INPUT

MARKET FORECAST

# U.S. Information Systems Outsourcing Market Analysis

## 1993-1998

U.S. Outsourcing Program

JANUARY 1994

# U.S. INFORMATION SYSTEMS OUTSOURCING MARKET ANALYSIS

## 1993-1998

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M&S 459/01 12/93

# Abstract

This report summarizes the U.S. information systems outsourcing market as it exists now and as it will evolve through 1998. It examines the components of the market, examines the influences on the market and briefly discusses the competitive environment in the outsourcing market. An alternate market model based on an annuity concept is introduced as a forecasting tool.

Particular attention is paid to the effect that the client/server shift and the expansion of telecommunications services are having on this market. It concludes with a summary and a series of recommendations for participants in this market.

This report is part of INPUT's U.S. Outsourcing Information Systems Program. It contains 70 pages and 32 exhibits.

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

**Outsourcing Information Systems Program**

***U.S. Information Systems Outsourcing Market Analysis, 1993-1998***



OSA • 436 • 1993

# Table of Contents

# Table of Contents (Continued)

# Table of Contents (Continued)

IV

# Table of Contents (Continued)

Appendix

# Exhibits

# Exhibits (Continued)

IV



Appendix

I

# Introduction

This report is part of a series of annual market analysis reports by INPUT issues on the key service modes in the U.S. information systems market. This report is published as part of INPUT's Information Systems Outsourcing Program.

## A
## Scope and Purpose

This report provides an analysis of the outsourcing market in the United States for the periods from 1993 to 1998. It summarizes the trends and market factors that influence the size and composition of both the commercial and the public-sector segments of the U.S. information services market.

It provides revenue forecasts for platform and applications operations, the traditional systems operations activities, as well as for network management and desktop services. It also takes a first look at business operations outsourcing.

Vendors can assess how their market share compares to the overall market segmentation. They can identify the factors that are bringing about changes in this market and assess whether they are taking the proper steps to continue meeting their clients' changing needs.

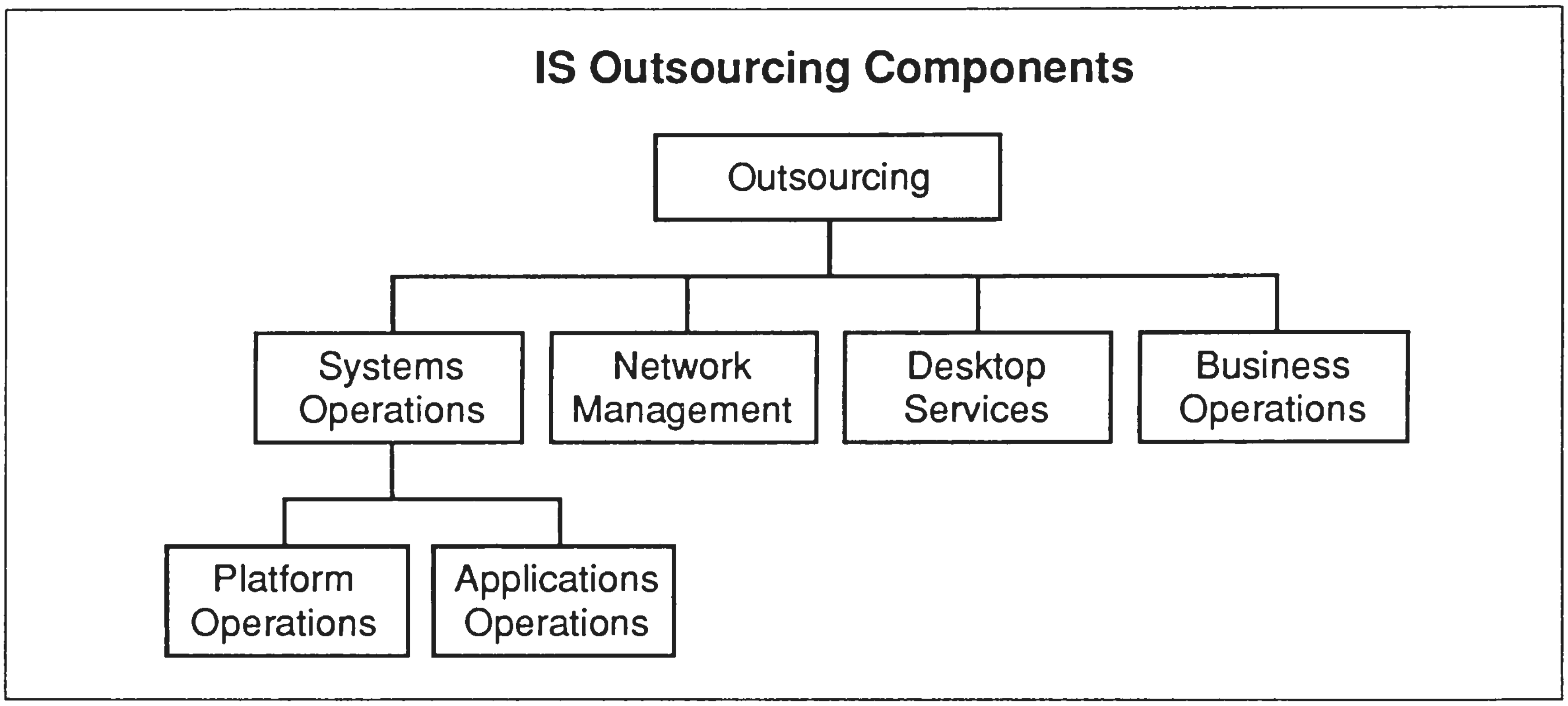
## B
## Definitions and Methodology

The market structure is defined below. The submodes are isolated to better analyze what is happening in the outsourcing market and to track more accurately how client needs are changing over time.

### 1. Definitions

Exhibit I-1 shows how the segments of the outsourcing market are related. To ensure consistency in the interpretation of the data in this report, the following definitions of the various outsourcing segments are provided:

EXHIBIT I-1




Systems Operations - The vendor can provide the information systems operations in either of two ways:

- Platform Systems Operations - The vendor is responsible for managing the computer systems and their associated networks.
- Applications Systems Operations - The vendor is responsible for developing and/or maintaining a client's applications software as well as operating the computer systems and the associated networks.

Network Management - The vendor is responsible for the management and operation of the computer-related information network, transmitting data and text, voice, image and video as required. Voice-only network operations are not currently considered part of information systems outsourcing.

Desktop Services - The vendor provides for the deployment, maintenance, support and connectivity of the client organization's PC/workstation inventory. The service often includes performing the "help desk" function for the client also. A further description of each component of desktop services is included in Chapter III under that topic.

Business Operations Outsourcing - The vendor is responsible for an entire business process in the client's organization, including the staff, facilities and related IS functions or other technology that may be used in the function. That business operation can be a financial operation, one related to human resources, or an entire manufacturing or logistics process.

### 2. Methodology

The data presented in this report has been compiled from a variety of sources. Primary research was conducted with both vendors and clients in the outsourcing market. Data was gathered from the vendors concerning their revenue and market activity, as well as their opinions and strategies. Users were polled as to their spending intentions and their future requirements.

Structured questionnaires were used to collect this data and opinions on a variety of subtopics concerning the outsourcing market throughout the year. Vendors contacted represented more than 60% of the identified revenue in the market. Approximately 65 detailed user interviews were conducted and a number of less formal discussions and telephone contacts were used to supplement the data compiled in the research activity.

An alternative model of the market was also derived this year, which considers the revenue stream generated by the existing contracts as an annuity that builds upon itself in the course of the contract life. This model was used to reflect more accurately the market realities. It is discussed further in the appropriate section of Chapter III.

Economic assumptions concerning the change in GDP for the entire U.S. economy over the forecast period are factored into the forecast numbers. The impact on INPUT forecasts is a continuation of the moderate growth rates forecasted earlier. INPUT does not see a quick recovery for information services spending in general, though the outsourcing market is one of the brighter segments of the market, growing at a faster rate than most of the other segments of the information systems market.

## C
## Information Systems Environment

Many factors in the changing information systems environment are having a profound influence on the outsourcing market in particular. In this chapter, these factors are divided into two categories. First, the business needs for which outsourcing clients and prospects must find solutions are examined. Second, the impacts of certain IT technologies on the market and how these are changing the very composition of the outsourcing opportunities available for vendors are reviewed.

### 1. Needs Influencing Use of IS

Exhibit I-2 presents, in summary form, needs expressed by the business community that can be addressed by the proper application of technology. They are certainly not all the issues faced daily by organizations operating in this fast paced business environment, but serve to illustrate some needs that can be met by the proper application of information technology. In the broader perspective , the needs discussed can be met by a variety of technologies, but the solutions that can be provided by the outsourcing arrangement will be emphasized for the purposes of this discussion.

EXHIBIT I-2

## Needs Influencing the Use of Information Services

- Time value of information
- Flexibility of IS tools
- Distribution of IS capability

#### a. Timeliness of Information

The need for near-instant reaction to changes in business conditions continues to be one of the key requirements for business organizations striving to be successful in the 1990s. Retail establishments, such as The Limited and Wal-mart have been successful in large part because they have been able to react overnight to the changes in customer purchasing patterns. Manufacturing concerns that are succeeding are interconnecting themselves through electronic commerce technology to respond in a timely manner to fluctuating fabrication and delivery schedules.

These examples illustrate that there is a high value associated with the currency of information. To be useful, data such as passenger name, part number or store location is useless unless it is converted into information. Its correlation with historical data and its relationship to other information collected need to be considered to convert it into information. Only then can the executives of the organization effectively apply their experience and decision models to that information.

#### b. Technology Changes

The application of information systems technology is also changing rapidly. Many firms are actually changing the way they do business. The explosion and success of telemarketing as an effective new marketing tool for sales organizations is but one example.

There is a new empowerment evident in most business organizations. Many operational managers have taken over much of the responsibility for their own information services destiny. Sales managers are equipping their sales forces with laptop computers to give them instant access to changing product information and allow them to process orders through a streamlined ordering system.

### c. Dispersed Processing Power

The general availability of laptop, and soon, personal computing devices such as Apple's Newton, is revolutionizing the capture of data. When this technology is coupled with the cellular technology that is transforming the telecommunications industry, it becomes apparent that IS capabilities need to be extremely responsive to change and provide continuous accessibility.

These same devices allow the dispersed elements of any organization to have at their fingertips the data and algorithms they need to do business. They need to take such actions as order placement, policy preparation and problem resolution without referring to the corporate office for direction. This capability will improve customer satisfaction and greatly speed up the sales cycle.

## 2. Technology

There are a number of technologies evolving rapidly in the market that have profound implications for information services in general. Several of those are of special significance for the outsourcing market. Exhibit I-3 summarizes those of particular interest.

EXHIBIT I-3

### Information Technologies Affecting Outsourcing

- Telecommunications explosion
- Client/server shift

### a. Telecommunications Changes

The telecommunications industry is undergoing fundamental changes at this time. The rapid acceptance of cellular telephone technology and the mobility of communications it promises are already accepted factors in the business community. Expansion of the technology from the personal telephone to the laptop computer is now taking place.

The resulting demand for accessible information will greatly increase the need for data that is current, accurate and available in a variety of forms. The expertise of those who can capture, process and deliver current operating data on demand is constantly in demand. More timely business and personal information is required every day to help individuals and corporations make more informed decisions.

Retail stores want to know what their customers are buying off the shelves at that moment. Travel agents need the booking status of flights as they change. Individuals are increasingly turning to the Internet to find key federal information and copies of public documents.

### b. Shift to Client/Server

The shift to client/server computing is accelerating as LAN configurations continue to proliferate. The PCs and workstations linked to them continue to get more powerful and the applications more sophisticated, while at the same time easier to use.

In fact, many vendors are finding there are hidden opportunities in the client/server revolution. As the shift continues to dispersed computing, three trends are evident:

- The IS departments have less control over the new environment. Even when they do maintain some management responsibilities, they are finding it is more difficult to manage a distributed computing environment than one located in a single data center.
- When the users assume responsibility for their own computing environment, they need help and turn to vendors for technical skills, rather than to their own IS departments.
- The shift to client/server doesn't occur overnight. The new environment has to be introduced gradually. There is still need for the old systems that make the organization run effectively in the interim. Opportunities are emerging for outsourcing vendors to help with this transition by supporting the legacy systems.

The information technology industry continues to be a rapidly changing environment that requires a flexible response on the part of users and vendors alike to take advantage of the changes. The technological changes represented by the telecommunications revolution and the related client/server shift are today's issues. Tomorrow the fundamental changes will take place in how business operates. That will bring even greater challenges to the IT community, challenges that will not only require the wise application of technology, but also a rethinking of how problems are addressed.

## D
## Related INPUT Reports

For a complete view of the outsourcing and related information services markets, readers are encouraged to review the following related INPUT reports:

*Business Operations Outsourcing (1993)*

*The CFO's Role in Outsourcing (1993)*

*Outsourcing Awards Analysis (1993)*

*Client Satisfaction with Outsourcing (1993)*

*IS Outsourcing Competitive Analysis (1993)*

*Information Systems Outsourcing Market Opportunities, 1992-1997 (1992)*

*Interaction of Downsizing with Outsourcing (1992)*

*Outsourcing Desktop Services (1992)*

*Strategic Assessment of the IS Outsourcing Revolution (1992)*

*Outsourcing Network Management and Operations (1992)*

*Methods of Approaching IS Outsourcing (1992)*

*Systems Operations Buyer Issues and Alternatives (1991)*

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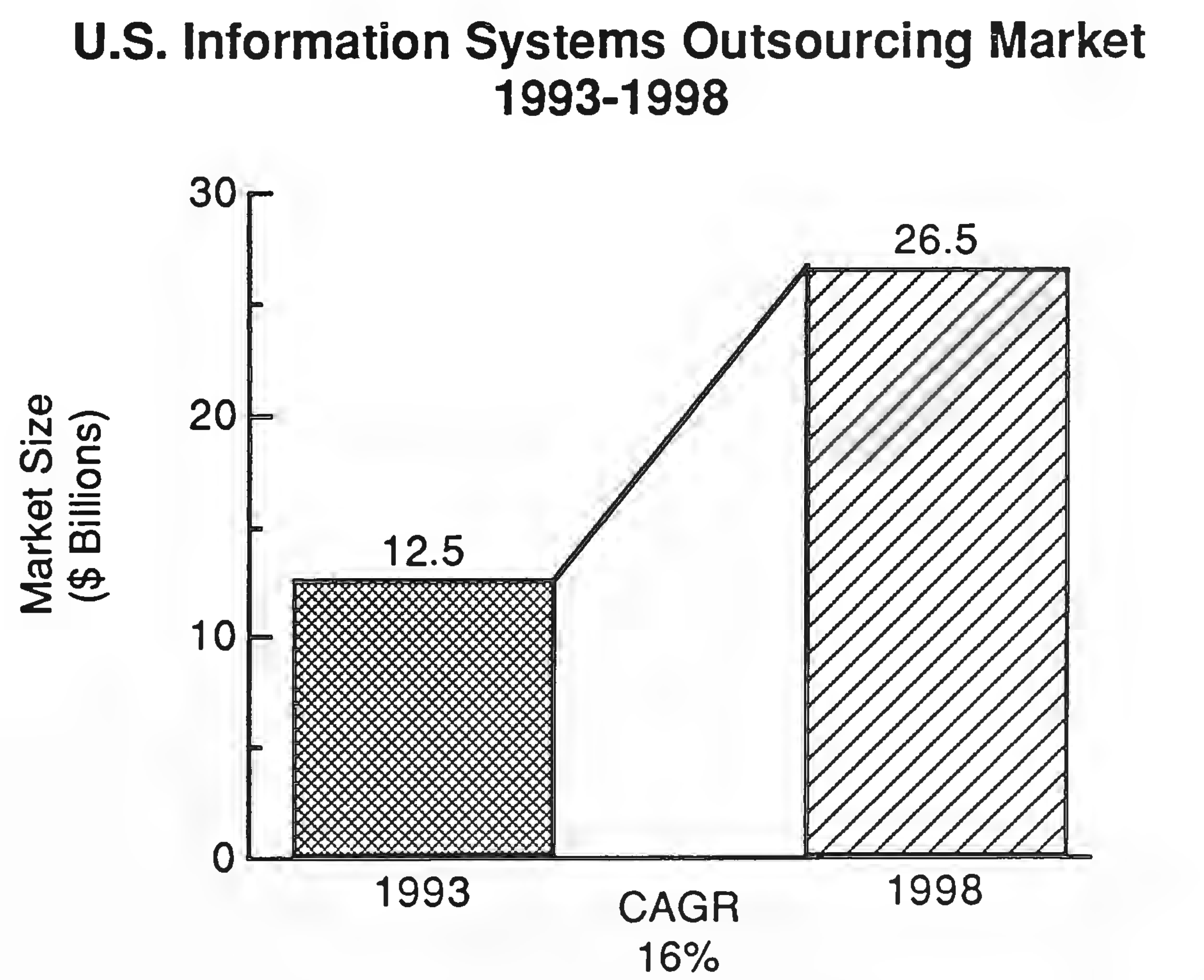
# II

# Executive Overview

## A
## Market Forecast, 1993-1998

Exhibit II-1 illustrates the size and growth of the outsourcing market in the period from 1993 to 1998. The compound annual growth rate of 16% still makes outsourcing one of the fastest growing segments of the information services market. The market is currently projected to be at $12.5 billion for 1993 and will more than double to $26.5 billion in 1998. This represents a compound annual growth rate (CAGR) of 16% for the forecast period.

