$0.25-1	\$1-10	>\$10	
Remote Computing Services	N/A	0%	2%	2%
Batch Services	N/A	76	0	29
Facilities Management	N/A	0	(12)	(2)
Processing Services Subtotal	N/A	27%	0%	9%
Applications Software Products	54	0	54	39
Systems Software Products	0	0	14	7
Software Products Subtotal	26%	0%	31%	24%
Government Professional Services	N/A	19	18	18
Commercial Professional Services	24	26	23	24
Professional Services Subtotal	24%	24%	20%	22%
Integrated Systems Subtotal	N/A	100	59	62
TOTAL	24%	24%	19%	21%

B. TRENDS IN PROFESSIONAL SERVICES COMPANIES

- Revenue distribution of responding professional services firms was less concentrated in computer services activities than the other company types, as shown in Exhibit VI-3.
 - Computer services revenue, as a percent of total company revenue, ranged from 50% in the small firms to a high of 97% in companies in the \$1-\$10 million range.
 - Growth rates were higher in the under \$10 million firms.
 - Foreign revenue was almost nonexistent, with only a small amount reported in the \$1-\$10 million range.
 - Captive revenue was reported in the over \$10 million respondent firms.
- Respondents' revenue from government clients was lower than revenue derived from the commercial sector, as shown in Exhibit VI-4.
 - Government professional services of the respondents declined in the under \$10 million firms, but increased in the larger firms.
 - Eighty percent or more of the under \$10 million respondents' revenue comes from commercial clients.
 - All companies reported higher growth rates from commercial clients.
- Overall, respondent professional services companies reported a higher growth rate (24%) than the industry performance of 21%.

EXHIBIT VI-3

REVENUE DISTRIBUTION OF
 RESPONDING PROFESSIONAL SERVICES COMPANIES, 1981

SIZE OF COMPANY (\$ millions)	REVENUE TYPE AS A PERCENT OF TOTAL COMPANY REVENUE						
	COMPUTER SERVICES			TOTAL COMPUTER SERVICES	OTHER	TOTAL	
	CAPTIVE	NONCAPTIVE					
		FOREIGN	U.S.				
\$0.25 - 1 ● 1981 ● Growth 1980 - 1981	0	0	50%	50%	50%	100%	
\$1 - 10 ● 1981 ● Growth 1980 - 1981	0	1%	96	97	3	100	
> \$10 ● 1981 ● Growth 1980 - 1981	2%	0	67	69	31	100	
TOTAL ● 1981 ● Growth 1980 - 1981	39%	0	15	14	38	20	
	2%	0%	69%	71%	29%	100%	
	39%	0%	17%	16%	37%	21%	

49 Respondents

EXHIBIT VI-4

RESPONDENTS' REVENUE FROM GOVERNMENT/COMMERCIAL CLIENTS - PROFESSIONAL SERVICES COMPANIES

CLIENT COMPANY SIZE (\$ millions)	PERCENT OF 1980 REVENUE	PERCENT OF 1981 REVENUE	PERCENT REVENUE GROWTH 1980-1981
Government			
\$0.25-1	27%	22%	20%
\$1-10	12	11	10
> \$10	36	49	21
Government Subtotal	32%	45%	20%
Commercial			
\$0.25-1	73	78	56
\$1-10	88	89	20
> \$10	64	51	27
Commercial Subtotal	68%	55%	26%
Total	100%	100%	24%

45 Respondents

- Exhibit VI-5, presenting the distribution of professional services revenue by type of activity, shows that programming and analysis continue to dominate as the primary revenue source of respondent firms.
 - Consulting and education, the two services most likely to be affected in a recession, did decline in revenue between 1980 and 1981.
 - From 14% of revenue in 1980, consulting services dropped to 11% in 1981.
 - Education and training revenue declined to only 1% of all respondent revenue in 1981.
 - In the largest companies, facilities management services did show a slight growth, representing 7% of the respondents' 1981 revenue.
- Concentration of client base is evident in the responding professional services companies, as shown in Exhibit VI-6.
 - Dependency upon their top 10 clients accounts for most of the respondents' revenue.
 - The smaller companies are the most vulnerable to unplanned cancellations of work, since they derive more than 94% of revenue from these primary clients.
 - Even in the larger firms, over 60% of their revenue is dependent on a handful of clients.
- Pretax profits of respondent professional services firms declined in 1981, as shown in Exhibit VI-7.
 - Overall, respondent professional services companies have the lowest pretax margins of the four company types.

EXHIBIT VI-5

**RESPONDENTS' REVENUE DISTRIBUTION BY ACTIVITY -
PROFESSIONAL SERVICES COMPANIES**

ACTIVITY COMPANY SIZE (\$ millions)	PERCENT OF 1980 REVENUE	PERCENT OF 1981 REVENUE
Programming and Analysis		
\$0.25-1	68%	70%
\$1-10	81	83
> \$10	80	80
Programming and Analysis Subtotal	80%	81%
Facilities Management		
\$0.25-1	0	0
\$1-10	8	8
> \$10	3	7
Facilities Management Subtotal	4%	7%
Consulting Services		
\$0.25-1	29	27
\$1-10	10	9
> \$10	15	11
Consulting Services Subtotal	14%	11%
Education and Training		
\$0.25-1	3	3
\$1-10	1	0
> \$10	2	2
Education and Training Subtotal	2%	1%
Total	100%	100%

45 Respondents

EXHIBIT VI-6

**RESPONDENTS' PERCENT OF REVENUE FROM TOP 10 CLIENTS -
PROFESSIONAL SERVICES COMPANIES**

COMPANY SIZE (\$ millions)	PERCENT OF 1980 REVENUE	PERCENT OF 1981 REVENUE
\$0.25-1	94%	94%
\$1-10	68	69
> \$10	58	61
Total	61%	62%

43 Respondents

EXHIBIT VI-7

PRETAX PROFITS OF RESPONDING PROFESSIONAL SERVICES COMPANIES

SOURCE	1980 PRETAX PROFITS	1981 PRETAX PROFITS	NUMBER OF RESPONDENTS
U.S. Noncaptive Revenue	7.1%	6.3%	41
Foreign Noncaptive Revenue	1.0	1.6	2
Total Computer Services Revenue	7.1	6.5	40

- Inflation and low profit margins associated with government contracts may continue to have a negative impact on profits in these firms.

VII INTEGRATED SYSTEMS COMPANIES

VII INTEGRATED SYSTEMS COMPANIES

A. INDUSTRY ANALYSIS

- Integrated systems companies captured \$2.8 billion of the U.S. computer services market in 1981. This services market is the only one not dominated by larger firms.
 - Only 38% of the market is held by companies over \$10 million, the lowest share held of the four computer services activities. Leading companies in this size are the CAD/CAM vendors.
 - The companies holding the major share of the integrated systems market (50%) are firms in the \$1-\$10 million range.
- The \$2.8 billion in revenue represents a 13% share of the market.
 - This places integrated systems companies in last place in total revenue and market share of the four company types.
 - However, revenue growth from these firms was 32% in 1981, second only to software products companies.
- Companies in this classification derived 89% of their revenue from integrated systems, as shown in Exhibit VII-1.

EXHIBIT VII-1

REVENUE DISTRIBUTION BY SERVICE MODES
OF INTEGRATED SYSTEMS COMPANIES, 1981

SERVICE MODE	PERCENT OF TOTAL REVENUE			
	SIZE OF COMPANY (\$ millions)			
	\$0.25-1	\$1-10	>\$10	TOTAL*
Remote Computing Services	1%	0%	6%	2%
Batch Services	12	1	3	4
Facilities Management	0	0	0	0
Processing Services Subtotal*	13%	1%	2%	6%
Applications Software Products	1	1	2	1
Systems Software Products	0	0	1	1
Software Products Subtotal*	1%	1%	3%	2%
Government Professional Services	0	0	1	1
Commercial Professional Services	1	2	3	2
Professional Services Subtotal*	1%	2%	4%	3%
Integrated Systems	84	95	83	89
TOTAL*	100%	100%	100%	100%

* May not total due to rounding.

- Companies holding the largest share of the market, the \$1-\$10 million firms, are the most focused with 95% of their revenue coming from integrated systems.
 - Processing services are second in revenue generation, but represent only 6% of the total.
 - Professional services and software products contributed smaller percentages, but may represent a higher portion of revenue if these services were unbundled.
- Growth in service modes, as shown in Exhibit VII-2, exceeded 30% in all areas except processing.
 - Integrated systems firms in the under \$10 million size grew faster (36%) than the larger firms (25%).
 - Higher growth rates were recorded for software product sales (37%) than for integrated systems (33%), but this came from a small revenue base.
 - Lower growth rates in processing can be attributed to a few firms who have shifted their marketing emphasis to selling integrated systems rather than processing services.