EXHIBIT II-1



Though the overall market growth has slowed somewhat from last year's rate (from 18% to 16%), certain components of the market are showing a high degree of growth over the five-year forecast period. Components showing this increased growth are those most impacted by the shift to client/server platforms—the network management and desktop services components.

It is increasingly important to understand each component of the outsourcing market. This identifies how the market is shifting as client needs change and what implications that has for the vendors.

### 1. Platform and Applications Operations

The two systems operations submodes continue to be the dominant segments of the outsourcing market. Most clients still want the vendor to take over management of the data center, or the data center with its associated applications software. The two components together make up 78% of the current contract revenues.

This phenomenon reflects two market conditions. First, a large number of the contracts entered into several years ago are still in effect. The majority of those were for platform operations or applications operations. Second, most of the so-called megacontracts that have emerged in the last few years are of the systems operations type. The mere size of these individually has a definite effect on the overall size of the market for platform and/or applications operations.

There is a change even in the systems operations segment of the market, however. Many of the new systems operations contracts are considered transition outsourcing contracts. The vendor takes over management of the legacy systems while the client turns its energies and resources to designing and implementing a new, re-engineered environment, usually involving client/server platforms. These contracts, by their transitory nature, are often of shorter duration than earlier systems operations contracts. So the impact of the shift to client/server is being felt in this segment of the market also.

### 2. Desktop Services

The desktop services segment of the market will continue to grow at a rate above 20% over the five-year period from 1993 to 1998. This reflects the recognition by clients that it is more difficult to manage a distributed computing environment than a centralized one.

More organizations are outsourcing the management of their PC/workstation inventory to vendors who deal with the problems of standardization, compatibility and security. The LANs associated with this equipment are also generally included in the arrangement with the vendor.

The typical pattern reported in a desktop services environment is for a net increase in total operating costs to occur at the start, with substantial savings occurring in the out-years of the contract for the user organization. EDS has reported this pattern as typical of its experience with clients. EDS attributes it primarily to a gradual centralization of many of the diverse functions involved, such as help desk support and equipment maintenance. This eventually provides substantial cost leverage to the service supplier, which is passed on as savings for the client.

### 3. Network Management

There is a healthy increase in the growth rate of the network management segment of the market over the rate reported last year (20% to 26%). The size of the market is expected to more than triple in the next five years.

The network management component includes only those contracts where the network alone is outsourced. When the network is outsourced as part of the platform or applications operations agreement, that network component is counted in those contracts.

There have been several examples of such contracts this year, notably NASDAQ to MCI, Republic Bank to EDS and Metropolitan Life to AT&T. In two of these cases, it marks the entry of the telecommunications companies into the outsourcing market. In early November, AT&T announced a new organization of 1,000 professionals devoted to participating in the outsourcing market, so there is likely to be increased activity in this submode soon.

More of these contracts can be expected. This change reflects the increasing importance of the communications network as a means of interconnecting the distributed computing environments that are emerging as a result of the shift to client/server.

### 4. Business Operations

There is increasing demand for outsourcing vendors to take over entire business functions for clients. Though not a new market (print shops have been outsourced for some time now), the existing arrangements are evolving into more comprehensive document management contracts. Other parts of the outsourcing market are evolving into this form of outsourcing arrangement also.

The claims processing contracts that have been part of the market for some time now no longer only include the processing of claims. Now the client usually turns over responsibility for issuing of checks and handling of complaints and claimant questions to vendor personnel, also.

Andersen Consulting attracted attention to this market shift two years ago when it assumed management of the accounting function at BP Exploration in the U.K. There is some activity among the large accounting firms to take over financial functions for some of their clients, though no contracts have been announced yet.

EDS has assumed operational responsibility for customer services operations in three situations, one of them with the Chevrolet Motors Division of GM. In these cases, EDS can apply technology and best management practices to improvement of the process. The result is lowered costs and reduced need for management attention to the process, as well as improved customer service.

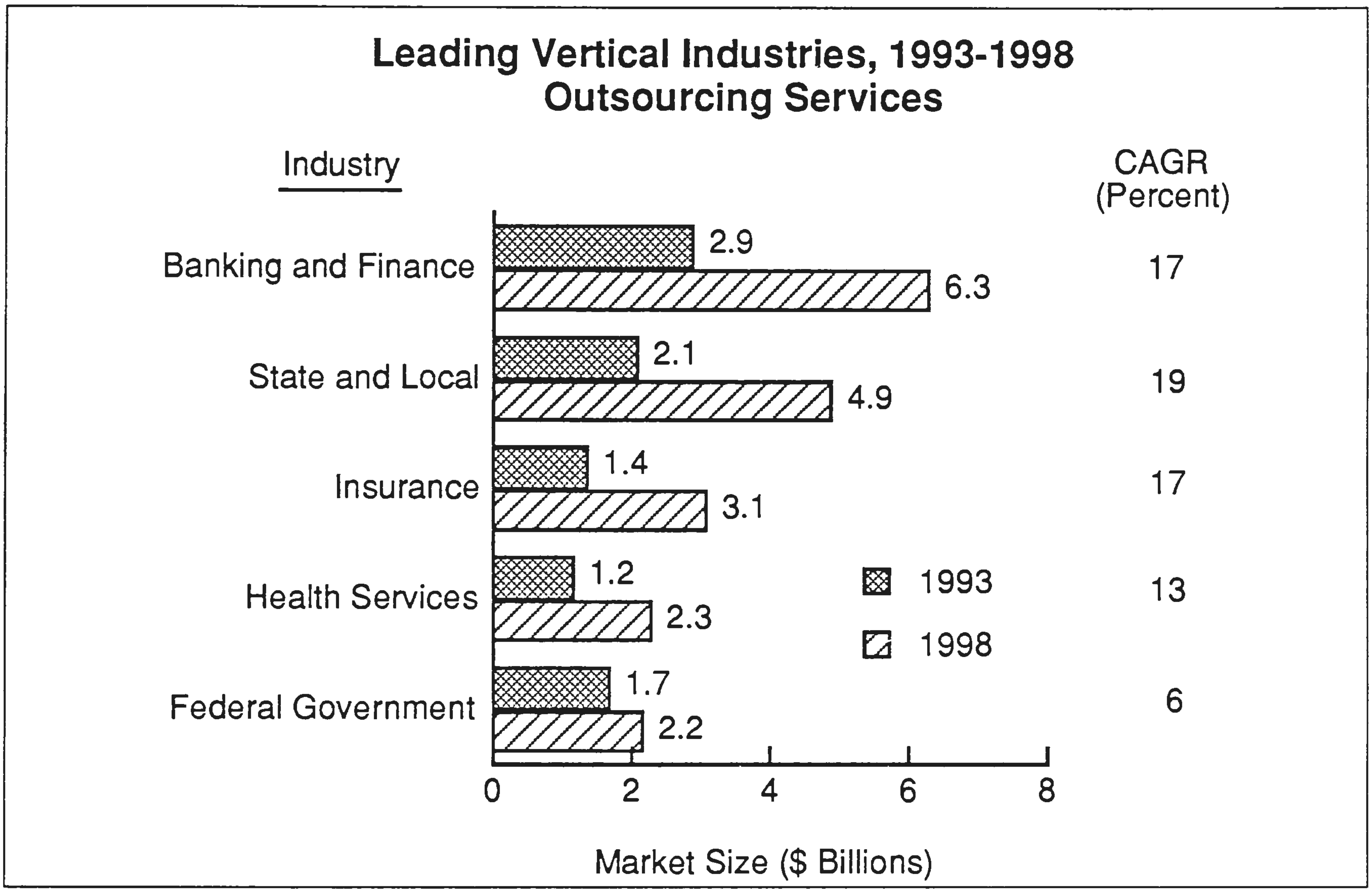
## B
## Forecast by Industry Sector

The market size for each vertical industry is discussed in Chapter IV of this report. Most industries show healthy growth rates for the period from 1993 to 1998. Exhibit II-2 presents the market statistics for the five vertical industries that are projected to be the largest in 1998.

Banking and finance continues to be the largest single vertical industry segment of the outsourcing market. State and local government may be a surprise in second place until one considers how much of the Medicare and Medicaid processing, administered by the states, is done by outsourcing vendors. The other public sector market, the federal government, is not growing rapidly because of large cuts in the Defense budget and reduced operating budgets in civilian agencies.

Insurance and health services entities, and to some extent state and local governments mentioned earlier, reflect increased awareness of the health care crisis in the U.S. and a determination to do something about it.

EXHIBIT II-2




## C
## Vendor Market Share

Exhibit II-3 identifies the changes that have taken place in the market between 1989 and 1992. EDS had the market leadership position then and still does now. It has expanded the breadth of services it offers from traditional facilities management to desktop services, and is positioning itself to move aggressively into business operations outsourcing.

CSC remains in the second spot, but its revenue mix has changed considerably. In 1989, it derived most of its outsourcing revenues from the federal market. In 1992, after a concerted effort and several major wins, particularly the large General Dynamics contract, it had a better balance between federal and commercial contracts.

EXHIBIT II-3

### Leading Outsourcing Vendors, 1989-1992

| 1989 | Percent Share | 1992 | Percent Share |
|---|---|---|---|
| EDS | 16 | EDS | 14 |
| CSC | 5 | CSC | 5 |
| Systematics | 3 | ISSC | 4 |
| ACS | 3 | First Data | 3 |
| Shared Medical | 2 | Digital | 2 |

The rest of the top vendors have been changing in the three-year period. Although ISSC did not even show in the list in 1989, that was partly because ISSC had not been organized into a separate unit and some of the IBM revenue that was really outsourcing was not identified as such. ISSC has aggressively attacked the market, however, and is growing its revenue base substantially each year.

First Data Resources has grown into the top vendor ranks because it has capitalized on its own strong position in the financial community and coupled that with substantial growth of its health care business, acquired from Lockheed several years ago.

Digital has shown substantial growth in the services portion of its business, much of it in the outsourcing area, particularly in the network management and desktop services segments.

Unisys has aggressively pursued outsourcing opportunities and will probably move up into the top five next year.

## D
## Conclusions and Recommendations

This report examines the forces at work in the outsourcing market. The continued health of that segment of the information services market is due in part to the continued aggressive marketing of the concept by the vendors. It also reflects the increasing complexity of the IT environment as client/server architectures begin to dominate and the benefits of expanded communications options continue to increase.

The market conditions are discussed more thoroughly in Chapter III and are summarized here. This summary will naturally lead to some recommendations for participants in today's outsourcing market, as well as any organizations that may be considering entering the commercial outsourcing market.

### 1. Conclusions

The outsourcing market continues to show health by growing at a faster rate than most of the other segments of the information services market. The continued slow recovery of the economy and the massive downsizing that has been experienced in the commercial arena is now affecting the public sector also. The option of turning over IS functions to a vendor is becoming more attractive as IS staffs shrink and IS expenditures are scrutinized even more closely.

EXHIBIT II-4

## Outsourcing Market—Conclusions

- Strong market growth continues
- Client/server shift impacting market
- New vendor/client relationships emerging

There are more and more success stories to encourage senior management to consider this alternative. INPUT research indicates that outsourcing clients are relatively satisfied with the performance of the vendors with whom they have contracts.

The traditional modes of systems operations—platform and applications operations—will experience a slowdown in their growth rate. Other types of outsourcing, notably desktop services and network management, will experience a substantial increase in their rate of growth.

Desktop services deals directly with the immediate problem of managing the burgeoning inventory of PCs and workstations and their associated LANs and WANs that result from the shift to dispersed processing. The vendors must deal with issues of compatibility as well as providing management of standards, providing for system security and trouble-shooting connectivity problems in the networks. Most of these arrangements eventually include the management of the help desk functions for the client also.

The network configuration needed to support this dispersed computing—connecting the LANs to gateways and providing for higher capacity T1s and common carrier network management—is a challenge also. Vendors are increasingly considered the repository for tools and expertise to provide this service in a much more effective manner than individual IS organizations can. For this reason, traditional outsourcing vendors such as EDS, Digital and ISSC (through Advantis) are providing this service, while the common carriers are also entering this market.

Downsizing and the need for improved financial performance that commercial organizations are experiencing have had another effect on the outsourcing market: clients are demanding a closer relationship between the management of their IS resources by the vendor and the impact on the firm's financial performance.

In a number of public forums, conferences and press statements, outsourcing prospects and clients alike are asking vendors to share in the risk of the client's business. They are asking that vendors share with the clients the benefits of the cost reductions that occur. They are suggesting that vendors be compensated on the basis of the success of the client organization's business, not on the basis of the work performed.

As of yet, many vendors are reluctant to do this. There are several reasons for this. It is obviously difficult to agree on the metrics that would be used to measure success in this environment. There are also difficulties in assigning responsibility for business performance in this scenario.

### 2. Recommendations

The changing market conditions require changes in strategy on the part of the outsourcing vendors. These changes must reflect the new demands placed on the vendors by the business community. They must also reflect the changes in technology that are shaping the new market environment.

EXHIBIT II-5

## Outsourcing Market—Recommendations

- Broaden service offerings
- Demonstrate value of arrangement
- Expand relationship with clients

Many of the outsourcing vendors in the market are currently seeking to increase the scope of the services they offer to their clients and prospects. Some of the firms are already large and are simply assimilating some of the service components of their kindred organizations. IBM's recent consolidation of most of the company's service functions under Denny Welsh at ISSC is the most recent example of this. Digital's earlier Services Group reorganization is a similar strategy.

Other vendors are acquiring assets in the marketplace to supplement their own resources. CSC did this over the last three years, and SHL Systemhouse has been aggressively acquiring client/server assets this year. Still others are forming strategic alliances that make sense. Unisys, teaming with Systematics, and May and Speh, teaming with Ameritech, are two examples that come to mind.

Outsourcing vendors will need to become systems integrators. They will need to expand their telecommunications capabilities. They will have to decide if they want to manage applications software also. All of these options lead to an expanded market presence, one that the successful vendor will need to develop.

Vendors are being asked to demonstrate the value they bring to the outsourcing relationship more frequently. Clients are asking questions about how the relationship can improve their competitive position. They are asking how it can provide better service to the clients' customers. Outsourcing vendors need to respond with value-based assessments of their services, based on all the factors that make up a successful outsourcing arrangement.

More of these creative approaches—part marketing approach, part hard-nosed financial analysis and measurement—must be developed by the vendors who want to distinguish themselves from the other market players.

Another way to provide more value is to strengthen the relationship with the client. The prime example of this type of arrangement is the relationship Acxiom has with its largest outsourcing client, TransUnion. The president of TransUnion joined the board of directors of Acxiom shortly after the contract was signed. Now the client's chief executive has a direct hand in strategy review for the vendor and is also intimately aware of the vendor's ongoing financial condition.

Not all client/vendor relationships need to be this close. The reality is that the direct involvement of the vendor in supporting the day-to-day business of the client through the IS function normally makes this relationship evolve into a closer one. By finding ways to enhance communications between the two parties, vendors can assure that client satisfaction is raised, and the chances for a long-term relationship are greatly improved.

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III

# Market Analysis and Forecast

This chapter examines general market characteristics, then examines the size and composition of the U.S. outsourcing market as it exists today. Forecasts are presented for each of the submodes. A new forecast model is introduced, based on the premise that outsourcing contracts can be modeled as an annuity. Finally, the competitive environment is reviewed. The result is a comprehensive look at the commercial and public-sector market for information systems outsourcing in the U.S. for the period from 1993 to 1998.

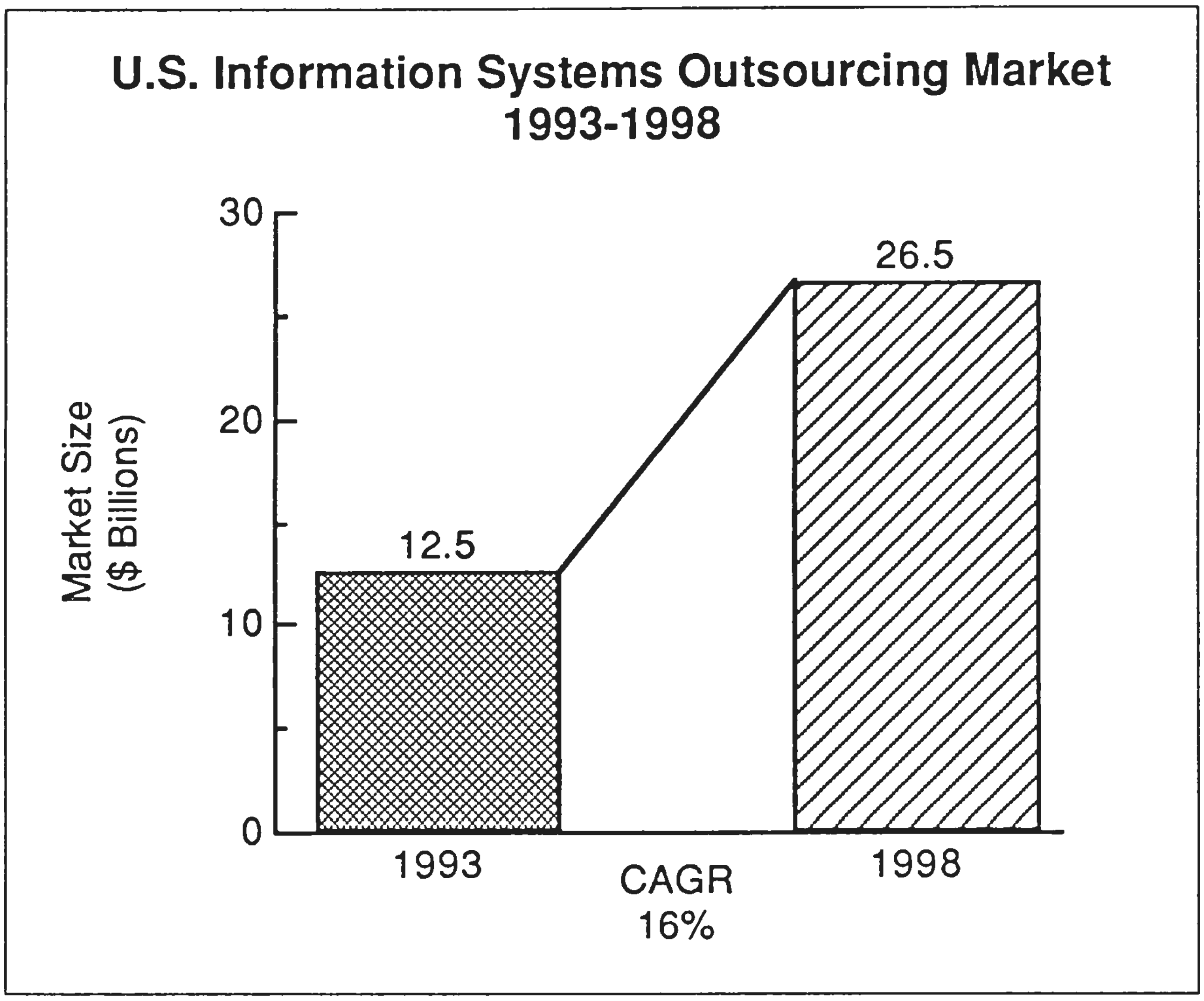
Early press reports in 1993 that the outsourcing market was slowing down were greatly exaggerated. INPUT's continuing analysis of the market indicates that the healthy growth rate is indeed continuing. There is a high probability that some very large contracts currently being negotiated will be closed before the end of 1993. All indications are that the market is healthy, though significant changes are still taking place.

## A
## Market Forecast, 1993-1998

Exhibit III-1 illustrates what will happen to the outsourcing market in the period from 1993 to 1998. The compound annual growth rate of 16% still makes outsourcing one of the fastest growing segments of the information services market. The market is currently projected to be at $12.5 billion for 1993. That market will more than double to $26.5 billion in 1998. This represents a compound annual growth rate (CAGR) of 16% for the forecast period.

Though the overall market growth has slowed somewhat from last year's rate (from 18% to 16%), certain components of the market are showing a high degree of growth over the five-year forecast period. The components showing this increased growth are those most impacted by the shift to client/server platforms. These are the network management and the desktop services components. They will be discussed at some length in Section B below.

EXHIBIT III-1




## B
## Types of Outsourcing Arrangements

Each submode of the market will be discussed in this section. It is increasingly important to understand each component of the outsourcing market. This section identifies how the market is shifting as client needs change and the implications of this for vendors.

### 1. Platform and Applications Operations

The two systems operations submodes continue to be the dominant segments of the outsourcing market. Most clients still want the vendor to take over management of the data center, or the data center with its associated applications software. The two components together account for 78% of current contract revenues.

This dominant proportion reflects two market conditions. First, a large number of the contracts entered into several years ago are still in effect. The majority of those were for platform operations or applications operations. Second, most of the so-called megacontracts that have emerged in the last few years are of the systems operations type. The sheer size of these, individually, has a definite effect on the overall size of the market for platform and/or applications operations.

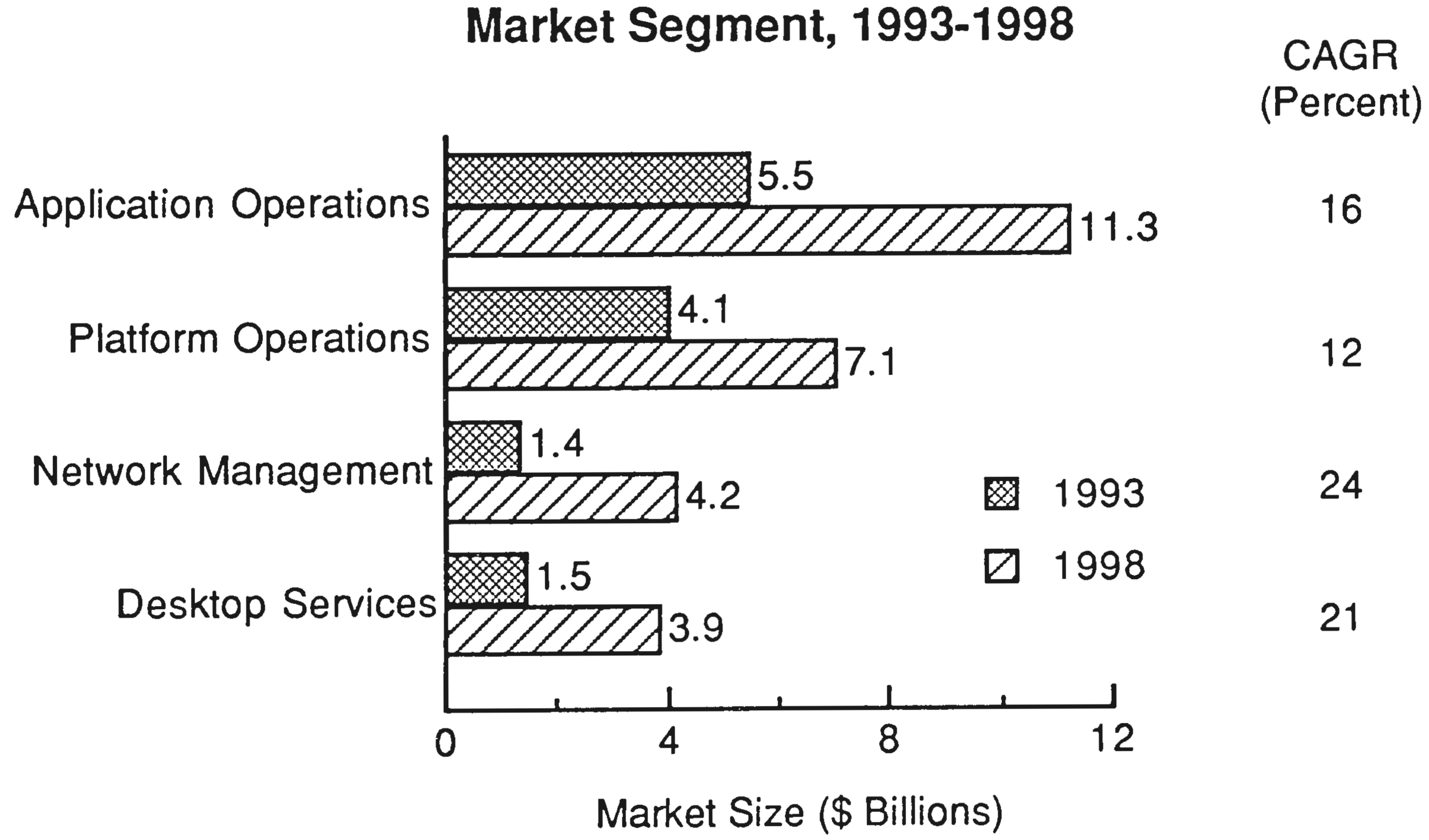
Platform operations will grow at a 12% CAGR over the forecast period. This rate, lower than the overall market rate, represents a shift to more applications operations arrangements, as well as some shorter term, lower value transition contracts. The market for platform operations will go from $4.1 Billion to $7.1 billion over the forecast period.

Applications operations will grow at the higher rate of 16% CAGR. Clients are becoming more willing to turn over both data center and applications management to the vendor. They are particularly prone to turn over legacy systems that are slated to be phased out eventually. The market for applications operations will grow from $5.5 billion to $11.3 billion over the forecast period.

Exhibit III-2 illustrates how each submode of the overall outsourcing market compares in size to the other submodes. The two systems operations submodes are obviously the largest part of the market.

EXHIBIT III-2

## U.S. IS Outsourcing Market Forecast by Market Segment, 1993-1998



There is change even in the systems operations segment of the market. Many of the new systems operations contracts are considered transitional. The vendor takes over management of the legacy systems while the client turns its energies and resources to designing and implementing a new, re-engineered environment, usually involving client/server platforms. These contracts are often of shorter duration than earlier systems operations contracts. So the impact of the shift to client/server is being felt in this segment of the market also.

There are indications that some legacy systems that are not run frequently will stay on the old platforms. These are natural candidates for smaller applications operations arrangements. The client has no need for the hardware to process them. Rather, the client will look for a vendor to simply provide an environment in which these applications can be run. The vendor will assume responsibility for maintaining the software to reflect changing operating conditions and running them upon request on a facility owned and operated by the vendor.

### 2. Desktop Services

The desktop services segment of the market continues to grow at a rate above 20% during the five-year period from 1993 to 1998. This reflects the recognition in the market that it is more difficult to manage a distributed computing environment than a centralized one. The market will grow from \$1.5 billion to \$3.9 billion over the five-year forecast period.

More organizations are outsourcing the management of their PC/workstation inventory to vendors to deal with the problems of standardization, compatibility and security. The LANs associated with this equipment are also generally included in the arrangement with the vendor.

To better understand the elements of desktop services, the following components have been identified by vendors as services they offer in this segment:

*Purchasing Consultation* - Advice and direction in the selection and configuration of equipment for a specific client need.

*Equipment Supply* - Assembly and delivery of equipment to meet the desired specifications defined either by the client or jointly with the vendor.

*Software Supply* - Delivery of the appropriate software to be installed on existing equipment. Compatibility and version control are critical here.

*Equipment Maintenance* - Diagnosis and repair of equipment problems and provision of preventive maintenance on a regular schedule if that is appropriate.

*Installation Services* - Upon delivery, connection and loading of software for the user and starting the system to test its response. Also known as the "burn-in" activity, though this is sometimes done remotely before the equipment/software combination is delivered.

*LAN Management* - Regular maintenance of the local area network, including backup and adding users to the system, as well as resolving operational problems.

*Help Desk/User Services* - Responding to user questions about software and equipment problems and resolving them remotely via phone access.

*User Training* - Includes providing courses on-site to user groups both for hardware operation and software use. Training can take the form of classroom instruction, CA tutorials tailored to client needs, or other forms.

*Logistics Management* - Managing the acquisition of equipment components and software according to predetermined specifications and the delivery of these to the appropriate client locations in a form suitable for installation.

*Network Interface Management* - Providing the expertise to interconnect various LANs in the organization to one another or to WANs, public access networks and common carriers. Dealing with these other providers and arranging for any interface software or hardware.

Not all of these elements have to be present in every desktop services arrangement. At a minimum, however, the vendor should be responsible for the PC/workstation inventory and some components of the help desk support function, as well as the maintenance activity.

The typical pattern reported in a desktop services environment is for a net increase in total operating costs to occur at the start, with substantial savings occurring in the out-years of the contract for the user organization. EDS has reported this pattern in its experience with clients. It attributes it primarily to a gradual centralization of many of the diverse functions involved, such as help desk support and equipment maintenance. This eventually provides substantial cost leverage to the service supplier, which is passed on as savings for the client.

### 3. Network Management

There is a healthy increase in the growth rate of the network management segment of the market over the rate reported last year (20%, now raised to 26%). The size of the market is expected to more than triple in the next five years, going from $1.4 billion to $4.2 billion in that time period.

The network management component includes only contracts in which the network alone is outsourced. When the network is outsourced as part of a platform or applications operations agreement, that network component is counted in those contracts.

There have been several examples of such contracts this year, notably NASDAQ to MCI, Republic Bank to EDS and Metropolitan Life to AT&T. In two of these cases, it marks the entry of the telecommunications companies into the outsourcing market. In early November, AT&T announced a new organization of 1,000 professionals devoted to participating in the outsourcing market, so there is likely to be increased activity in this submode soon.

More of these contracts can be expected. This change reflects the increasing importance of the communications network as a means of interconnecting the distributed computing environments that are emerging as a result of the shift to client/server.