EXHIBIT VII-2

REVENUE GROWTH BY SERVICE MODES OF
INTEGRATED SYSTEMS COMPANIES, 1980-1981

SERVICE MODE	REVENUE GROWTH, 1980-1981 (percent)			
	SIZE OF COMPANY (\$ millions)			TOTAL
	\$0.25-1	\$1-10	>\$10	
Remote Computing Services	25%	0%	9%	11%
Batch Services	38	5	-7	11
Facilities Management	N/A	N/A	N/A	N/A
Processing Services Subtotal	40%	5%	2%	11%
Applications Software Products	25	100	38	49
Systems Software Products	N/A	N/A	15	14
Software Products Subtotal	25%	100%	28%	37%
Government Professional Services	N/A	N/A	43	46
Commercial Professional Services	25	32	24	29
Professional Services Subtotal	25%	32%	28%	31%
Integrated Systems	34	37	28	33
TOTAL	35%	36%	25%	32%

B. TRENDS IN INTEGRATED SYSTEMS COMPANIES

- Integrated systems respondents stated that 79% of their revenue came from computer service activities, as shown in Exhibit VII-3.
 - Again, the companies most focused on service activities were the under \$10 million firms. These firms also reported higher growth rates.
 - Export revenue was concentrated in the over \$10 million firms, with 12% of their revenue coming from overseas.
- The hardware component, as shown in Exhibit VII-4, is the largest revenue element of the respondents.
 - Hardware revenue dropped, however, as increased revenue was received from hardware maintenance, software products, and software maintenance.
 - These firms reported very little custom modification revenue, further strengthening the expectation that they will continue to sell "packaged solutions".
 - Training and documentation shows almost zero revenue. This is probably because most integrated systems companies bundle this cost into the price of the system and do not report it separately.
- Exhibit VII-5 shows the average number of systems sold by the respondents for 1980 and 1981.
 - The largest increases were reported in the under \$1 million firms, with average systems sales increasing by 89%.

EXHIBIT VII-3

REVENUE DISTRIBUTION OF RESPONDING
INTEGRATED SYSTEMS COMPANIES, 1981

SIZE OF COMPANY (\$ millions)	REVENUE TYPE AS A PERCENT OF TOTAL COMPANY REVENUE					
	CAPTIVE	COMPUTER SERVICES		TOTAL COMPUTER SERVICES	OTHER	TOTAL
		FOREIGN	NONCAPTIVE U.S.			
\$0.25 - 1						
● 1981	0	0	100%	100%	0	100%
● Growth 1980 - 1981	0	0	77	77	0	77
\$1 - 10						
● 1981	0	0	88	88	12%	100
● Growth 1980 - 1981	0	0	34	34	64	38
>\$10						
● 1981	0	12%	66	78	22	100
● Growth 1980 - 1981	0	7	17	15	33	22
TOTAL						
● 1981	0	11%	68%	79%	21%	100%
● Growth 1980 - 1981	0	7%	18%	16%	34%	20%

20 Respondents

EXHIBIT VII-4

RESPONDENTS' REVENUE DISTRIBUTION BY HARDWARE/SERVICES -
INTEGRATED SYSTEMS COMPANIES

HARDWARE/SERVICES COMPANY SIZE (\$ millions)	PERCENT OF 1980 REVENUE	PERCENT OF 1981 REVENUE
Hardware		
\$0.25-1	69%	61%
\$1-10	66	64
> \$10	78	73
Hardware Subtotal	77%	72%
Hardware Maintenance		
\$0.25-1	0	0
\$1-10	4	5
> \$10	9	12
Hardware Maintenance Subtotal	9%	11%
Software		
\$0.25-1	31	39
\$1-10	25	25
> \$10	10	11
Software Subtotal	11%	13%
Software Maintenance		
\$0.25-1	0	0
\$1-10	1	2
> \$10	3	4
Software Maintenance Subtotal	3%	4%
Custom Modifications		
\$0.25-1	0	0
\$1-10	3	2
> \$10	0	0
Custom Modifications Subtotal	0%*	0%*
Training and Documentation		
\$0.25-1	0	0
\$1-10	1	1
> \$10	0	0
Training & Documentation Subtotal	0%*	0%*
Total	100%	100%

16 Respondents

* Revenue Less Than .5%

EXHIBIT VII-5

SYSTEMS SOLD BY RESPONDENTS -
INTEGRATED SYSTEMS COMPANIES

COMPANY SIZE (\$ millions)	AVERAGE NUMBER SYSTEMS SOLD 1980	AVERAGE NUMBER SYSTEMS SOLD 1981	GROWTH 1980/1981
\$0.25-1	9	17	89%
\$1-10	16	21	31
>\$10	242	206	(15)

16 Respondents

- The decline in systems sold by the larger firms was attributed to one vendor who sold half as many systems in 1981 as 1980.
- The larger firms, however, were selling at an annualized rate of 17 systems per month.
- As shown in Exhibit VII-6, integrated systems companies depend upon a direct sales force.
 - As opposed to the increased use of retail stores by major micro and mini manufacturers, respondents reported no activity for this distribution channel.
 - User groups/conferences and seminars created few sales closure opportunities for these respondents and will continue to be only a way to collect leads and other market intelligence. Buyers do not make purchase decisions in such forums.
 - Reference selling is important in integrated systems companies as most of the other sales methods cited were referrals from existing clients.
- Pretax profits declined in respondent integrated systems firms in 1981, as shown in Exhibit VII-7.
 - Respondents reported overall pretax profits of 10.4%, down from 11.5% in 1980.
 - This is an emerging services market, where higher marketing and development costs are incurred.
 - Profits should improve as the client base expands and vendors start increasing prices for the value added component of their product, applications software.

EXHIBIT VII-6

RESPONDENTS' SALES DISTRIBUTION CHANNELS, 1981 -
INTEGRATED SYSTEMS COMPANIES

SALES METHOD	PERCENT OF REVENUE BY COMPANY SIZE			WEIGHTED AVERAGE OF TOTAL RESPONDENTS
	\$0.25 - 1	\$1 - 10	\$10	
Direct Sales	95%	90%	87%	87%
Distributors Sales Force	5	0	1	1
Retail Stores	0	0	0	0
User Groups/Conferences/ Seminars	0	2	0	1
Other	0	8	12	11
TOTAL	100%	100%	100%	100%

16 Respondents

EXHIBIT VII-7

PRETAX PROFITS OF RESPONDING
INTEGRATED SYSTEMS COMPANIES

SOURCE	1980 PRETAX PROFITS	1981 PRETAX PROFITS	NUMBER OF RESPONDENTS
U.S. Noncaptive Revenue	12.6%	10.8%	14
Foreign Noncaptive Revenue	8.0	3.6	3
Total Computer Services Revenue	11.5	10.4	14

VIII VENDOR PERFORMANCE

VIII VENDOR PERFORMANCE

- The published results of 74 publicly held computer services companies are presented in this chapter.
 - The companies presented represent less than 1% of the more than 6,000 firms in the U.S. computer services industry.
 - Their average revenue growth, as shown in Exhibit VIII-1, was 28%, higher than the industry average of 24%.
 - Pretax margins were 12% for all firms, down 1% from 1980 margins of 13%.

- Thirteen of these companies went public in 1981. These were:
 - ASK Computer Systems.
 - Cycare Systems.
 - Data Law.
 - Intergraph.
 - Management Science America.

EXHIBIT VIII-1

PUBLISHED RESULTS OF PUBLIC COMPANIES -
SUMMARY

		FISCAL YEAR (\$ millions)		PERCENT GROWTH 1980-1981	PERCENT PROFIT ON REVENUE	
		1981	1980		1980	1981
Processing Services	R	\$2,271.47	\$1,846.96	23%	1980	14%
	P	\$ 301.69	\$ 254.22	19%	1981	13%
Software Products	R	265.40	182.38	46	1980	11
	P	44.66	19.58	128	1981	17
Professional Services	R	1,017.31	786.71	29	1980	8
	P	72.71	66.35	10	1981	7
Integrated Systems	R	947.60	703.33	35	1980	16
	P	141.51	109.29	29	1981	15
TOTAL	R	\$4,501.78	\$3,519.38	28%*	1980	13%*
	P	\$ 560.57	\$ 449.44	25%*	1981	12%*

R = Revenue (Gross); P = Profit (Before taxes and extraordinary items)

* Weighted Average

74 Companies

- Monchik-Weber.
 - NCA Corporation.
 - Pansophic Systems.
 - Policy Management Systems.
 - SEI Corporation.
 - Software AG.
 - Syscon.
 - Systematics.
- Many public companies that provide computer services are not included in this section because revenue from noncomputer services activities exceeds 25% of their total. Some examples of these firms are Reynolds & Reynolds, Planning Research Corporation, and AGS Computers.
 - The 32 processing companies shown in Exhibit VIII-2 had revenue growth of 23%.
 - Pretax profit margins declined in the processing firms from 14% in 1980 to 13% in 1981.
 - The fastest-growing processing services company in this analysis was Time Sharing Resources with a 61% increase in revenue. Second was Anacomp (the growth leader last year) with 49%.
 - The most profitable processing services company was, for the second year in a row, Comdata Network with 38% pretax profits.