### 4. Business Operations

There is increasing demand for outsourcing vendors to take over entire business functions for clients. Though this is not a new market (print shops have been outsourced for some time now), the existing arrangements are evolving into more comprehensive document management contracts. Some other parts of the outsourcing market are also evolving into this form of outsourcing arrangement.

This submode of the outsourcing market will be forecast separately this year, so is not included in the tables in the Appendix. It will appear as a component of the larger market next year.

The market size for this submode consists of newly identified activity as well as existing revenue from current applications operations contracts that have evolved into business operations outsourcing. It is expected that INPUT will be able to isolate this component of the market after further research next year. It is projected to be at $500 million in 1993 and will grow to $1.7 billion by 1998, at a compound annual growth rate of 28%.

The claims processing contracts that have been a major part of the outsourcing market for some time now no longer only include the processing of claims. Now the client usually turns over responsibility for issuing checks and handling complaints and claimant questions to vendor personnel, also.

Andersen Consulting attracted attention to this market shift two years ago when it assumed management of the accounting function at BP Exploration in the U.K. There is activity among large accounting firms to take over financial functions for some of their clients, though no contracts have been announced yet.

EDS has assumed operational responsibility for customer services operations in three situations, one of them with the Chevrolet Motors Division of GM. In these cases, EDS can apply technology and best management practices to improvement of the process. The result is lowered costs and reduced need for management attention to the process, as well as improved customer service.

## C
## Alternate Market Model

As mentioned in Chapter I under Methodology, INPUT traditionally forecasts the outsourcing market using a combination of vendor revenue figures and user buying intentions, supplemented with other available market information. This has resulted in a steady growth pattern that has been confirmed each year by actual historical data and the analyses of other market watchers.

Major changes in the outsourcing market have occurred in the last several years. Large, multibillion-dollar contracts with minimum durations of ten years have been negotiated in the last few years and more are expected. For example, both Xerox and Philip Morris are negotiating outsourcing contracts that would be bigger than the General Dynamics agreement with CSC.

Several of these large megacontracts in a given year can affect the size of the market significantly. There has also been a change in the duration of the smaller contracts, with many of them being for a maximum of five years now. Transition outsourcing contracts may be of even shorter duration.

At the same time, more data is available on the actual contracts signed over the last three years, so a new approach to modeling the market was taken in addition to the standard one.

### 1. Annuity Concept

The outsourcing contract can be directly compared to the mainframe equipment contracts that were so lucrative for the major equipment vendors in the past. Once an enterprise system was installed, the vendor benefited from an ongoing stream of revenue that was often considered much like an annuity.

In a similar manner, the outsourcing contract can be considered an annuity. The contract represents a long-term relationship between the vendor and the client, in which the client pays the vendor for services rendered, usually on a fixed-price basis. The typical pattern is for the vendor to invest in the relationship in the early stages, then to generate substantial profits in the later years as operating efficiencies and new technologies improve the cost performance of the joint arrangement.

In the model, the revenues of the newer contracts build upon the ongoing revenue from the existing contracts to create an increasing revenue base over the years. The new model can help validate the market dynamics INPUT has been using thus far, and answer other questions about the market.

### 2. Model Testing

INPUT tested the model in several ways:

a) The impact of large megacontracts was explored. INPUT posited that a $6 billion contract would be signed in 1994 (the Xerox contract is expected to be this large). When spread over ten years, the impact on the market is about 0.3% on the five-year compound annual growth.

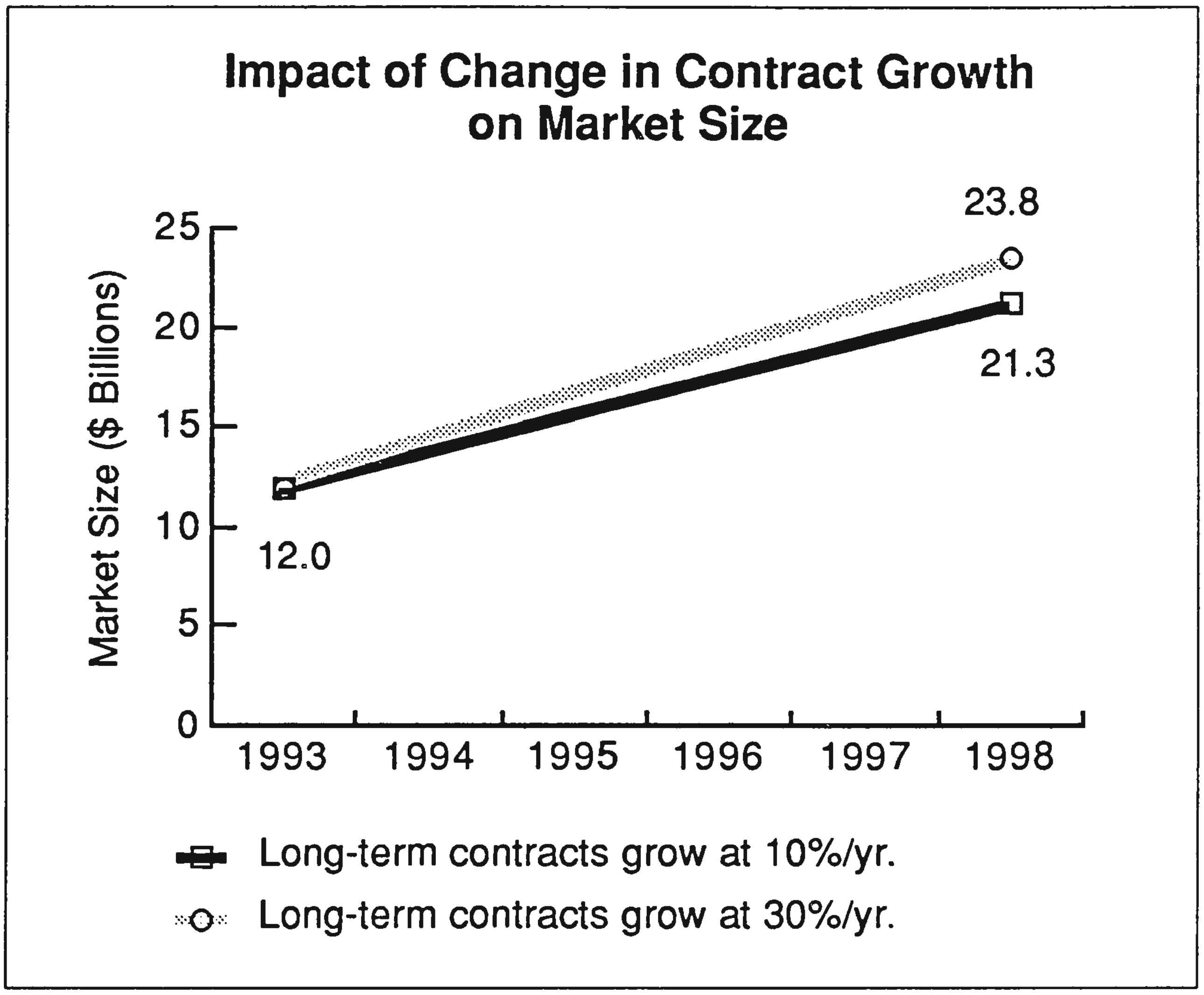
b) If the renewal rate for current outsourcing contracts were to change by 10%, say going from 90% to 80%, this would have a greater impact, with the CAGR dropping by a full percentage point. There is no evidence that such a shift is occurring, however.

c) If we assume that there is some inherent growth in the large contracts, we can test that effect on the market. Interviews and data indicate that the typical outsourcing contract may grow by about 10% per year. Some of the early contracts, in fact, had this growth factor built in. Exhibit III-3 illustrates that the total market could change by $2.5 billion over a five-year period if the large-contract growth rate were 30% rather than 10%.

The annuity model does validate INPUT is forecast assumptions. The impact of megacontracts is not as large as suspected. The long-term nature of these contracts, and the large size of the current market relative to any single contract, dampen this effect.

The annuity model represents an accurate model of what is really happening in the actual market. It will be refined and used to more precisely reflect what is going on in certain vertical markets, where enough individual contract data exists, such as in manufacturing and banking.

EXHIBIT III-3




## D
## Key Market Factors

The information systems environment described in Chapter I of this report has created two sets of forces that impact the growth of the outsourcing market as it currently exists. They can be conveniently divided into positive factors or driving forces, and negative, or inhibiting factors. Exhibit III-4 summarizes the driving forces and Exhibit III-5 summarizes the market inhibitors. A better understanding of these forces will assist vendors in adopting a winning market strategy that takes full advantage of the current conditions.

### 1. Driving Forces

As the IS environment changes, new skills and techniques are being required of those individuals who currently are responsible for an organization's information systems. Some of those skills are extensions of old skills, such as programming and systems design. Others are new ones that require extensive retraining or redirection, such as telecommunications skills and distributed data base design, among others.

There is an ample supply of computer-literate individuals graduating from the universities. In fact, most college graduates leave the universities comfortable with using PCs for word processing all of their term papers. Many are attuned to electronic mail and the remote access of data from libraries via PCs.

These individuals are entering industry without any fear of computers. In fact, they usually expect to have a PC immediately available to them to do their work. That is a positive factor, but on the negative side, they identify more applications for IS technology than the internal organization has the capacity to implement.

Two results are likely. First, these potential buyers may implement solutions themselves, often ignoring company standards, thus creating islands of processing and automation while solving their immediate problems. In the process, the implementers often find the solution consumes more of their time than it should.

Second, they turn to outside help to deliver some procedure or process they do not have the internal skills to implement. This provides them with the solution more efficiently but requires a clear knowledge of what the requirements really are, so that the external vendor or supplier can deliver the right product.

In this environment, outsourcing vendors that have demonstrated both past success in solving IS problems and some knowledge of the client organization's business can offer a very attractive solution. In the new environment, vendors must demonstrate that they have kept abreast of the changes in technology and business conditions that make the redesign and rethinking necessary in the first place.

EXHIBIT III-4

## Market Driving Forces

- Lack of IS skills
- Changing business environment
  - Cost reduction
  - Re-engineered processes

The changing IS environment is only part of the change taking place in U.S. industry today. A more fundamental change is taking place in the way organizations conduct their business. The need to reduce costs and remain competitive is driving many companies to rethink all of their internal operating procedures.

The result will be a complete change in the way organizations conduct their operations. This change will be more fundamental than a change in technology. The IT technology involved will simply be an enabler, albeit an important one.

Gone are the days when an improvement in the processing technology was seen as the way to reduce operating expenses. Many of the current advocates of business re-engineering see IT as the follow-on to the redesign of the business operation. IT is really only a tool for the implementation of the new procedures.

Vendors like CSC and Systemhouse have recognized the changes in the complexion of the market and have broadened the scope of the services they offer their clients and prospects. CSC has been particularly successful at making acquisitions that position it to provide the business re-engineering services that are currently required.

Systemhouse has been acquiring expertise in client/server implementation by buying a number of small companies specializing in that segment of the market.

EDS and Perot Systems are downplaying the technical aspects of their services and stressing the solutions delivery they can provide. They are positioning themselves to apply technology to the client's business problem, stressing the solution, not the technology being used to provide the solution.

There will be more discussion of specific vendor actions later in this report. Generally, outsourcing vendors are finding opportunities in the changing business environment in the following areas:

- Outsourcing vendors are discovering they can provide a transition service that takes over the old processing platforms and their applications while the client organization concentrates on creating the new environment.

- Vendors are filling a need to manage the resulting client/server environment as it becomes an integral part of more organizations. These organizations are discovering that it requires specialized skills and careful management to handle the resulting desktop environment profitably.

- Communications is becoming an ever more important part of the solution to the IT problem. Dispersed computing, home-based work, a mobile work force—all these are increasing the demands for a skill that is already scarce: telecommunications management. Specialist firms are increasingly considered a good solution to these problems. Both traditional outsourcing vendors and telecommunications consortia are active in this market.

- More services are being required of outsourcing vendors as business processes change. They are being called upon to provide management consulting services and systems integration services, and are even being asked to take over entire business operations.

As the nature and the texture of the business community changes, the shape of the outsourcing market changes also. Most vendors are changing their market posture to take advantage of these developments.

### 2. Inhibiting Forces

It is easy to paint a bright picture of the state of the outsourcing market, stimulated as it is by the profound changes taking place in the business community. To present a balanced picture, however, the problems that exist must also be reviewed.

Exhibit III-5 identifies the two major inhibitors to market growth. New applications are often developed by individual departments on platforms selected on the basis of convenience. As client/server technology is introduced to provide a particular business solution, a great variety of processing environments can be found in the typical business organization.

This disparity is often difficult to manage because the era of open systems has not really arrived yet and much is still proprietary. Such an environment is difficult to manage and also appears to the user organization to be difficult to turn over to a vendor for management. In fact, the outsourcing vendors are usually better organized and more experienced in managing such a disparate environment. The perception still exists that multiple platforms cannot be managed effectively by one entity. This is having a dampening effect in the marketplace.

EXHIBIT III-5

## Market Inhibitors

- Changing mix of processing platforms
- Investment in legacy systems

The typical business organization has been operating with old systems for a number of years. These so-called legacy systems are often the repository of much of the company's knowledge and standard procedures. They may now be past their useful life span ,but they cannot be turned off overnight. Invoices have to be generated, production schedules must be prepared, payroll must be met.

Most of these systems were developed over a span of years and were updated and modified as the business needs changed. They represent a major investment in both software and hardware. Everyone thinks twice before changing them and eventually scrapping them.

This negative factor does have a positive aspect, however, as mentioned earlier. A number of outsourcing vendors have found many clients ready to outsource these legacy systems while internal staff concentrate on designing and implementing new systems that reflect new business conditions. This type of transition outsourcing is just that, a transitional phenomenon, but one that will be profitable for several years.

## E
## Market Analysis

Exhibit III-6 summarizes four characteristics of the outsourcing market that highlight the changing nature of this market.

EXHIBIT III-6

### Changing Characteristics of the Outsourcing Market

- Client/server developments affecting contract types
- Transition outsourcing as a viable alternative for legacy systems
- Demands for vendors to share in client performance increasing
- Systems integration services often required

As mentioned earlier, the fastest growing segments of the outsourcing market are those impacted by the client/server shift. Network management is clearly the one component that is related to the increasing dispersion of computing power that the client/server shift is introducing into organizations. To date, much of the increase has been simply due to the proliferation of PCs and workstations in all organizations and the need to interconnect them. This requirement will only increase as the shift continues.

The desktop services segment is also expected to expand because of the shift to client/server. It is already so difficult to manage the distributed computing power that organizations are turning to vendors to do it. When the true client/server applications emerge, this need will only increase.

This shift to client/server environments cannot be accomplished overnight. The legacy systems that now keep the organizations running and responsive to their customers must be maintained and operated as the platform shift is accomplished. More and more organizations are turning to outsourcing vendors to manage these legacy systems while their own staff concentrates on upgrading the internal systems.

The next two characteristics are not derived from the shift in market sizes and growth rates, but actually from other analyses and observations that INPUT has gathered in the process of studying the outsourcing market.

The changing requirements of the clients are not only caused by a shift in how they will do their computing. They are rethinking the way they do business and their relationships to vendors also. Several major client organizations in public forums have called upon outsourcing vendors to share in the business risks with clients.

Many vendors are understandably reluctant to do this. Some clients do not feel that the metrics exist that can accurately measure the relationship between vendor performance and business success. This is still uncharted territory.

Yet there are documented cases of such arrangements in place. EDS is paid on the basis of how successful the Chicago Parking Authority is in collecting parking fines. EDS developed and is operating the new system to manage this function. Perot Systems will be paid on the basis of the profitability of EuropCar Rentals after the second year of the outsourcing contract the two parties have signed.

The concept of value pricing, still ill defined, is another indication that vendors will increasingly be paid on the basis of what they can contribute to improving the performance of the client's business.

Finally, earlier studies done by INPUT indicated that once a client selects an outsourcing vendor, there is a high probability that the same vendor will be considered for add-on work, often systems integration activity. There is now market experience that demonstrates a closer relationship between the two.

Some vendors have successfully migrated systems integration projects into outsourcing arrangements and vice versa. Perot did that after it designed and implemented a data center for Nations Bank in Dallas. ISSC has done extensive systems integration work to convert much of its Eastman Kodak contract from mainframes to a client/server environment. There are other such examples and the increasing complexity of the IT environment promises that there will be many more such situations developing.

As the outsourcing market has changed over the years, vendors have responded to these changes with increased service offerings. They need to continue this expansion of their service line while restructuring their contractual relationships. There is no question that vendors will meet changing client demands in a variety of innovative ways, some of them initiated by the vendors, others stimulated by client and prospect requirements.

## F
## Competitive Analysis

The traditional view of outsourcing vendors is no longer valid as the market increases in complexity and variety. The forecast described earlier in this chapter identified several market segments, all growing at different rates, some attracting new players, others providing new challenges for the existing vendors.

The transformation of several equipment manufacturers into service companies has had a profound impact on the market in the last few years. IBM's ISSC, Digital and Unisys have all greatly increased their outsourcing market penetration. The increased acceptance of outsourcing as a viable approach to achieving improved performance from the IS function has attracted some major participants to the vendor community.

As the market changes, there are some significant actions being taken by some of the major players to better position themselves to benefit from these changes. Exhibit III-7 shows some market participants who are most active in selected areas of the market. This list is intended to be illustrative, not all-inclusive. The following discussion elaborates on these activities.

EXHIBIT III-7

## Typical Market Broadening Activity

| Market Segment | Major Activator |
|---|---|
| Client/Server | EDS<br>SHL Systemhouse<br>Andersen |
| Transition Outsourcing | Power<br>Genix |
| Broadened Perspective | CSC<br>ISSC<br>Digital<br>Systematics<br>Unisys |
| Business Operations | EDS<br>CSC |

### 1. Client/Server Strategies

Most vendors are aware that the client/server shift will impact what they have to offer as outsourcing vendors. Certain vendors have given some clear signals as to how they plan to address this change.

SHL Systemhouse has adopted a strategy of acquiring a number of small regional companies that are specializing in client/server implementations. This strategy will help its systems integration business in the short term, but will also position it with a large pool of expertise to manage the resulting distributed computing environments in the long run. The question is whether or not SHL can assimilate and manage all these small components effectively.

EDS has prepared itself for the client/server market by becoming a force in the desktop services market. Though this is not the management of a client/server environment as such, it does position EDS to manage the PC/workstation complexes that result from such a change in computing environment.

Andersen Consulting has adopted a strategy of implementing client/server environments as the solution of choice in all its engagements. This will enhance its long-run capability to manage distributed environments and the software associated with it, a market it has particularly targeted.

### 2. Transition Outsourcing

The shifting emphasis to client/server has had another impact on many organizations. IS organizations have found themselves with two difficult tasks. One is that they must change the systems they now have in place to better environments designed to take advantage of newer technologies. The other is that they must continue to manage the legacy systems that keep their current operations functioning. They usually don't have enough staff to do both jobs effectively.

Many organizations are turning to outsourcing vendors to take over the legacy operations while they develop replacement systems. Certain outsourcing vendors have recognized this as an opportunity and are actively pursuing these opportunities. Since most development plans take longer than anticipated, some of these transition contracts last for several years.

The Genix Group and Power Computing, in particular, have targeted these situations and have a number of contracts of this type. It does give them some opportunity to generate additional interim revenues while they change their marketing tactics to respond to the changing market conditions.

### 3. Broadened Services Offerings

Most vendors are taking some action to broaden their service offerings to better respond to increasing client needs. The examples in this category are numerous:

CSC has achieved a significant transformation in changing from a federal government orientation to a commercial one. In the process, it has also increased its range of services, from just an outsourcing and systems integration vendor to one with a strong position in the business process re-engineering market. CSC Index, through the efforts of its president and other principals of the organization, has attained an enviable reputation in this area.

Several other vendors have also broadened their scope to meet increasing customer demands. ISSC has a desktop services component in several of its contracts, particularly those in the retail and manufacturing sector. It also has created a consulting group to provide the management consulting and operations redesign activity that is being required. Digital has also formed a consulting division to broaden the range of services it offers in the marketplace.

Digital has had some success in the network management component of the outsourcing market also. EDS has also seen its services in demand in that segment. Non-traditional vendors, MCI and AT&T in particular, are joining Advantis in providing stiff competition in that area of the market. More of this competitive activity can be expected in the future as the communications required between the distributed computing modes increases in scope and importance.

Systematics continues to broaden its scope of activity under the auspices of Alltel. Banking and communications clients continue to provide the largest base of clients, but its entry into the health care market is now assured, with the acquisition of TDS Healthcare Systems last September.

Unisys has successfully shifted its focus from an equipment manufacturer to a services provider, completely changing the company culture in the process. Its clients represent a wide range of vertical industries, with a large base in the public sector being expanded into manufacturing and finance very aggressively.

### 4. Business Operations Outsourcing

Outsourcing vendors are being asked to take over some business operations that can be favorably impacted by the application of information technology. Such vendors as EDS and Genix are providing document management activities for clients. They join Xerox in that market.

EDS has also acquired several contracts in which it manages the customer service operation for the client. Customer service is a key function that would not normally be considered for outsourcing. The vendor who provides the latest call-handling and database management techniques to the client, as well as promising a reduction in the turnover of the help desk staff, has been able to acquire business in this area.

Many of the claims processing contracts that outsourcing vendors such as CSC, EDS and ISSC have held over the years, particularly in health insurance and public entitlement programs, are evolving into much more comprehensive contracts that include a variety of business operations, including funds disbursement and client contacts.

### 5. Conclusions

Though the relative shares of the major outsourcing vendors are not changing significantly, there are new entrants in the market. The existing participants include some major vendors and many smaller ones who have identified a regional niche or a technical specialty they can provide effectively to their clients. The dispersal of the market will continue, with its expansion.

There are many new trends emerging that will provide opportunities for all vendors. The three dominant trends are:

- Contracts are including a broader range of services
- The outsourcing of entire business functions
- Expanded services for the developing client/server population.

These openings do favor vendors with substantial resources who can better invest in their internal operations to prepare themselves to meet changing market needs.

Many clients may be reluctant to turn over a major business function to a smaller vendor. This may favor the larger vendors. Prospects are telling INPUT that they want their vendor to have financial stability and to be responsible for the investments required to ensure technical innovation. They are increasingly asking for contracts in which the vendor participates in the client's success by getting paid from the business profits. To date, only EDS and Perot Systems have done this.

In this changing environment, there are both risks and opportunities. The vendors who are ready to provide a full range of services, from consulting to running business operations, will be well positioned to gain add-on business with existing clients, as well as to demonstrate that they have the experience needed to attract new ones. It will become more and more important to manage the outsourced activities as efficiently as possible, leveraging technology and business practices, to operate in the profit-sharing environment that will emerge.

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IV

# Vertical Industry Markets

There has been significant outsourcing activity in various vertical industries. Some of these are traditionally active ones. Others are showing some early signs of becoming a good market for outsourcing vendors. Still others show no signs of increased outsourcing activity. INPUT has chosen to group the industry activity in that way this year to make it more useful to the reader and to give fuller treatment to the more important industries.

## A
## Strong Outsourcing Markets

The organizations in this group of vertical markets have traditionally been most receptive to the use of outsourcing vendors. They represent the largest markets currently. Organizations in these markets still show signs of continuing to actively seek outsourcing arrangements. There are some new developments in this set of industries that bear watching also.

### 1. Banking and Finance

Banking and finance organizations have traditionally been more receptive to outsourcing arrangements. Banking and finance is by far the largest segment of the outsourcing market and is projected to continue as the leader in the five-year period from 1993 to 1998. Banks in particular have been outsourcing various functions such as check processing and lockbox operations for many years and are thus very receptive to the concept of using vendors for IS and related functions.

#### a. Environment

The banking and finance industry has been particularly concerned in the last few years with cost reduction issues. The savings and loan problems are but one element of this drive to reduce costs by downsizing, eliminating certain services or consolidating banking functions.

Transaction volumes continue to increase. The reaction of larger banks has been to reverse the trend to decentralization that had been adopted to provide greater client responsiveness. Instead, financial institutions of all types are turning to standardized approaches, more efficient software development and acquisition of applications software that has proven itself in the market.

Certain technologies are being closely watched by participants in the banking and finance market. Relational databases continue to be of major importance to banks. As competition heats up, banks are stressing relationship banking to capture all of a customer's business. Relational database management systems are a necessity in this environment.

Imaging offers many efficiencies to the financial institution faced with capturing more nonstandard documents, but the cost of capital investment is high. This has certainly delayed many imaging projects in all but the largest banks. The growing use of graphical workstations and client/server platforms for processing transaction information is finally increasing the interest in this technology.

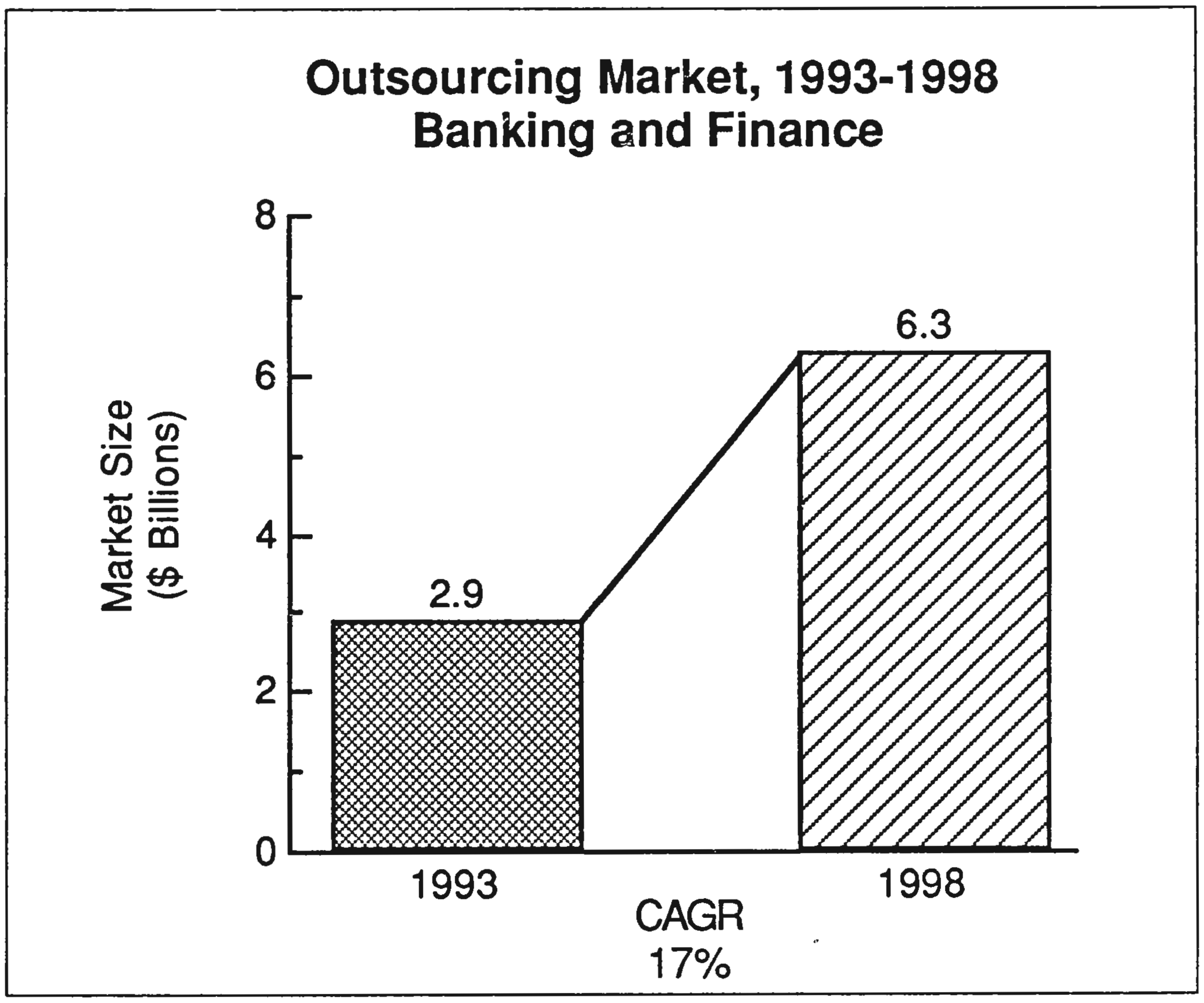
### b. Activity

The need to reduce operating costs and free capital assets for other investments continues to make outsourcing an attractive alternative for many banking and finance institutions. This is particularly true of the regulated portion of the banking industry. Credit unions and nonbank financial institutions do not have the same motivations and are less likely to outsource.

Exhibit IV-1 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $2.9 billion will grow to $6.3 billion by 1998, at a CAGR of 17% over the period. The details of the submodes of this industry can be found in the Appendix at the end of this report.

Systematics and FIserve continue to be the two banking specialist outsourcing vendors that are still successful in this market. This year saw the departure of Mellon Bank and FFMC from this market segment. Mellon Bank simply got out of outsourcing altogether, while FFMC decided to concentrate on its health care business and sold its Basis division to FIserve. Generalists such as EDS and ISSC continue to gain some success in this market, and First Data is a large player also. There are indications that Andersen Consulting as well as some of the major accounting firms are about to take over management of entire departments of some banks. No contracts have been announced in this area yet.

EXHIBIT IV-1




## 2. Discrete Manufacturing

This vertical industry is also historically a receptive user of outsourcing vendors. Some of the earliest contracts of note, both in facilities management and in outsourcing, were American Standard and Eastman Kodak. Some of the largest outsourcing contracts have also emerged from this vertical industry, particularly in the aerospace sector. The urgent needs to control costs and improve IS operations have always been strong motivators in this segment of the market.

### a. Environment

This industry is made up of so many different sub-industries that it defies applying some general statements that are true for all the elements of the industry. Some segments of the discrete manufacturing industry are growing rapidly; others are suffering from overcapacity and obsolescence.

All of them are feeling cost pressures to re-engineer and downsize. The growing sectors are being motivated by competitive pressures. The less progressive sectors are reducing operating costs just to avoid bankruptcy. In either case, IT is seen as an enabling tool to help them to control their operations better.