EXHIBIT VIII-2

PUBLISHED RESULTS OF PUBLIC COMPANIES'
PROCESSING SERVICES

COMPANY NAME	FISCAL YEAR END		FISCAL YEAR (\$ millions)		PERCENT GROWTH 1980-1981	PERCENT PROFIT ON REVENUE	
			1981	1980		1980	1981
ANACOMP	6/81	R	\$106.37	\$71.64	48%	1980	12%
		P	14.13	8.25	71	1981	13
ANSTAT	9/81	R	3.82	3.22	19	1980	6
		P	0.27	0.19	42	1981	7
APPLIED DATA PROCESSING	12/81	R	2.88	2.64	9	1980	(3)
		P	(0.15)	(0.09)	(67)	1981	(5)
AUTOMATIC DATA PROCESSING	6/81	R	558.44	455.42	23	1980	17
		P	89.85	75.51	19	1981	16
CITIZENS FINANCIAL	12/81	R	7.28	5.66	29	1980	19
		P	1.81	1.09	66	1981	25
COMDATA NETWORK	12/81	R	19.73	14.37	37	1980	38
		P	7.56	5.40	40	1981	38
COMPUTEK COMPUTING	3/81	R	2.08	1.97	5	1980	7
		P	0.12	0.13	(8)	1981	6
COMPUTER NETWORK	3/81	R	19.28	21.24	(9)	1980	6
		P	(0.20)	1.23	(116)	1981	(1)
COMPUTER RESEARCH	8/81	R	3.39	2.45	38	1980	7
		P	0.31	0.17	82	1981	9
COMPUTER SERVICES	2/82	R	7.60	6.15	24	1980	18
		P	1.39	1.11	25	1981	18
COMPUTER USAGE	9/81	R	11.35	11.42	(1)	1980	6
		P	(0.43)	0.66	(165)	1981	(4)

R = Revenue (Gross); P = Profit (Before taxes and extraordinary items)

* Weighted Average

32 Processing Companies

EXHIBIT VIII-2 (Cont.)

PUBLISHED RESULTS OF PUBLIC COMPANIES'
PROCESSING SERVICES

COMPANY NAME	FISCAL YEAR END		FISCAL YEAR (\$ millions)		PERCENT GROWTH 1980-1981	PERCENT PROFIT ON REVENUE	
			1981	1980		1980	1981
COMSHARE	6/81	R	\$82.90	\$70.83	17%	1980	11%
		P	6.73	8.08	(17)	1981	8
CYCARE SYSTEMS	12/81	R	20.03	14.81	35	1980	7
		P	1.46	1.05	39	1981	7
DYATRON	12/81	R	41.60	34.36	21	1980	4
		P	(4.61)	1.49	(409)	1981	(11)
ELECTRONIC DATA SYSTEMS	6/81	R	454.61	374.66	21	1980	12
		P	60.29	45.47	33	1981	13
ELECTRONIC TABULATING	12/81	R	5.95	5.33	12	1980	16
		P	0.56	0.83	(33)	1981	9
GENESEE COMPUTER CENTER	5/81	R	1.43	1.17	22	1980	1
		P	0.08	0.02	300	1981	6
INFORMATICS	12/81	R	150.33	125.89	19	1980	6
		P	9.31	7.66	22	1981	6
KEYDATA	7/81	R	11.84	16.46	(28)	1980	(24)
		P	(0.93)	(3.98)	77	1981	(8)
NATIONAL DATA CORPORATION	5/81	R	75.67	60.13	26	1980	15
		P	12.94	9.14	42	1981	17
NETWORK DATA PROCESSING	3/81	R	2.16	1.73	24	1980	11
		P	0.32	0.19	68	1981	15
NUMERAX	6/81	R	4.92	4.18	18	1980	7
		P	0.54	0.27	100	1981	11

R = Revenue (Gross); P = Profit (Before taxes and extraordinary items)

* Weighted Average

32 Processing Companies

EXHIBIT VIII-2 (Cont.)

PUBLISHED RESULTS OF PUBLIC COMPANIES'
PROCESSING SERVICES

COMPANY NAME	FISCAL YEAR END		FISCAL YEAR (\$ millions)		PERCENT GROWTH 1980-1981	PERCENT PROFIT ON REVENUE	
			1981	1980		1980	1981
PAY-FONE SYSTEMS	6/81	R	\$4.51	\$3.93	15%	1980	21%
		P	0.96	0.84	14	1981	21
QUOTRON SYSTEMS	12/81	R	88.12	63.81	38	1980	25
		P	20.92	16.07	30	1981	24
SCIENTIFIC COMPUTERS	6/81	R	13.47	13.09	3	1980	21
		P	2.86	2.75	4	1981	21
SEI CORPORATION	12/81	R	32.67	23.06	42	1980	13
		P	4.62	2.88	60	1981	14
SHARED MEDICAL SYSTEMS	12/81	R	131.62	106.58	24	1980	25
		P	32.95	26.22	26	1981	25
STSC	5/81	R	27.61	21.10	31	1980	14
		P	3.11	3.03	3	1981	11
SYSTEMATICS	5/81	R	36.33	30.28	20	1980	8
		P	3.13	2.48	26	1981	9
TELECREDIT	4/80	R	45.58	38.43	19	1980	3
		P	5.06	1.01	401	1981	11
TIME SHARING RESOURCES	5/81	R	8.21	5.10	61	1980	13
		P	1.02	0.68	50	1981	13
TYMSHARE	12/81	R	289.69	235.85	23	1980	15
		P	25.71	34.39	(25)	1981	9
SUBTOTAL		R	\$2,271.47	\$1,846.96	23%*	1980	14%*
		P	\$301.69	\$254.22	19%*	1981	13%*

R = Revenue (Gross); P = Profit (Before taxes and extraordinary items))

* Weighted Average

32 Processing Companies

- The eight software product companies shown in Exhibit VIII-3 achieved a growth rate of 46% in 1981.
 - Pretax profit margins improved by six percentage points, making this group of companies the most profitable in the industry.
 - Profit, as a composite for the software companies analyzed, increased 128% in 1981.
 - Software AG was the fastest growing company with 74%, closely followed by NCA with 72%.
 - Cullinane was the most profitable with 28% pretax margins, a gain of four percentage points over the prior year.
- The 18 professional services firms shown in Exhibit VII-4 had revenue growth of 29%.
 - Pretax profit declined from 8% in 1980 to 7% in 1981.
 - The Continuum Company, for the second year in a row, had the highest growth rate of all professional services companies (69%). C.A.C.I. followed closely with 68%.
 - The Continuum Company also had the highest pretax profit margins, 25% in 1981, leading for the second year.
- The 16 integrated systems companies shown in Exhibit VII-5 grew 35% in 1981.
 - Pretax profit of these firms increased by 1%, resulting in overall margins of 16%.

EXHIBIT VIII-3

PUBLISHED RESULTS OF PUBLIC COMPANIES'
SOFTWARE PRODUCTS

COMPANY NAME	FISCAL YEAR END		FISCAL YEAR (\$ millions)		PERCENT GROWTH 1980-1981	PERCENT PROFIT ON REVENUE	
			1981	1980		1980	1981
APPLIED DATA RESEARCH	12/81	R	\$52.26	\$37.13	41%	1980	3%
		P	4.99	1.22	309	1981	10
COMSERV	12/81	R	17.67	10.70	65	1980	14
		P	3.63	1.44	152	1981	21
CULLINANE DATA-BASE SYSTEMS	4/81	R	29.35	17.73	66	1980	24
		P	8.32	4.30	93	1981	28
MANAGEMENT SCIENCE AMERICA	12/81	R	73.14	53.72	36	1980	10
		P	10.11	5.36	89	1981	14
NCA CORPORATION	12/81	R	12.09	7.01	72	1980	21
		P	2.89	1.47	97	1981	24
PANSOPHIC SYSTEMS	4/81	R	30.15	23.22	30	1980	12
		P	4.01	2.73	47	1981	13
POLICY MANAGEMENT SYSTEMS	12/81	R	31.86	22.01	45	1980	12
		P	6.28	2.59	142	1981	20
SOFTWARE AG	5/81	R	18.88	10.86	74	1980	4
		P	4.43	0.47	843	1981	24
SUBTOTAL		R	\$265.40	\$182.38	46%*	1980	11%*
		P	\$44.66	\$19.58	128%*	1981	17%*