Several advances in information technology have helped discrete manufacturers move information faster and more accurately in their organizations. These include:

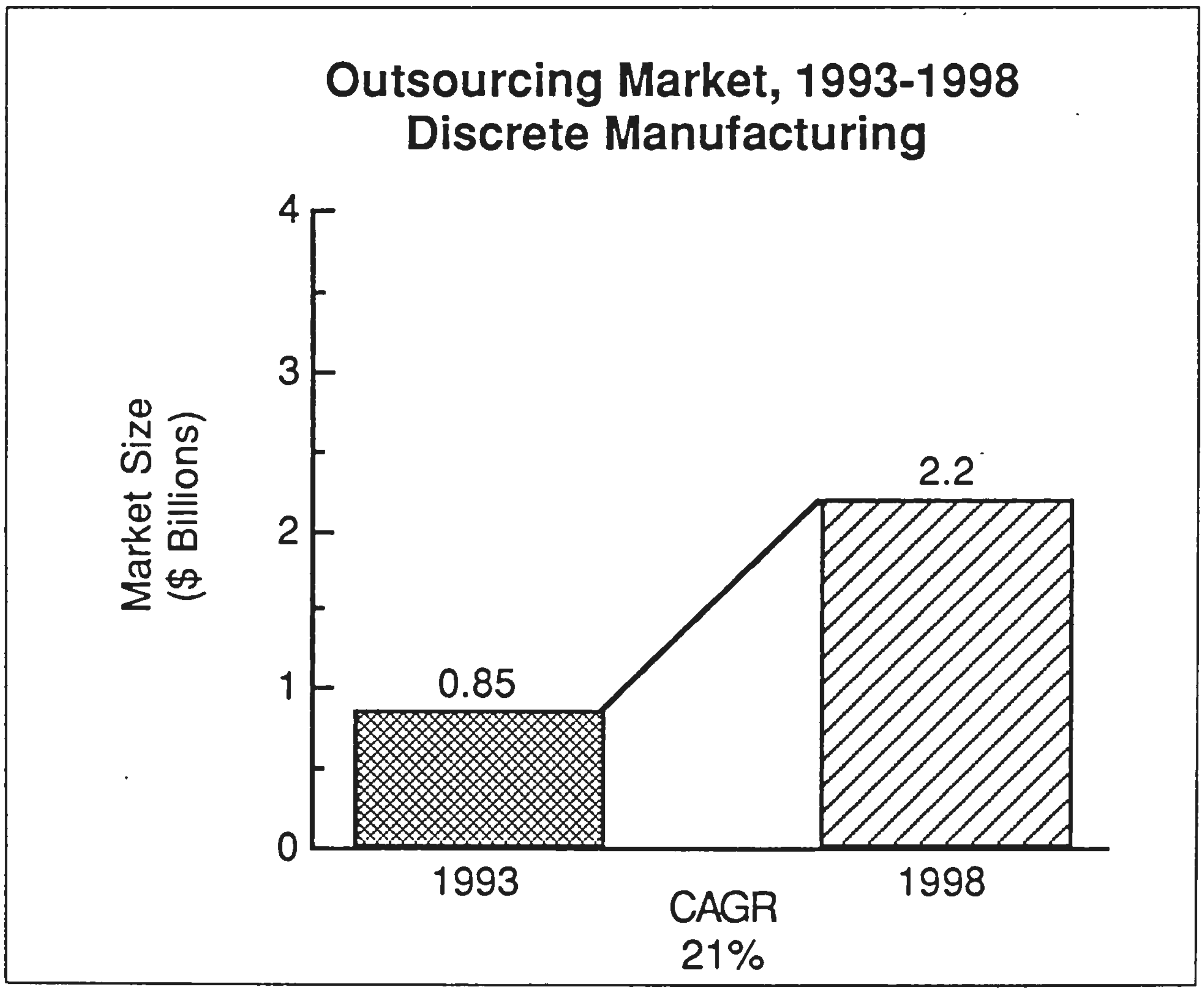
- Sharply reduced computing costs
- Increasing use and reliability of LANs
- The advent of relational database management systems
- The move toward "open standards" with its increased interoperability
- The use of CASE tools and 4GL programming languages

All of these technologies require new skills, in which that some prospects cannot invest directly. This only increases the opportunities for outsourcing vendors to be perceived as the repository for those valuable skills.

### b. Activity

Exhibit IV-2 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $850 million will grow to $2.2 billion by 1998, at a CAGR of 21% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

EXHIBIT IV-2



The news in this industry continues to be that megacontracts are likely to be closed in this industry segment. The McDonnell Douglas/ISSC $3 billion agreement with ISSC rivals the General Dynamics/CSC deal that was closed in late 1991. The Lockheed agreement with EDS was also a large one.

There are also persistent rumors that Xerox will close an even larger deal in early 1994. This industry segment continues to be an active one, in which the major players such as ISSC, EDS and CSC continue to play successfully. Power Computing and The Genix Group still operate successfully in this arena, and Digital is showing signs of leveraging its strong presence here as well.

There are good opportunities in this segment for network management opportunities that both Digital and Advantis, with their network management experience, can capitalize on.

### 3. State and Local Government

The health care piece of the state and local government vertical market, the Medicaid and Medicare administration, has been using outsourcing vendors for some time now. There are pressures in this market that make it an attractive market for further activity, though at present, there are no large outsourcing contracts that can be identified.

#### a. Environment

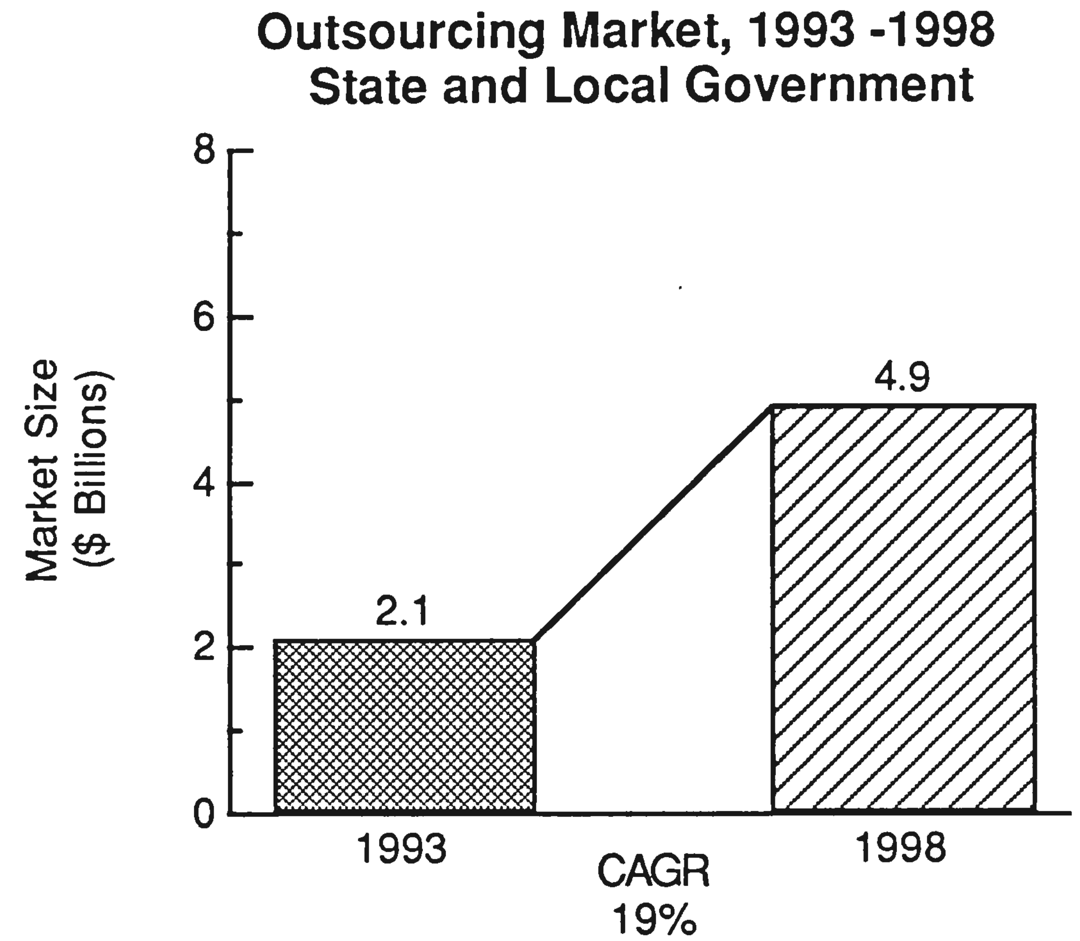
This diffused market is estimated to have over 80,000 buying units, some of them no larger than a school district. Others, such as major metropolitan areas (New York, Chicago and Los Angeles), have IT budgets to rival the larger corporations.

Vendors have a difficult time targeting this market. Many have chosen to become more specialized in a process or service, such a law enforcement or claims processing. This approach allows one success to be replicated from one buying unit to another. EDS's success in the Chicago Parking Authority will probably lead to other such arrangements. ISSC and CSC's success in Medicaid and Medicare claims processing, administered by the states, has been leveraged into other states.

#### b. Activity

Exhibit IV-3 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $2.1 billion will grow to $4.9 billion by 1998, at a CAGR of 19% over the period.

EXHIBIT IV-3




This is one industry sector that has shown increased strength lately. EDS and CSC are strong here, particularly in the management of Medicaid and Medicare claims systems, as mentioned earlier. GTE Data Services has also carved out a segment of this business for itself, however, and can be expected to increase its penetration.

In addition, SCT and SHL Systemhouse continue their success in this area, leveraging previous experience and good software to win new business. There has been some activity in network management at the state level. MCI's contract with the State of Minnesota was implemented in 1993 and could serve as the model for others.

### 4. Retail Distribution

Though this vertical industry represents a much smaller segment of the overall outsourcing market, activity has increased rapidly in the last two years. It continues to be projected to grow at a CAGR of 24% for the period from 1993 to 1998, the fastest growing vertical market.

#### a. Environment

The use of new techniques and technologies by the market leaders, Wal-mart, Penneys and Kmart in particular, continue to challenge the other players in this industry to adopt new and creative uses of IS, just to remain competitive. The very thin margins in this industry provide additional incentive to retailers to do more with less. There are other market innovators with success stories also.

The ability of Land's End, a marketer of clothing and related items, to design and implement a client buying history system increased its sales in one quarter by 20%. Telemarketing representatives and customer service staff can call up a record of any client's past buying pattern with the company as they interface with that client. It is then easy to ask clients if they need to replenish their supply of an item ordered earlier. The telemarketer can also advise them that one of their favorite pieces of clothing is currently on sale. This is just a small example of the possibilities.

The major technological trends are related to electronic commerce.

- The electronic capture and transmittal of transaction data has become essential in planning for and reacting to the rapid changes that occur in retail consumption patterns.

- The growing use of debit cards as well as the continued popularity of credit cards is easing the capture of transaction data while adding another level of convenience to certain retail transactions. The use of cards at the gas station pump is an example.

- EDI is helping to reduce costs between suppliers and retailers as it becomes the accepted mode of conducting business at the supply level.

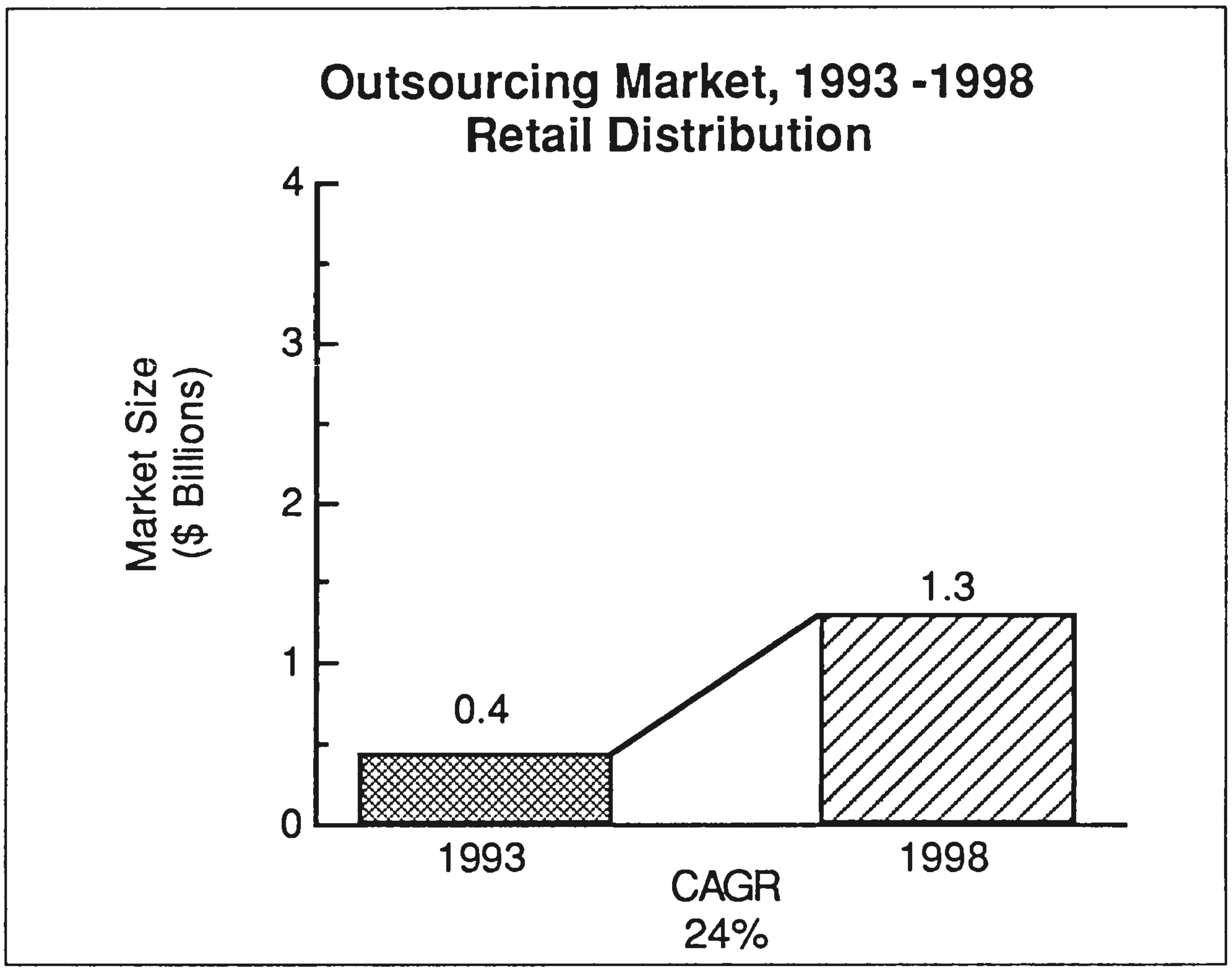
In this environment, there are undoubtedly opportunities for outsourcing vendors, particularly those who can demonstrate they can provide technical expertise as well as good management skills.

### b. Activity

Exhibit IV-4 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $440 million will grow to $1.3 billion by 1998, at a CAGR of 24% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

ISSC and EDS have dominated the systems operations vendors in this segment of the market as it has continued to exhibit healthy growth. ISSC continued to service such chains as Zale, Cullum Supermarkets, and Supermarkets General. EDS's agreement with Smith's Food and Drugs involves moving the client from a mainframe environment to a UNIX-based client/server environment over the life of the contract. This may well become the pattern that develops in this industry.

EXHIBIT IV-4




Digital continues to expand its agreement with Blockbuster Video. This agreement has elements of both desktop services and network management and is also international in scope.

## B Increased Activity Markets

These markets show signs of becoming more active. The economic conditions in certain of these industries are having a marked effect in some cases. In other cases, there is finally an awakening of interest in the potential of outsourcing.

### 1. Insurance

Insurance companies have traditionally been reluctant to outsource their IS activities in the past. They are justly proud of their own internal IS capabilities and often feel they can do it better than a vendor. This is changing as poor performance continues to plague certain segments of the industry. Outsourcing is likely to become a more attractive alternative. The increased interest in health care and the control of its costs will also positively impact this vertical market. Many of the Blue Cross/Blue Shield providers already outsource their IS activities.

### a. Environment

The same pressures that have been present in the banking industry for some time now, namely reduced profits, tightened budgets and company downsizing, are now being felt in the insurance industry.

The heated discussions on the health care crisis currently in process are focusing the attention of many organizations on this segment of the insurance industry. The role of insurance companies in the new environment is still being decided. Though originally opposed to the concept, most insurance companies have agreed that it will happen and are now determining how they can participate in the new system.

This does not make for a time of quick decision in the health care segment of the insurance industry, but life and casualty, as well as property companies, are feeling financial pressures. They are more likely to consider outsourcing as an option in the near future.

The major technologies impacting this vertical industry are also similar to those impacting the banking and finance industry.

- Client/server platforms are being used in increasing numbers. In a recent INPUT survey, respondents in the insurance industry indicated that 40% of the new applications being planned will reside in a client/server environment.

- Imaging promises to greatly speed the processing of claims and the management of historical records. Before this solution is adopted, however, the processes involved must be thoroughly studied and redesigned to ensure that the costs incurred do result in significant savings.

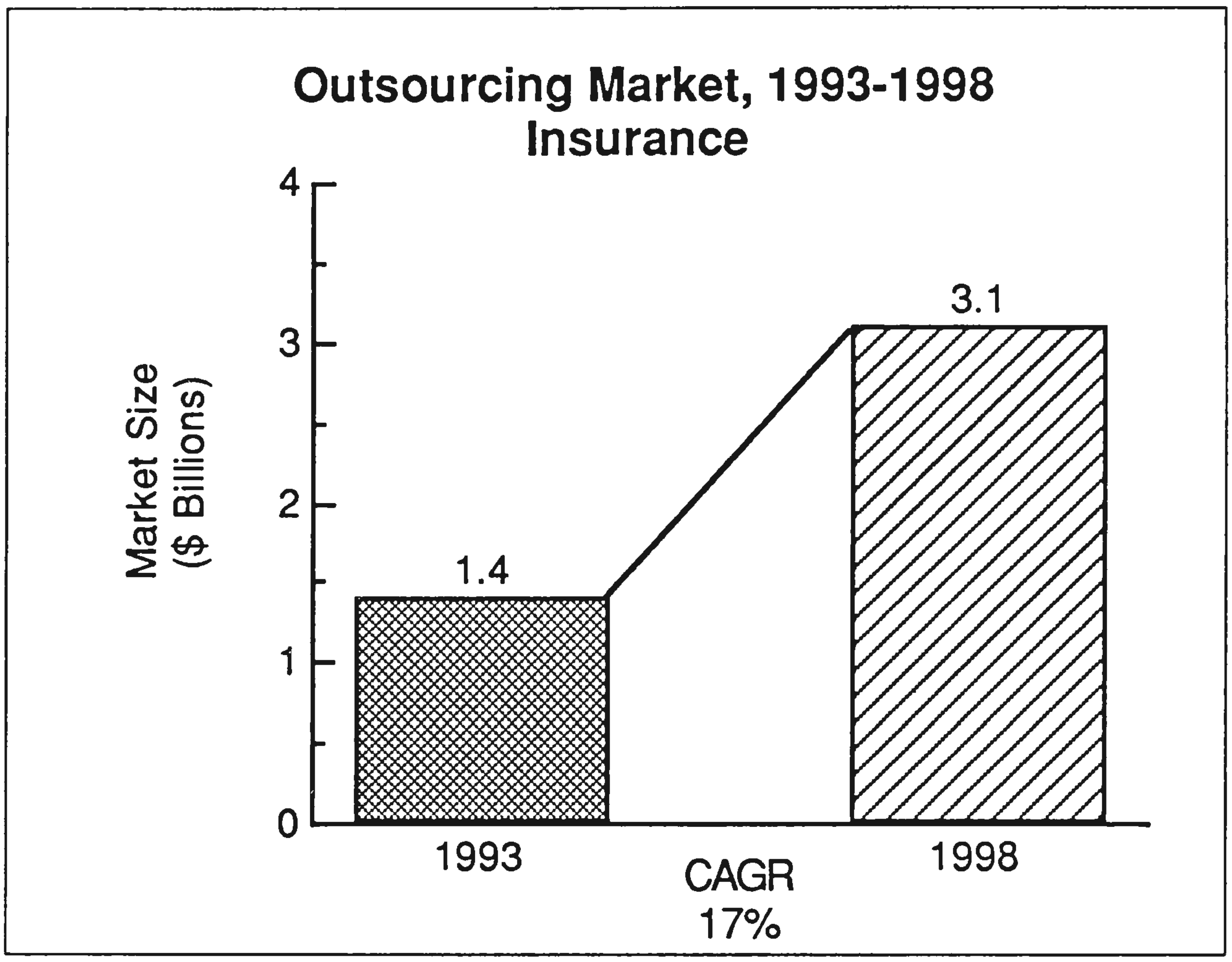
- Electronic transmission of claims and related data is not yet a fact. Success with EDI in the retail, wholesale and transportation industries is alerting insurers that there are savings and efficiencies to be gained in their industry also. New York Life and Northwestern Mutual Life are two companies that have already linked their agents electronically.

- Pen-based computing systems are being considered the next step to link agents to their home offices while they are in the field. Much development is in process now that could introduce additional efficiencies into the system in the future.

### b. Activity

Exhibit IV-5 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $1.4 billion will grow to $3.1 billion by 1998, at a CAGR of 17% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

EXHIBIT IV-5




Many industry watchers are still waiting for the big surge to come in outsourcing contracts in this industry. Everyone recognizes that the Blue Cross/Blue Shield organizations have been outsourcing to either EDS, ISSC or CSC for some time now. Jackson National Life has also outsourced to EDS, but that is the exception rather than the rule. More companies are considering it but are slow to move. The recent award of a large network management contract to AT&T by Metropolitan Life is an indication that there is potential for substantial agreements and that increased activity is likely.

Vendors are certainly prepared to enter this market. ISSC, for example, has developed an alliance with Continuum, a firm specializing in the life insurance industry, to provide outsourcing services to that segment of the industry.

### 2. Health Services

As mentioned above, the increased interest in providing health care to all citizens at a manageable cost is impacting this vertical market significantly. The potential for outsourcing is only beginning to be realized in this segment of the market.

### a. Environment

The use of IS in the health services industry can conveniently be categorized into a variety of applications areas, each with its particular needs:

- Billing and accounting systems - About 40% of total medical information systems spending is for these systems. It is critical that health care institutions be reimbursed for their services. The reimbursement agents can vary so much—from the federal government, to the state agencies, to the private insurance companies, and finally to the patient—that sophisticated systems are needed to track and collect the fees.

- Cost and profitability analysis systems - Managed care systems that are evolving in response to the escalating costs make the profitability analysis component of health care systems ever more important.

- Patient clinical records and business information systems - These are the systems that track the patient through the health care system. Though not part of the accounting and financial systems, they need to be closely integrated with them.

- Services and patient/resource scheduling systems - These systems schedule the use of resources, the scheduling of appointments, the use of test equipment and the many other support functions that are needed to support the medical staff.

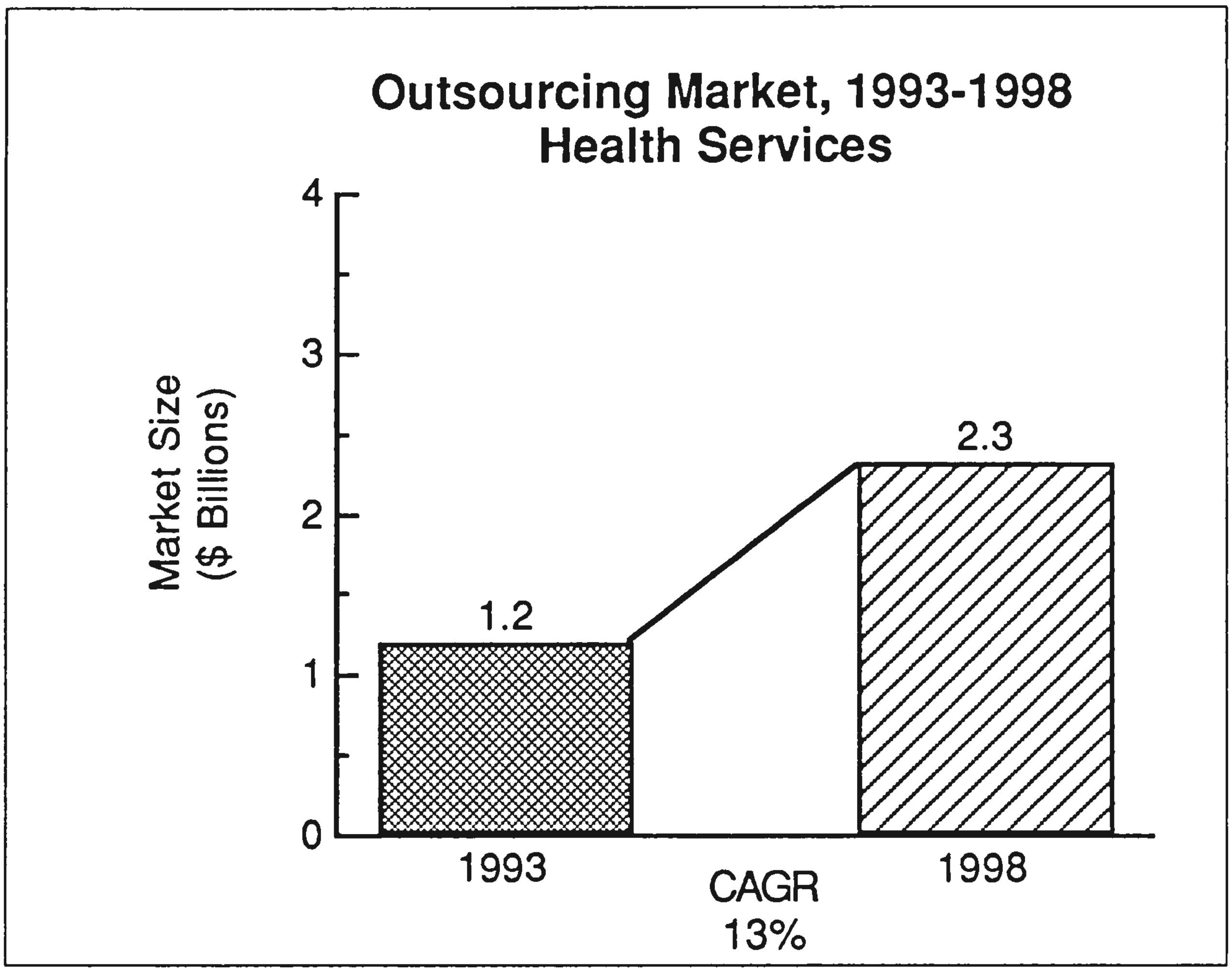
All of these systems are complex in their own right. Since they have to be closely integrated one with another, the resulting IS task becoming an even greater challenge, even for the experts.

### b. Activity

Exhibit IV-6 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $1.2 billion will grow to $2.3 billion by 1998, at a CAGR of 13% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

The need for specialists who indeed know how to operate in this complex environment has resulted in several outsourcing vendors being particularly successful in this market. Shared Medical Systems still has the largest share of the market. EDS and Perot Systems both have contracts with hospital associations under which they manage the data centers.

EXHIBIT IV-6




Systematics has acquired TDS Healthcare Services recently, signaling its entry into this market. FFMC, as mentioned earlier, has sold off its Basis division to concentrate on its health services business. These new developments are signs that the market holds promise for several vendors.

### 3. Transportation

This has not been a very active market except for a few notable exceptions, such as Continental's deal with EDS of several years ago. There appears to be some more recent activity that should be watched, however.

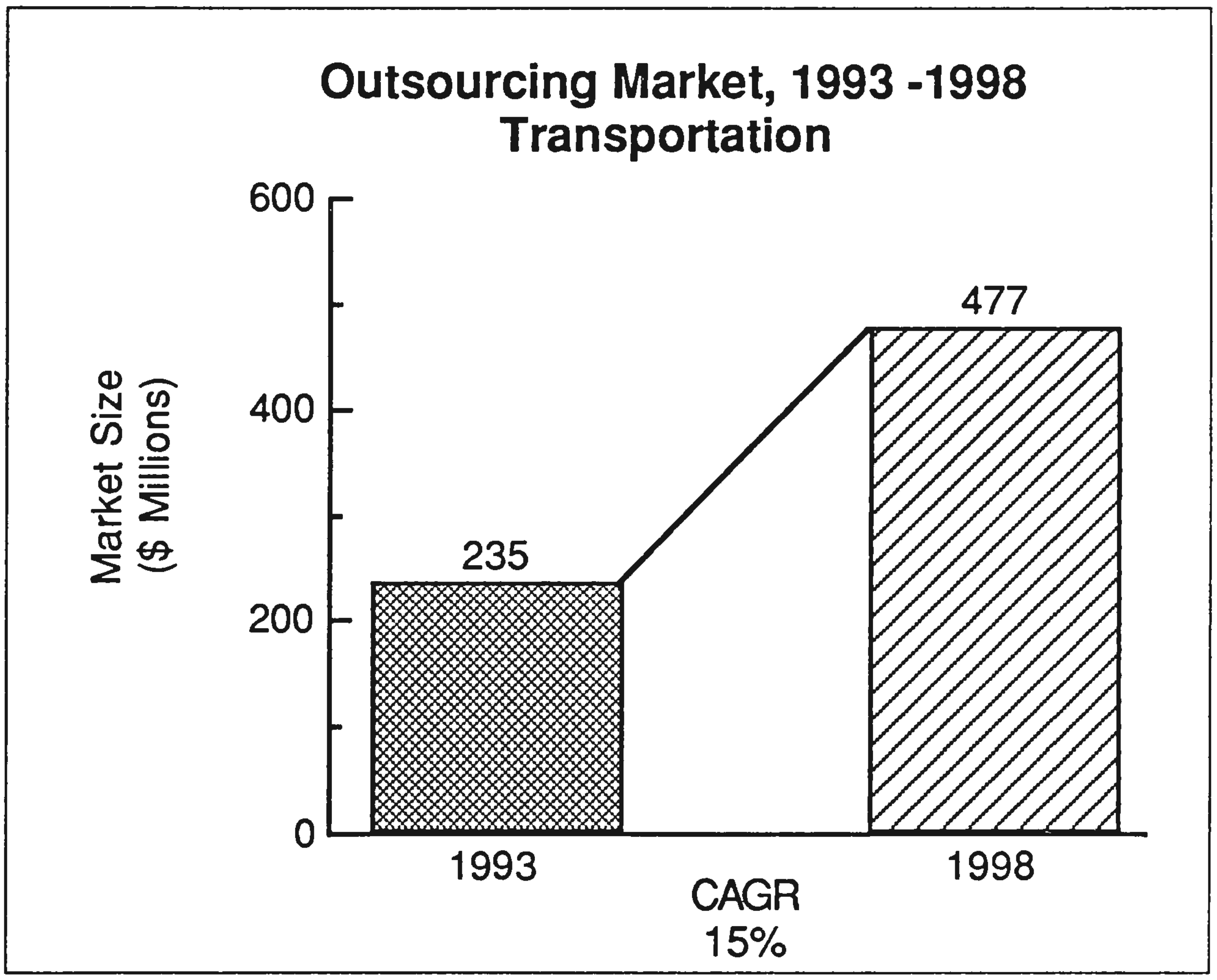
#### a. Environment

Airlines need to report the latest changes in passenger bookings instantly. Travel agencies need instant access to the available capacities on scheduled flights. The existing reservation systems represent the investment of millions of dollars of systems development and hundreds of millions of dollars of IT and telecommunications equipment.

### b. Activity

Exhibit IV-7 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $235 million will grow to $477 million by 1998, at a CAGR of 15% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

EXHIBIT IV-7




There has not been much activity in this segment of the market. ISSC just won a substantial applications operations contract with Southern Pacific. One of the strong motivators for this contract was to help Southern Pacific regain the technical edge it has lost in the last few years. This may be the start of a trend, but there is no firm evidence of that as yet.

### 4. Utilities

Traditionally the smallest of the vertical markets when outsourcing activity is measured, the utilities segment has recently shown some activity. The parallel industry in the U.K. is currently one of the most active segments of the outsourcing market, but the primary reason for this, privatization of the utilities, is not present in the U.S. market.