R = Revenue (Gross); P = Profit (Before taxes and extraordinary items)

* Weighted Average

8 Software Companies

EXHIBIT VIII-4

PUBLISHED RESULTS OF PUBLIC COMPANIES'
PROFESSIONAL SERVICES

COMPANY NAME	FISCAL YEAR END		FISCAL YEAR (\$ millions)		PERCENT GROWTH 1980-1981	PERCENT PROFIT ON REVENUE	
			1981	1980		1980	1981
AMERICAN MANAGEMENT SYSTEMS	12/81	R	\$ 65.63	\$ 58.50	12%	1980	6%
		P	(2.03)	3.68	(155)	1981	(3)
ANALYSTS INTERNATIONAL	6/81	R	23.85	20.05	19	1980	3
		P	0.77	0.54	43	1981	3
AUXTON COMPUTER ENTERPRISES	12/81	R	9.66	9.04	7	1980	7
		P	0.46	0.62	(26)	1981	5
C.A.C.I.	6/81	R	58.49	34.73	68	1980	7
		P	3.98	2.42	64	1981	7
CGA COMPUTER ASSOCIATES	4/81	R	15.51	11.81	31	1980	14
		P	1.95	1.64	19	1981	13
COMPUTER ASSISTANCE INTERNATIONAL	1/82	R	13.23	10.93	21	1980	8
		P	0.92	0.84	10	1981	7
COMPUTER DATA SYSTEMS	6/81	R	16.45	14.84	11	1980	9
		P	1.67	1.39	20	1981	10
COMPUTER HORIZONS	2/81	R	10.92	9.97	10	1980	7
		P	0.57	0.74	(23)	1981	5
COMPUTER SCIENCES	3/81	R	600.59	452.63	33	1980	10
		P	47.10	43.23	9	1981	8
COMPUTER TASK GROUP	12/81	R	38.08	24.93	53	1980	7
		P	2.08	1.83	14	1981	6
THE CONTINUUM COMPANY	3/81	R	15.82	9.35	69	1980	31
		P	4.01	2.93	37	1981	25

R = Revenue (Gross); P = Profit (Before taxes and extraordinary items)

EXHIBIT VIII-4 (Cont.)

PUBLISHED RESULTS OF PUBLIC COMPANIES'
PROFESSIONAL SERVICES

COMPANY NAME	FISCAL YEAR END		FISCAL YEAR (\$ millions)		PERCENT GROWTH 1980-1981	PERCENT PROFIT ON REVENUE	
			1981	1980		1980	1981
DATA ARCHITECTS	11/81	R	\$ 12.39	\$ 8.56	45%	1980	8%
		P	1.56	0.71	120	1981	13
KEANE, INC.	12/81	R	16.40	17.32	(5)	1980	1
		P	0.81	0.25	224	1981	5
MONCHIK-WEBER	5/81	R	16.54	13.56	22	1980	9
		P	1.61	1.25	29	1981	10
RAND INFORMATION SYSTEMS	2/81	R	15.48	18.98	(19)	1980	(2)
		P	0.38	(0.32)	219	1981	2
SOFTECH	5/81	R	20.85	13.83	51	1980	3
		P	1.39	0.38	266	1981	7
SYSCON	11/81	R	61.12	51.35	19	1980	7
		P	4.46	3.42	30	1981	7
TECHNALYSIS	12/81	R	6.30	5.33	18	1980	15
		P	1.02	0.80	28	1981	16
SUBTOTAL		R	\$1,017.31	\$786.71	29%*	1980	8%*
		P	\$ 72.71	\$ 66.35	10%*	1981	7%*

R = Revenue (Gross); P = Profit (Before taxes and extraordinary items)

* Weighted Average

18 Professional Services Companies

EXHIBIT VIII-5

PUBLISHED RESULTS OF PUBLIC COMPANIES'
INTEGRATED SYSTEMS

COMPANY NAME	FISCAL YEAR END		FISCAL YEAR (\$ millions)		PERCENT GROWTH 1980-1981	PERCENT PROFIT ON REVENUE	
			1981	1980		1980	1981
APPLICON	4/81	R	\$ 75.05	\$ 50.78	48%	1980	12%
		P	10.19	5.94	72	1981	14
ASK COMPUTER SYSTEMS	6/81	R	13.00	8.33	56	1980	24
		P	2.71	1.99	36	1981	21
AUTO-TROL TECHNOLOGY	12/81	R	46.29	50.76	(9)	1980	12
		P	(5.63)	5.98	(194)	1981	(12)
C3	3/81	R	32.54	14.04	132	1980	33
		P	9.83	4.64	112	1981	30
COMPUTER CONSOLES	12/81	R	50.67	44.15	15	1980	14
		P	5.52	6.26	(12)	1981	11
COMPUTER DESIGNED SYSTEMS	8/81	R	1.91	1.44	32	1980	24
		P	0.35	0.34	3	1981	18
COMPUTERVISION	12/81	R	270.71	191.09	42	1980	21
		P	58.75	40.26	46	1981	22
DATA LAW CO.	12/81	R	0.58	0.09	544	1980	(501)
		P	(0.68)	(0.44)	(55)	1981	(117)
DATA MANAGEMENT	8/81	R	0.44	0.55	(20)	1980	(11)
		P	(0.01)	(0.06)	83	1981	(2)
DIMIS, INC.	12/81	R	3.05	4.07	(25)	1980	17
		P	(0.03)	0.68	(104)	1981	(10)
GERBER SCIENTIFIC	4/81	R	99.56	76.49	30	1980	13
		P	14.98	9.85	52	1981	15

R = Revenue (Gross); P = Profit (Before taxes and extraordinary items)

EXHIBIT VIII-5 (Cont.)

PUBLISHED RESULTS OF PUBLIC COMPANIES'
INTEGRATED SYSTEMS

COMPANY NAME	FISCAL YEAR END		FISCAL YEAR (\$ millions)		PERCENT GROWTH 1980-1981	PERCENT PROFIT ON REVENUE	
			1981	1980		1980	1981
HBO AND COMPANY	3/81	R	\$ 29.09	\$ 20.37	43%	1980	22%
		P	5.62	4.40	28	1981	19
INTERGRAPH	12/81	R	91.10	56.47	61	1980	15
		P	16.23	8.36	94	1981	18
NATIONAL DATA COMMUNICATIONS	10/81	R	8.47	10.36	(18)	1980	11
		P	(2.91)	1.18	(347)	1981	(34)
TRIAD SYSTEMS	9/81	R	78.39	56.51	39	1980	17
		P	16.38	9.35	75	1981	21
UNIVERSITY COM- COMPUTING (WYLY CORP.)	12/81	R	146.75	117.83	25	1980	9
		P	10.48	10.56	(1)	1981	7
SUBTOTAL		R	\$947.60	\$703.33	35%*	1980	16%*
		P	\$141.51	\$109.29	29%*	1981	15%*

R = Revenue (Gross); P = Profit (Before taxes and extraordinary items)

* Weighted Average

16 Integrated Systems Companies

- Data Law Co., a very small company, was the growth leader in 1981, with 562%. Second was C3, a company specializing in integrated systems for the government, with 132%.
- C3 also achieved the highest pretax profits of integrated systems vendors, reporting 30% margins.

APPENDIX A: DEFINITION OF TERMS

APPENDIX A: DEFINITION OF TERMS

A. REVENUE

- TOTAL COMPANY REVENUE - Revenue received from total computer services, and other sources of revenue.
- TOTAL COMPUTER SERVICES REVENUE - Revenue received from services provided by vendors which perform data processing functions using vendor computers (processing services), or assist users to perform such functions on their own computers (software products and/or professional services), or a combination of hardware and software integrated into a total system (integrated systems).
- CAPTIVE COMPUTER SERVICES REVENUE - Revenue received from users who are part of the same parent corporation as the vendors.
- NONCAPTIVE COMPUTER SERVICES REVENUE - Revenue received for computer services provided within the United States from users who are not part of the same parent corporation as the vendor.
- NONCAPTIVE FOREIGN COMPUTER SERVICES REVENUE - Revenue received for computer services provided outside the United States from users who are not part of the same parent corporation as the vendor.

- OTHER REVENUE - Revenue derived from lines of business other than those defined above.

B. SERVICE MODES

- PROCESSING SERVICES - Remote computing services, batch services, and facilities management.
 - REMOTE COMPUTING SERVICES - Provision of data processing to a user by means of terminals at the user's site(s) connected by a data communications network to the vendor's central computer.
 - BATCH SERVICES - This includes data processing performed at vendors' sites of user programs and/or data which are physically transported (as opposed to electronically by telecommunications media) to and/or from those sites. Data entry and data output services, such as keypunching and computer output microfilm processing, are also included. Batch services include those expenditures by users who take their data to a vendor site which has a terminal connected to a remote computer for the actual processing.
 - FACILITIES MANAGEMENT (FM) - (Also referred to as "Resource Management" or "Systems Management.") The management of all or part of a user's data processing functions under a long-term contract (not less than one year). This would include both remote computing and batch services. To qualify as FM, the contractor must directly plan and control as well as operate the facility provided to the user on-site, through communications lines or mixed mode. Simply providing resources, even though under a long-term contract and/or for all of a user's processing needs, does not necessarily qualify as FM.

- SYSTEMS IMPLEMENTATION PRODUCTS - which are used to prepare applications for execution by assisting in designing, programming, testing, and related functions. Examples include languages, sorts, productivity aids, data dictionaries, report writers, project control systems, program library management systems, and retrieval systems.
- PROFESSIONAL SERVICES - This category is made up of services related to EDP, including systems management, systems design, custom/contract programming, consulting, education, and training.
 - Services are sold to:
 - GOVERNMENT - which includes federal, state, and local governments and their agencies.
 - COMMERCIAL - which includes all nongovernment organizations.
- INTEGRATED SYSTEMS - An integration of systems and applications software with hardware, packaged as a single entity. The value added by the vendor is primarily in the software. Most CAD/CAM systems and many small business systems are integrated systems. This does not include specialized hardware systems such as word processors, cash registers, and process control systems.
- SOFTWARE PRODUCTS - This category includes users' purchases of applications and systems packages for use on in-house computer systems. Included are lease and purchase expenditures, as well as fees for work performed by the vendor to implement and maintain the package at the users' sites. Fees for work performed by organizations other than the package vendor are counted in professional services. There are several subcategories of software products.
 - APPLICATIONS PRODUCTS - are software which perform processing to service user functions. They consist of:

- CROSS-INDUSTRY PRODUCTS - which are used in multiple user industry sectors. Examples are payroll, inventory control, and financial planning.
- INDUSTRY-SPECIALIZED PRODUCTS - which are used in a specific industry sector such as banking and finance, transportation, or discrete manufacturing. Examples are demand deposit accounting and airline scheduling.
- SYSTEMS PRODUCTS - are software which enables the computer/communications system to perform basic functions. They consist of:
 - SYSTEMS OPERATIONS PRODUCTS - which function during applications program execution to manage the computer system resource. Examples include operating systems, DBMS, communication monitors, emulators, and spoolers.
 - SYSTEMS UTILIZATION PRODUCTS - which are used by operations personnel to utilize the computer system more effectively. Examples include performance measurement, job accounting, computer operations scheduling, and utilities.

USES OF PROCESSING SERVICES

- PROBLEM SOLVING AND DATA BASE MANAGEMENT SERVICES - Based on software tools designed to manage user data bases and/or convert data into usable information through the use of mathematical, statistical, or financial analysis tools. These tools usually enable the end user to readily and easily display the results in report or graphical form.
- TRANSACTION PROCESSING SERVICES - Usually highly repetitive, clerical applications. Most business accounting fits into this category: payroll,

accounts receivable, order entry, portfolio accounting, and inventory control are all good examples of transaction processing. Many industry-specific applications also fit into this category; for example, wholesale distribution and most hospital processing services.

- VENDOR DATA BASE SERVICES - Based on data bases supplied by the vendor. Although the data base may be public or owned by a third party, the vendor controls access to it. Credit authorization and legal data bases are examples.
- UTILITY SERVICES - Provide access to a computer and/or communications network with basic software that enables users to develop their own programs. Terminal-handling software, sorts, language compilers, scientific library routines, and other systems software, including language, are included in this category.

C. TRENDS AND ISSUES

- REVENUE GROWTH - Derived from one or more of the following:
 - PRICE INCREASES - Proportion of revenue increase derived solely from increasing the price of services.
 - ACQUISITION - Proportion of revenue increase derived from the acquisition of other companies.
 - REAL GROWTH - Proportion of revenue increase derived from all sources net of the effect of price increases and acquisitions.
- SOFTWARE PRODUCT INSTALLATIONS BASED ON HARDWARE VALUE - Presented based on the following values:
 - Personal/Microcomputers - less than \$15,000.

- Minicomputers - \$15,000 to \$250,000.
- Mainframes - greater than \$250,000.
- PRETAX PROFITS - Profits before taxes and extraordinary items.

D. BALANCE SHEET DATA

- TRADE RECEIVABLES - Receivables from clients, excluding rent from tenants, income due from subsidiaries, and other nonclient receivables.
- TOTAL CURRENT LIABILITIES - Includes the current portion of long-term debt, which was also identified as a separate item in the questionnaire.

E. DEFINITIONS OF FINANCIAL RATIOS

- Current ratio =

$$\frac{\text{current assets}}{\text{current liabilities}}$$
- Return on equity after tax =

$$\frac{\text{net income}}{\text{net worth}}$$
- Total debt as a percent of total capital =

$$\frac{\text{total debt including current portion}}{\text{(total debt and net worth)}}$$
- Long-term debt as a percent of equity =

$$\frac{\text{long-term debt}}{\text{equity}}$$

- Trade receivables turnover =

$$30 * \frac{\text{trade receivables}}{\frac{\text{annual revenue}}{12} \times \left(1 + \frac{\text{revenue growth rate}}{2}\right)} = \text{days}$$
- Asset turnover =

$$\frac{\text{revenue}}{\text{total assets}}$$
- Return on assets =

$$\frac{\text{net income}}{\text{total assets}}$$
- Working capital as a percent of total assets =

$$\frac{(\text{current assets} - \text{current liabilities})}{\text{total assets}}$$
- Trade receivables as a percent of total assets =

$$\frac{\text{trade receivables}}{\text{total assets}}$$
- Current assets as a percent of total assets =

$$\frac{\text{current assets}}{\text{total assets}}$$
- Long-term debt less current portion as a percent of total liabilities =

$$\frac{\text{long-term debt less current portion}}{\text{total liabilities}}$$
- Deferred taxes as a percent of current liabilities =

$$\frac{\text{deferred taxes}}{\text{current liabilities}}$$
- Equity as a percent of total assets =

$$\frac{\text{equity}}{\text{total assets}}$$

APPENDIX B: METHODOLOGY AND RECONCILIATION

APPENDIX B: METHODOLOGY AND RECONCILIATION

- Industry performance data in 1980 and 1981 were established by two methodologies:
 - A census of all known computer services firms with U.S. noncaptive revenue exceeding \$10 million with revenue segmented by delivery modes.
 - A stratified random sample of companies under \$10 million with revenue segmented by delivery modes.
- The public company data were extracted from public documents issued by these firms.
- Respondent data, derived from a mail questionnaire, were used only for trend information. There is no statistical validity in these data.
- Expanding the scope of this year's study has yielded significant changes in the estimate of 1980 market size.
 - Integrated systems increased the number of companies covered and added significant revenue to the industry.
 - This also caused some companies to move from their previous classifications to integrated systems, since this is now their primary revenue

source in the U.S. market (Reynolds & Reynolds and University Computing are examples).

- Exhibit B-1 shows the reconciliation in number of companies between last year and this year.
 - Four software companies were omitted due to acquisition, decline in revenue, or reclassification in one of the other service modes.
 - The six increases in professional services were from large professional services companies unknown until this year's research.
 - This year's net gain was two companies.
- Increases in the over \$10 million category (34 companies) in 1981 came from companies moving over the \$10 million mark and new companies discovered for the first time.
- Under \$10 million firms were increased by 750 to account for new startup companies (particularly in software products) and for professional services companies which were believed to be understated from previous reports.
- The revenue reconciliation between last year's and this year's report appears in Exhibit B-2.
 - An increase of \$526 million, all from companies over \$10 million, was added to the 1980 revenue base because of:
 - Companies included for the first time.
 - Companies restating revenue due to acquisitions.
 - This 4% addition of revenue is well within the statistical confidence levels.

EXHIBIT B-1

RECONCILIATION OF NUMBER OF COMPANIES
IN 1980, IN 1981, AND 1982 REPORTS

TYPE OF COMPANY ● SIZE (\$ millions)	1981 REPORT OF 1980 COMPANIES	INCREASE FROM REVISED ESTIMATE*	1982 REPORT OF 1980 COMPANIES	INCREASE IN NUMBER OF COMPANIES IN 1981	1981 NUMBER OF COMPANIES
Processing Services					
● > \$10	98	-	98	11	109
● < 10	2,050	-	2,050	100	2,150
Subtotal †	2,148	-	2,148	111	2,259
Software Products					
● > \$10	26	-4	22	13	35
● < 10	1,200	-	1,200	370	1,570
Subtotal †	1,226	-4	1,222	383	1,605
Professional Services					
● > \$10	53	6	59	10	69
● < 10	925	-	925	290	1,215
Subtotal †	978	6	984	300	1,284
TOTAL †	4,352	2	4,354	794	5,148

* FROM CENSUS OF OVER \$10 MILLION COMPANIES AND BY RANDOM SAMPLE OF UNDER \$10 MILLION COMPANIES.

† ROUNDED

EXHIBIT B-2

RECONCILIATION OF 1980 REVENUE IN 1981 AND 1982 REPORTS
(\$ millions)

TYPE OF COMPANY ● SIZE (\$ millions)	1981 REPORT OF 1980 REVENUE	INCREASE FROM REVISED ESTIMATE*	INTEGRATED SYSTEMS	1982 REPORT OF 1980 REVENUE	1981 REVENUE INCREASE	1981 REVENUE
Processing Services						
● > \$10	\$5,116	\$363	\$232	\$ 5,711	\$1,151	\$ 6,862
● < 10	3,694	-	1	3,695	554	4,249
Subtotal	\$8,810	\$363	\$233	\$ 9,406	\$1,705	\$11,111
Software Products						
● > \$10	1,411	-41	5	1,375	508	1,883
● < 10	1,220	-	6	1,226	595	1,821
Subtotal	\$2,631	\$-41	\$ 11	\$ 2,601	\$1,103	\$ 3,704
Professional Services						
● > \$10	2,110	204	39	2,353	449	2,802
● < 10	1,362	-	-	1,362	328	1,690
Subtotal	\$3,472	\$204	\$ 39	\$ 3,715	\$ 777	\$ 4,492
TOTAL	\$14,913	\$526	\$283	\$15,722	\$3,585	\$19,307

* FROM CENSUS OF OVER \$10 MILLION COMPANIES AND BY RANDOM SAMPLE OF UNDER \$10 MILLION COMPANIES.

- Revenue from integrated systems of the three company types, not counted in last year's report, added \$283 million to the revised 1980 base number of \$15.7 billion.
- The \$3.6 billion of additional revenue generated by these firms in 1981 was a gain of 23%.
- Exhibit B-3 shows a summary of the industry in 1980 and 1981, including revenue reconciliation.

EXHIBIT B-3

RECONCILIATION SUMMARY -
COMPUTER SERVICES INDUSTRY, 1980-1981 (\$ billions)

Company Type by Primary Service	Year	Processing, Software and Professional Services Revenues	Integrated Systems Revenues	Total Market
Processing	1980	\$9.1	\$.2	\$9.3
	1981	10.8	.3	11.1
Software	1980	2.6	—	2.6
	1981	3.7	—	3.7
Professional Services	1980	3.7	.1	3.8
	1981	4.4	.1	4.5
Subtotal	1980	15.4	.3	15.7
	1981	18.9	.4	19.3
Integrated Systems	1980	.3	1.8	2.1
	1981	.4	2.5	2.8
Total	1980	\$15.7	\$2.1	\$17.8
	1981	19.3	2.8	22.1

————— 1980 Basis Comparisons

————— 1981 Basis Comparisons

* May not total due to rounding

APPENDIX C: DATA BASE

REVENUE DISTRIBUTION BY COMPANY TYPE AND SERVICE MODE

(percent)

TYPE OF COMPANY SIZE (\$ millions)	SERVICE MODE												
	PROCESSING SERVICES		SOFTWARE PRODUCTS		PROFESSIONAL SERVICES		INTEGRATED SYSTEMS		TOTAL*				
	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981			
Processing Services													
• \$0.25 - 1	4%	3%	0	0	0	0	0	0	0	4%	3%		
• 1 - 10	15	14	1%	0	1%	1%	0	0	17	15			
• 10 - 25	3	3	0	0	0	0	0	0	3	3			
• > 25	24	23	1	2%	2	3	1%	1%	28	29			
SUBTOTAL	46%	43%	2%	3%	4%	4%	1%	1%	53%	50%			
Software Products													
• \$0.25 - 1	0	0	3	3	0	0	0	0	3	3			
• 1 - 10	0	0	4	5	0	0	0	0	4	5			
• > 10	0	0	6	7	1	1	0	0	7	9			
SUBTOTAL	0%	0%	12%	15%	2%	2%	0%	0%	14%	17%			
Professional Services													
• \$0.25 - 1	0	0	1	1	2	2	0	0	2	2			
• 1 - 10	1	1	0	0	4	4	0	0	5	5			
• > 10	1	1	0	0	11	11	0	0	13	12			
SUBTOTAL	2%	2%	1%	1%	17%	17%	0%	0%	20%	20%			
Integrated Systems													
• \$0.25 - 1	0	0	0	0	0	0	1	2	1	1			
• 1 - 10	0	0	0	0	0	0	5	6	5	6			
• > 10	1	1	0	0	0	0	4	4	5	5			
SUBTOTAL	1%	1%	0%	0%	0%	0%	11%	11%	12%	13%			
TOTAL	49%	45%	16%	19%	23%	23%	12%	13%	100%	100%			

* May not total due to rounding

EXHIBIT C-2

U.S. COMPUTER SERVICES EMPLOYEES BY
TYPE AND SIZE OF COMPANY

TYPE OF COMPANY ● SIZE (\$ millions)	NUMBER OF EMPLOYEES (thousands)	
	1980	1981
Processing Services		
● <\$10	89	94
● >\$10	110	123
Subtotal*	199	217
Software Products		
● <\$10	20	30
● >\$10	21	23
Subtotal*	41	53
Professional Services		
● <\$10	33	38
● >\$10	60	65
Subtotal*	93	103
Integrated Systems		
● <\$10	23	29
● >\$10	12	14
Subtotal*	35	43
Computer Services		
● <\$10	164	191
● >\$10	203	225
TOTAL*	367	416

* May not total due to rounding

EXHIBIT C-3

NUMBER OF QUESTIONNAIRES USED BY
SURVEY TYPE AND SIZE OF COMPANY

TYPE OF SERVICE AND SURVEY	NUMBER USED IN SURVEY (\$ millions)					TOTAL
	\$0.25-0.99	\$1-9.9	\$10-24.9	> \$25		
Processing Services						
● Mail Survey	13	34	10	12	69	
● Random Sample <\$10 Million	12	40	-	-	52	
● Census >\$10 Million	-	-	50	59	109	
● Public Companies	-	12	6	14	32	
Software Products						
● Mail Survey	5	16	9	2	32	
● Random Sample <\$10 Million	14	23	-	-	37	
● Census >\$10 Million	-	-	21	14	35	
● Public Companies	-	-	5	3	8	
Professional Services						
● Mail Survey	16	17	10	6	49	
● Random Sample <\$10 Million	10	15	-	-	25	
● Census >\$10 Million	-	-	44	25	69	
● Public Companies	-	2	10	6	18	
Integrated Systems						
● Mail Survey	2	11	1	6	20	
● Random Sample <\$10 Million	5	23	-	-	28	
● Census >\$10 Million	-	-	17	13	30	
● Public Companies	2	3	1	10	16	
Total	79	196	184	170	629	

SURVEY RESPONDENTS AND TOTAL INDUSTRY STATISTICS

TYPE OF COMPANY SIZE • (\$ millions)	RESPONDENTS				INDUSTRY			
	NUMBER OF RESPONDENTS	1981 REVENUE (\$ millions)	PERCENT OF TOTAL	1980-1981 PERCENT CHANGE IN REVENUE	NUMBER OF COMPANIES	1981 REVENUE (\$ millions)	PERCENT OF TOTAL	1980/1981 PERCENT CHANGE IN REVENUE
Processing Services								
• \$0.25-1	13	\$ 6	0.2%	24%	1,100	\$ 791	4%	15%
• 1-10	34	139	5.2	22	1,050	3,458	16	15
• 10-25	10	153	5.8	26	50	732	3	18
• >25	12	1,101	41.2	22	59	6,130	28	20
Subtotal*	69	\$1,400	52.4%	23%	2,259	\$11,111	50%	18%
Software Products								
• \$0.25-1	5	3	0.1	78	1,180	712	3	28
• 1-10	16	48	1.8	59	390	1,109	5	66
• >10	11	259	9.7	40	35	1,883	9	37
Subtotal*	32	\$ 310	11.6%	44%	1,605	\$ 3,704	17%	42%
Professional Services								
• \$0.25-1	16	7	0.3	47	905	526	2	24
• 1-10	17	58	2.2	27	310	1,164	5	24
• >10	16	455	17.0	15	69	2,802	13	19
Subtotal*	49	\$ 520	19.5%	17%	1,284	\$ 4,491	20%	21%
Integrated Systems								
• \$0.25-1	2	1	0.1	77	600	376	2	35
• 1-10	11	41	1.5	34	400	1,351	6	36
• >10	7	399	14.9	17	30	1,069	5	25
Subtotal*	20	\$ 442	16.4%	18%	1,030	\$ 2,795	13%	32%
TOTAL	170	\$2,672	100.0%	23%	6,178	\$22,101	100%	24%

*May not total due to rounding.

APPENDIX D: QUESTIONNAIRES

CONFIDENTIAL SURVEY



ADAPSO and INPUT assure confidentiality of all returns. The data provided by your company will only be used to produce statistical summary data. A return envelope is enclosed for your reply. If you do not wish to return your questionnaire directly to INPUT, please send it to the alternate return listed below.

INSTRUCTIONS

The questionnaire is designed to be completed by management. Data is requested on your computer services activities for fiscal years 1980 and 1981. Numbers in the left-hand margin correspond to an explanation of terms listed on the enclosed "Definition of Terms."

Please complete the general information section and each subsection as applicable. The four computer services activities surveyed are:

- Processing Services
- Software Products
- Professional Services
- Integrated (Turnkey) Systems

SURVEY RESULTS

The results of the survey will be published in ADAPSO's Sixteenth Annual Survey of the Computer Services Industry. The price of the 1982 report will be \$850 through September 15, 1982, and \$995 thereafter.

As a token of our appreciation for your completed questionnaire, INPUT will send you one of the following summaries (please check your choice):

- Summary of INPUT's Directory of Leading Computer Service Firms - 1982
- Summary of INPUT's Study on Personal Computer Software Market Opportunities

Non-ADAPSO members will also receive a summary of the survey results.

Company Name	_____
Mailing Address	_____ _____ _____
Parent Company Name (if applicable)	_____
<i>(In case we have any questions regarding your return, may we have):</i>	
Your Name	_____
Title	_____
Telephone Number	_____

THANK YOU FOR YOUR PARTICIPATION!

Return questionnaire to:
Kenneth R. Churilla
INPUT
2471 East Bayshore Road, Suite 600
Palo Alto, CA 94303
(415) 493-1600

Alternate return:
George Rittersbach
Peat, Marwick, Mitchell and Co.
345 Park Avenue
New York, NY 10022

ADAPSO QUESTIONNAIRE-1982

FOR OFFICE USE ONLY

CATALOG NO. Y A D 5 _____ (1)

Q TYPE (2)

C TYPE (3)

R TYPE (4)

_____ (5)

GENERAL INFORMATION

1. Fiscal year end Year end (6) Month end (7)
2. Company status (check one) Public ₁ Private ₂ Subsidiary/Division ₃

REVENUE

Def. No.		(\$ thousands)	
		1980	1981
2	3. U.S. non-captive computer services revenue*	\$ _____ (9)	\$ _____ (25)
3	4. Foreign non-captive computer services revenue*	\$ _____ (10)	\$ _____ (26)
4	5. Total captive computer services revenue*	\$ _____ (11)	\$ _____ (27)
5	6. Total computer services revenue* (Total of no. 3, 4 & 5)	\$ _____ (12)	\$ _____ (28)
6	7. Other revenue	\$ _____ (13)	\$ _____ (29)
	8. Total company revenue (Total of no. 6 & 7)	\$ _____ (14)	\$ _____ (30)

EMPLOYEES

Please list the average or mid-year number of employees associated with:

	Number of Employees	
	1980	1981
7 9. U.S. non-captive computer services	_____ (15)	_____ (31)
8 10. Total computer services	_____ (16)	_____ (32)

REVENUE SOURCES

Of your non-captive U.S. and foreign computer services revenue, what percentages came from:

SERVICES OFFERED	UNITED STATES		FOREIGN	
	1980	1981	1980	1981
14 11. Processing services	_____ % (17)	_____ % (21)	_____ % (33)	_____ % (37)
20 12. Professional services	_____ % (18)	_____ % (22)	_____ % (34)	_____ % (38)
25 13. Software products	_____ % (19)	_____ % (23)	_____ % (35)	_____ % (39)
29 14. Integrated systems	_____ % (20)	_____ % (24)	_____ % (36)	_____ % (40)
TOTAL	100 %	100 %	100 %	100 %

* Includes Integrated (Turnkey) Systems Revenue

REVENUE SOURCES (Cont.)

Def.
No.
9

What were/are the targeted percentage growth rates of your non-captive U.S. computer services revenues for the following years?

	Non-Captive U.S.
15. Fiscal 1980	_____ % (41)
16. Fiscal 1981	_____ % (42)
17. Fiscal 1982	_____ % (43)

Relating to the growth rates for your non-captive U.S. computer services revenues, what percent have/will result from:

10

11

12

	FY 1980	FY 1981	FY 1982
18. Price increases	_____ % (44)	_____ % (50)	_____ % (53)
19. Acquisitions	_____ % (45)	_____ % (51)	_____ % (54)
20. Real growth	_____ % (46)	_____ % (52)	_____ % (55)
TOTAL	100%	100%	100%

PROFIT PERFORMANCE

13

What were your pretax profits for the following years?

	FY 1980	FY 1981
21. Pretax profit on non-captive U.S. computer services revenue (Quest. no. 3)	_____ % (47)	_____ % (56)
22. Pretax profit on foreign non-captive computer services revenue (Quest. no. 4)	_____ % (48)	_____ % (57)
23. Pretax profit on total computer services revenue (Quest. no. 6)	_____ % (49)	_____ % (58)

Note: The remainder of the questionnaire has questions appropriate for each of the four types of computer services surveyed. Please complete each subsection where you have sales revenue.

PROCESSING SERVICES

Def.
No.
14

Of your non-captive U.S. processing services revenues, what percentages came from:

16

	1980	1981
24. Problem solving, data base management, business planning and decision support services	$\frac{\quad}{(59)}\%$	$\frac{\quad}{(63)}\%$

17

25. Specialized transaction processing services	$\frac{\quad}{(60)}\%$	$\frac{\quad}{(64)}\%$
---	------------------------	------------------------

18

26. Vendor data base services	$\frac{\quad}{(61)}\%$	$\frac{\quad}{(65)}\%$
-------------------------------	------------------------	------------------------

19

27. Utility services	$\frac{\quad}{(62)}\%$	$\frac{\quad}{(66)}\%$
----------------------	------------------------	------------------------

TOTAL	100%	100%
-------	------	------

What percent of this revenue is from services similar to (competing with) IBM's new Network Information Services?

28. $\frac{\quad}{(67)}\%$

What percent of your U.S. non-captive processing revenue is from facilities management services (processing contracts greater than one year)?

15

29. 1980 $\frac{\quad}{(68)}\%$ 1981 $\frac{\quad}{(69)}\%$

What percent of your U.S. non-captive revenue came from your top 10 clients?

30. 1980 $\frac{\quad}{(70)}\%$ 1981 $\frac{\quad}{(71)}\%$

What are the major applications, industries served, and growth rates of your U.S. non-captive processing services?

Major Applications	Industries Served (If Applicable)	1981 Percent Of Revenue	1980/1981 Growth Rate
31. _____ (72)	_____ (76)	_____ % (80)	_____ % (84)
32. _____ (73)	_____ (77)	_____ % (81)	_____ % (85)
33. _____ (74)	_____ (78)	_____ % (82)	_____ % (86)
34. _____ (75)	_____ (79)	_____ % (83)	_____ % (87)

PROFESSIONAL SERVICES

Def.
No.
20

What percent of your non-captive U.S. professional services revenue was derived from the following clients?

	1980	1981
35. Government (Federal, State and Local)	<u> </u> % (88)	<u> </u> % (94)
36. Commercial	<u> </u> % (89)	<u> </u> % (95)
TOTAL	100%	100%

Of your non-captive U.S. professional services revenue, what percent came from:

	1980	1981
37. Programming and analysis services	<u> </u> % (90)	<u> </u> % (96)
38. Facilities management	<u> </u> % (91)	<u> </u> % (97)
39. Consulting services	<u> </u> % (92)	<u> </u> % (98)
40. Education and training	<u> </u> % (93)	<u> </u> % (99)
TOTAL	100%	100%

21
22
23
24

What percent of your non-captive U.S. professional services revenue came from your top 10 clients in:

41. 1980 % 1981 %
 (100) (101)

What are the specialty areas, industries served, hardware specialization, and growth rates for your U.S. non-captive professional services?

Application/ Specialty Areas	Industries Served (If Applicable)	Hardware Specialization (If Applicable)	1981 Percent Of Revenue	1980/1981 Growth Rates
42. <u> </u> (102)	<u> </u> (106)	<u> </u> (110)	<u> </u> % (114)	<u> </u> % (118)
43. <u> </u> (103)	<u> </u> (107)	<u> </u> (111)	<u> </u> % (115)	<u> </u> % (119)
44. <u> </u> (104)	<u> </u> (108)	<u> </u> (112)	<u> </u> % (116)	<u> </u> % (120)
45. <u> </u> (105)	<u> </u> (109)	<u> </u> (113)	<u> </u> % (117)	<u> </u> % (121)

SOFTWARE PRODUCTS

Def.
No.
25
26
27

What percent of your non-captive U.S. software product revenue was derived from:

	1980	1981
46. Applications software	_____% (122)	_____% (137)
47. Systems software	_____% (123)	_____% (138)
TOTAL	100%	100%

Of your U.S. software revenue, what percent came from:

	1980	1981
48. Product sales including enhancements (license lease/rental)	_____% (124)	_____% (139)
49. Maintenance	_____% (125)	_____% (140)
50. Custom modifications of products	_____% (126)	_____% (141)
51. Training and documentation	_____% (127)	_____% (142)
TOTAL	100%	100%

28

Of your 1980 and 1981 U.S. software revenue, what percent was installed on:

	1980	1981
52. Personal/microcomputers	_____% (128)	_____% (143)
53. Minicomputers	_____% (129)	_____% (144)
54. Mainframes	_____% (130)	_____% (145)
TOTAL	100%	100%

What percent of your U.S. software sales were generated by the following distribution channels?

	1981
55. Direct sales force	_____% (131)
56. Mail/telephone sales	_____% (132)
57. Retail stores	_____% (133)
58. User groups/conferences/seminars	_____% (134)
59. Distributors' sales force	_____% (135)
60. Other _____	_____% (136)
TOTAL	100%

What are your major software products, industries served, hardware, and growth rates for your U.S. non-captive software products?

Major Products/ Application Areas	Industries Served (If Applicable)	Hardware Compatibility	1981 Percent Of Revenue	1980/1981 Growth Rate
61. _____ (146)	_____ (150)	_____ (154)	_____% (158)	_____% (162)
62. _____ (147)	_____ (151)	_____ (155)	_____% (159)	_____% (163)
63. _____ (148)	_____ (152)	_____ (156)	_____% (160)	_____% (164)
64. _____ (149)	_____ (153)	_____ (157)	_____% (161)	_____% (165)

INTEGRATED SYSTEMS

Def.
No.
29

What percent of your U.S. non-captive integrated systems revenue came from:

	1980	1981
65. Hardware (including peripherals)	<u> </u> % (166)	<u> </u> % (172)
66. Hardware maintenance	<u> </u> % (167)	<u> </u> % (173)
67. Software	<u> </u> % (168)	<u> </u> % (174)
68. Software maintenance	<u> </u> % (169)	<u> </u> % (175)
69. Custom modifications	<u> </u> % (170)	<u> </u> % (176)
70. Training and documentation	<u> </u> % (171)	<u> </u> % (177)
TOTAL	100%	100%

How many integrated systems did you sell (booked revenue) in:

71. 1980 (#) 1981 (#)
(178) (179)

What percent of your U.S. integrated systems revenues are generated by the following distribution channels?

	1981
72. Direct sales force	<u> </u> % (180)
73. Distributors' sales force	<u> </u> % (181)
74. Retail stores	<u> </u> % (182)
75. User groups/conferences/seminars	<u> </u> % (183)
76. Other _____	<u> </u> % (184)
TOTAL	100%

What are your major products, industries served, hardware and growth rates for integrated systems?

Major Products/ Application Areas	Industries Served (If Applicable)	Hardware Supplier(s)	1981 Percent Of Revenue	1980/1981 Growth Rates
77. _____ (185)	_____	_____	<u> </u> % (197)	<u> </u> % (201)
78. _____ (186)	_____	_____	<u> </u> % (198)	<u> </u> % (202)
79. _____ (187)	_____	_____	<u> </u> % (199)	<u> </u> % (203)
80. _____ (188)	_____	_____	<u> </u> % (200)	<u> </u> % (204)

THANK YOU!

Catalog No.		Y	A	D	5					(1)
Q Type		<input type="checkbox"/>	(2)							
C Type		<input type="checkbox"/>	(3)							
R Type		<input type="checkbox"/>	(4)							
ID #	_____									

ADAPSO 1982
PUBLIC COMPANY ANALYSIS

COMPANY NAME _____ (5)

FISCAL YEAR END (6)

FISCAL MONTH END (7)

BALANCE SHEET

1980 1981
(In Thousands)

Accounts Receivables	_____	_____	
	(8)	(20)	
Total Current Assets	_____	_____	
	(9)	(21)	
All Other Assets	_____	_____	
	(10)	(22)	
Total Assets	_____	_____	
	(11)	(23)	
Total Current Liabilities	_____	_____	
	(12)	(24)	
Deferred Income Taxes	_____	_____	
	(13)	(25)	
Long Term Debt	_____	_____	
	(14)	(26)	
Total Liabilities	_____	_____	
	(15)	(27)	
Stockholders Investment	_____	_____	
	(16)	(28)	
Retained Earnings	_____	_____	
	(17)	(29)	
Total Equity	_____	_____	
	(18)	(30)	
Liabilities And Equity	_____	_____	
	(19)	(31)	

INCOME STATEMENT

	'77	'78	'79	1980	1981
	(In Thousands)				
Revenues	<u>(32)</u>	<u>(33)</u>	<u>(34)</u>	<u>(42)</u>	<u>(46)</u>
Earnings before taxes and extraordinary items	<u>(35)</u>	<u>(36)</u>	<u>(37)</u>	<u>(43)</u>	<u>(47)</u>
Net Earnings	<u>(38)</u>	<u>(39)</u>	<u>(40)</u>	<u>(44)</u>	<u>(48)</u>
Number of Employees					
Year End			<u>(41)</u>	<u>(45)</u>	<u>(49)</u>

INDEX

INDEX

	<u>Page</u>
Application growth rates	36-38
Foreign revenue	
companies over \$10 million	21,24
respondent data	32-33
Growth rates, targeted versus actual	32,34
Hardware manufacturers used by respondents	38-39
Integrated systems	
application growth	36-37
average systems sold	85,88
financial ratios	27
growth	
by company type	21-22
by service mode	8-10,83-84
growth rates, targeted versus actual	32,34
hardware	
maintenance revenue	84
revenue	85,87
specialization	38-39
impact of price increases/acquisitions	35-36
market share	17,19
pretax profits	
public companies	12-13
respondents	89-91
productivity	10-11,21,23
public company analysis	25-26,103-104
revenue	
custom modification	85,87
distribution by service mode	20-21,81-82
foreign	21,24
training and documentation	85,87
sales distribution channels	89-90
software	
maintenance revenue	87
revenue	85,87
Market size and growth	5,15-17,19
by company type	5-7
by service mode	7-10

	<u>Page</u>
Pretax profits	
public companies	12-13,93-105
respondent data	49,51,66-67,76,79,89,91
Processing services	
application growth	36-38
batch services	43-44
data base services	46,48
facilities management processing	43-44,49
financial ratios	27
growth	
by company type	5-6,22
by service mode	8-10,44-45
growth rates, targeted versus actual	32,34
IBM network competition	49
impact of price increases/acquisitions	35-36
market share	19
pretax profits	
public companies	12-13,25-26
respondents	49,51
problem solving and data base management	46,48
productivity	10-12,23
public company analysis	25-28,95-98
remote computing services	42-44
revenue	
distribution by service mode	17-18,20,42-44
foreign	24-25
from top 10 clients	49-50
transaction processing	46,48
utility	48-49
Productivity	10-12,21,23
Professional services	
application growth	36-37
commercial	70-73,75
financial ratios	27
government	70-73,75
growth	
by company type	5-6,22
by service mode	71-72,9-10,21-22
growth rates, targeted versus actual	32,34
hardware specialization	39
impact of price increases/acquisitions	35
market share	19
pretax profit	
public companies	12-13,25-26
respondents	76,79

	<u>Page</u>
productivity	10-12,23
public company analysis	25-28,99,101-102
revenue	
by activity types	76-77
distribution by service mode	20,69-71
foreign	24
from top 10 clients	76,78
Public companies	
financial ratios	25,27-28
pretax profits	12-13,25-26
revenue and profit by company name	93-95
Questionnaires	
mail	125
public company analysis	133
Reconciliation	116-120
Revenue per employee: see productivity	
Software products	
applications	55-58,60
applications growth	36-38
financial ratios	27
growth	
by company type	21-22
by service mode	8-10,55-57
growth rates, targeted versus actual	32,34
hardware specialization	38-39
impact of price increases/acquisitions	35
market share	17,19
pretax profit	
public companies	12-13
respondents	66-67
productivity	10-11,21,23
public company analysis	25-28,99-100
revenue	
by computer size	63,65-66
custom software modification	61
distribution by service mode	20-21,53-55
foreign	21,24
maintenance	61-62
product sales	61-62
training and documentation	61-62
sales distribution channels	63,65
systems	55-57,63
Survey sample size	123