### a. Environment

There is pressure to deregulate in the utilities industry in general. It has been accomplished in the natural gas industry, but is much harder to achieve in such segments of the industry as sewer, electricity and water, primarily because it is uneconomical to duplicate the conduits for these services.

Utilities are increasingly having to pay more attention to consumer interests and environmental issues, in some cases incurring additional costs to meet tough new standards.

As a result, operating budgets are under increasing pressures just as the demand for many of the services is flattening out because of conservation measures, some of them encouraged by the utilities themselves. Downsizing is as common a term in the utilities industry as in the manufacturing sector and it means the same thing: reducing staff and expenses.

The answer to meeting the cost pressures is often to aggressively market new services or capabilities to generate additional revenues. This requires the careful maintenance and management of the customer information that utilities tend to collect and leveraging this asset into new revenues.

### b. Activity

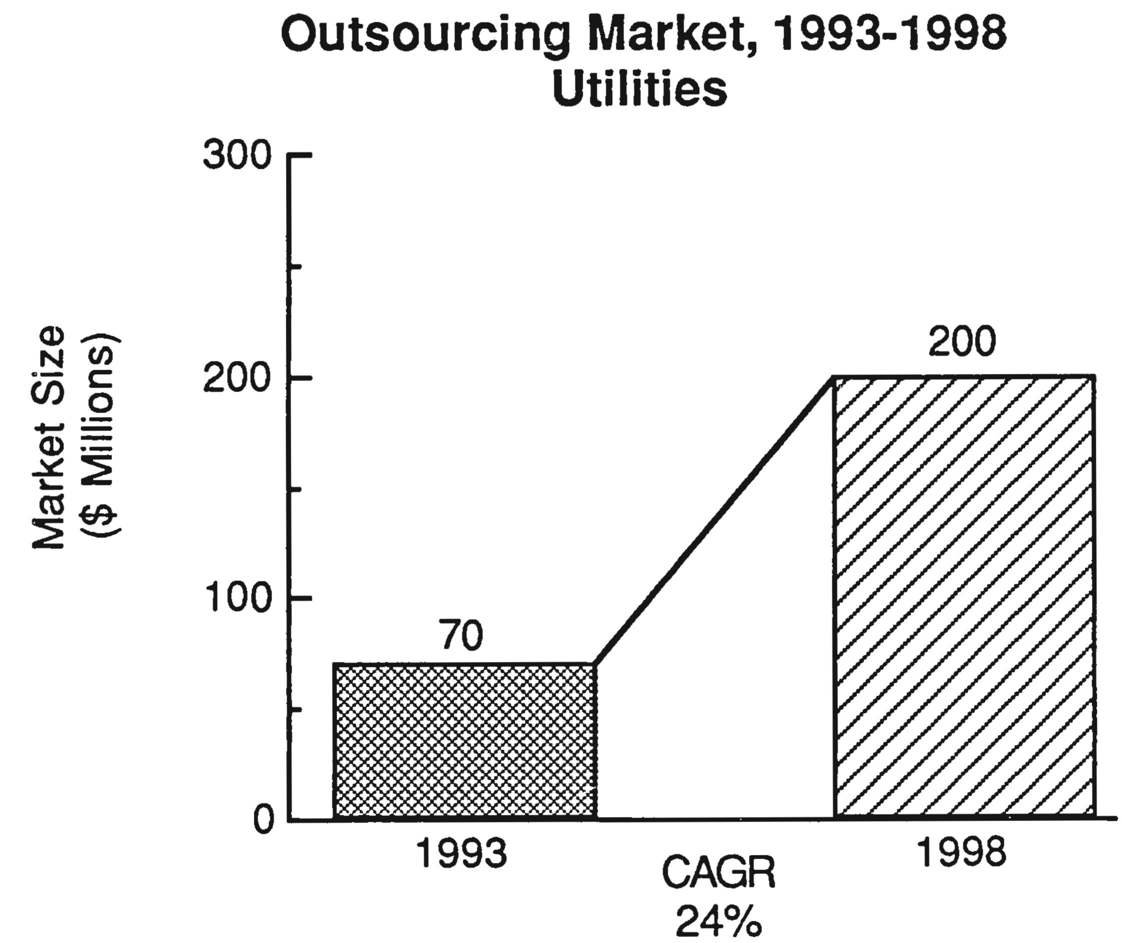
Exhibit IV-8 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $70 million will grow to $203 million by 1998, at a CAGR of 24% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

There has been recent activity in this market. No pattern or leading vendor has yet emerged, however. EDS won the Washington Water Power Contract, ISSC has Yankee Power, and CSC recently won United Illuminating. The only pattern here is that major vendors are scoring the wins, not specialists or smaller vendors. ISSC has just won a desktop services contract at Texas Utilities. This is the first of its kind in this industry.

## 5. Telecommunications

The burgeoning of the cellular telephone industry, the increasing interactions between the cable TV and telecommunications industry, and the increased mobility of the business population will require services that outsourcing vendors may be best prepared to offer this industry.

EXHIBIT IV-8




### a. Environment

The regulatory environment continues to be one of the biggest change agents for this industry. Both telephone companies and cable TV operators are affected.

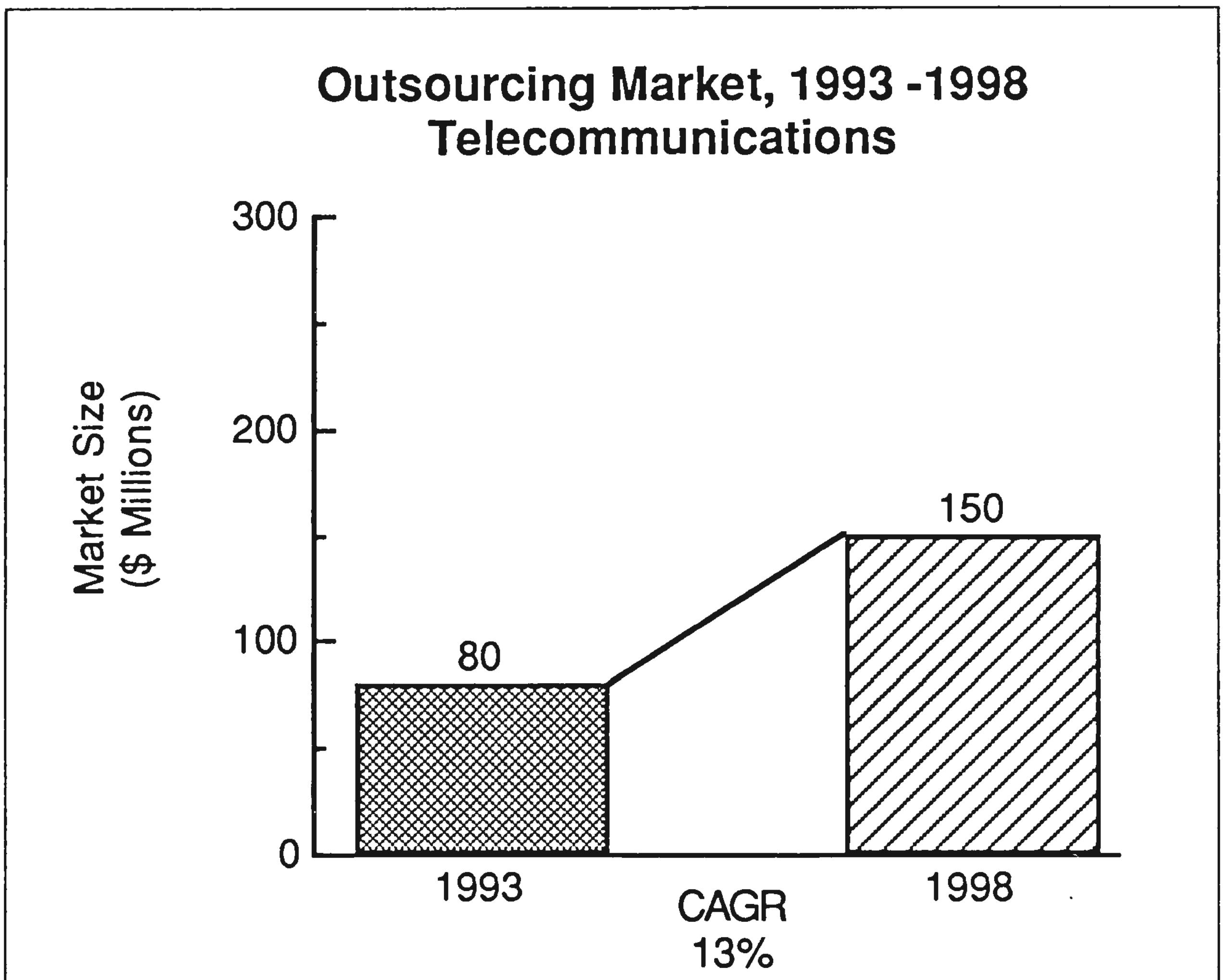
The U.S. Court of Appeals has just confirmed that telephone companies can offer content-based information services. The RBOCs continue to apply pressure on the federal government to allow them to enter the long-distance market. Cable companies have been told to lower their rates to consumers.

At the same time, the regulatory impact of antitrust laws seems to be null and void. Several recent mergers of telephone services with cable TV interests indicate that these new companies will be encouraged in the hope that they will provide new and enhanced information services to the consumer.

### b. Activity

Exhibit IV-9 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $80 million will grow to $150 million by 1998, at a CAGR of 13% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

EXHIBIT IV-9




The major activity in this market centers around the providing of cellular phone billing services to this burgeoning segment of the telecommunications industry. Cincinnati Bell Information Services, GTE Data Services and Systematics are among the leaders in this segment of the market. Some of the contracts are simply for providing processing services to clients, while others are true outsourcing contracts.

One other interesting contract should be noted in the sector. Martin Marietta manages the data center for Infonet, the consortium of common carriers and international telephone companies that provides global service to many business organizations. In a sense, a network management vendor has chosen to outsource its own platform operations.

As the newer telephone/cable TV companies form and begin to offer services and products to the consumer market, new challenges, especially in the billing area, are likely to emerge that will provide additional opportunities for the outsourcing vendor community.

## C
## Less Active Markets

The four markets listed below have little activity in some cases or very modest growth rates in other cases. Though the vendors operating in these markets do find them profitable, they do not as yet show signs of changes in their environment that would warrant reconsideration by other vendors.

### 1. Process Manufacturing

Much as in the discrete manufacturing vertical market, the need to control costs and deal with older IS operations has stimulated much of the outsourcing activity in this segment of the market. There has been less universal acceptance of the outsourcing concept in this industry overall than in the discrete manufacturing industry, however.

#### a. Environment

The same technologies that are being adopted by the discrete manufacturing industries apply here also. Some of the participants in this market, particularly the pharmaceutical and chemical companies, have a high level of internal skills in their IS departments. They traditionally prefer to build solutions themselves and operate their own IS departments.

#### b. Activity

Exhibit IV-10 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $825 million will grow to $1.7 billion by 1998, at a CAGR of 16% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

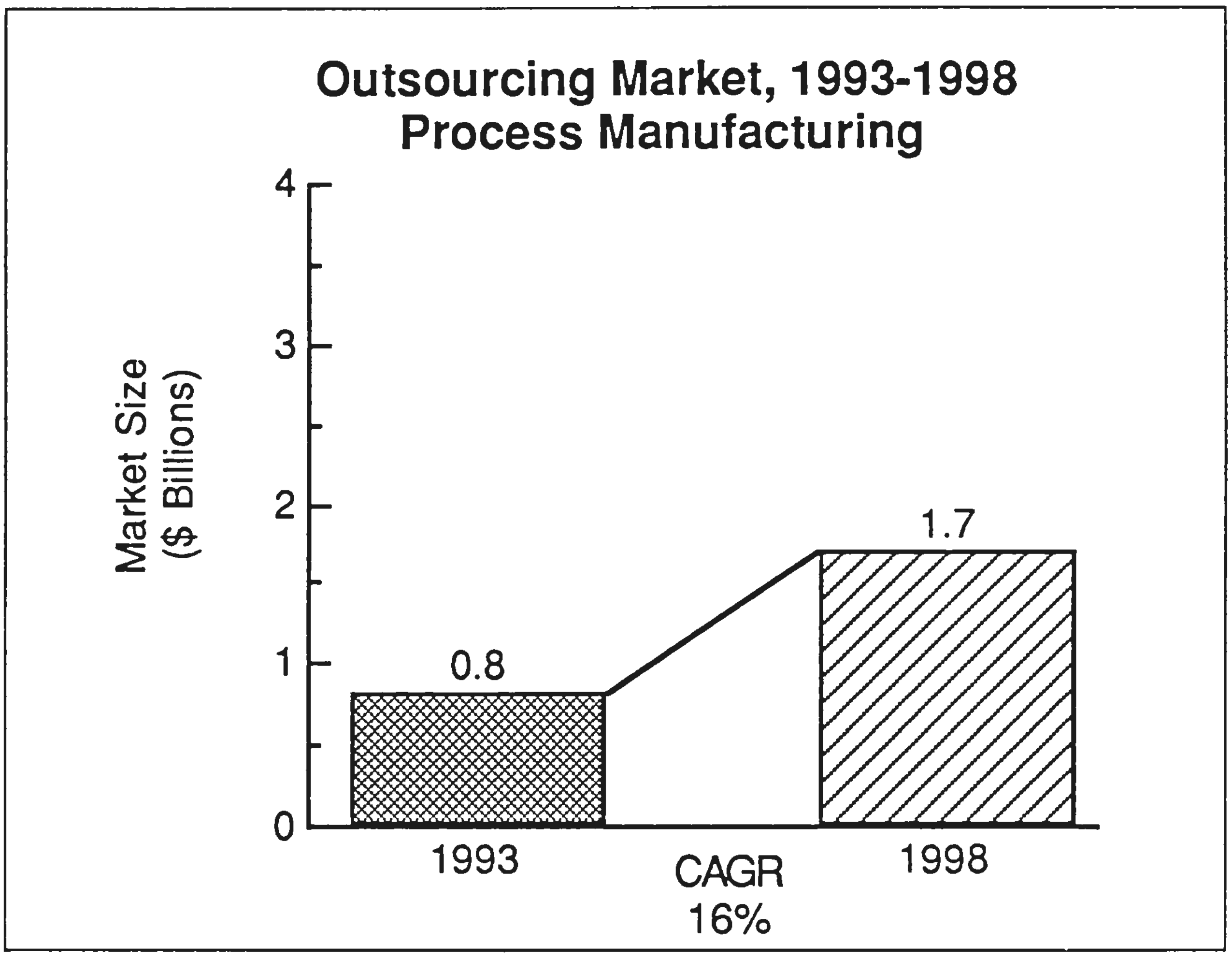
Stepan Chemical has outsourced to CSC recently, marking a new development in the chemical industry. There has been some selective outsourcing in the pharmaceutical and chemical sectors, but the steel industry has been much more receptive to outsourcing.

The Bethlehem Steel arrangement with EDS is certainly the most significant contract in the industry—not as much for its size ($500 million), but because it marked the first time an outsourcing vendor assumed responsibility for the processing platforms on the shop floor as well as in the data center.

### 2. Education

There has been some limited activity in this segment of the market, mostly by a single vendor in the higher education market. The much larger K-12 market remains largely untapped, primarily because of the diffused nature of the purchasing power in that environment.

EXHIBIT IV-10




### a. Environment

The need for improving all levels of education continues to be pressed. Yet the funds to do this are limited. The funds for IS expenditures are even more limited as the majority of educational expenditures continues to be spent for staff requirements.

It is frustrating for educational technologists who can see many applications for IS technology that could enhance the educational experience for all levels of students. The techniques are identified and in some cases proven, but few jurisdictions have the funding to implement them.

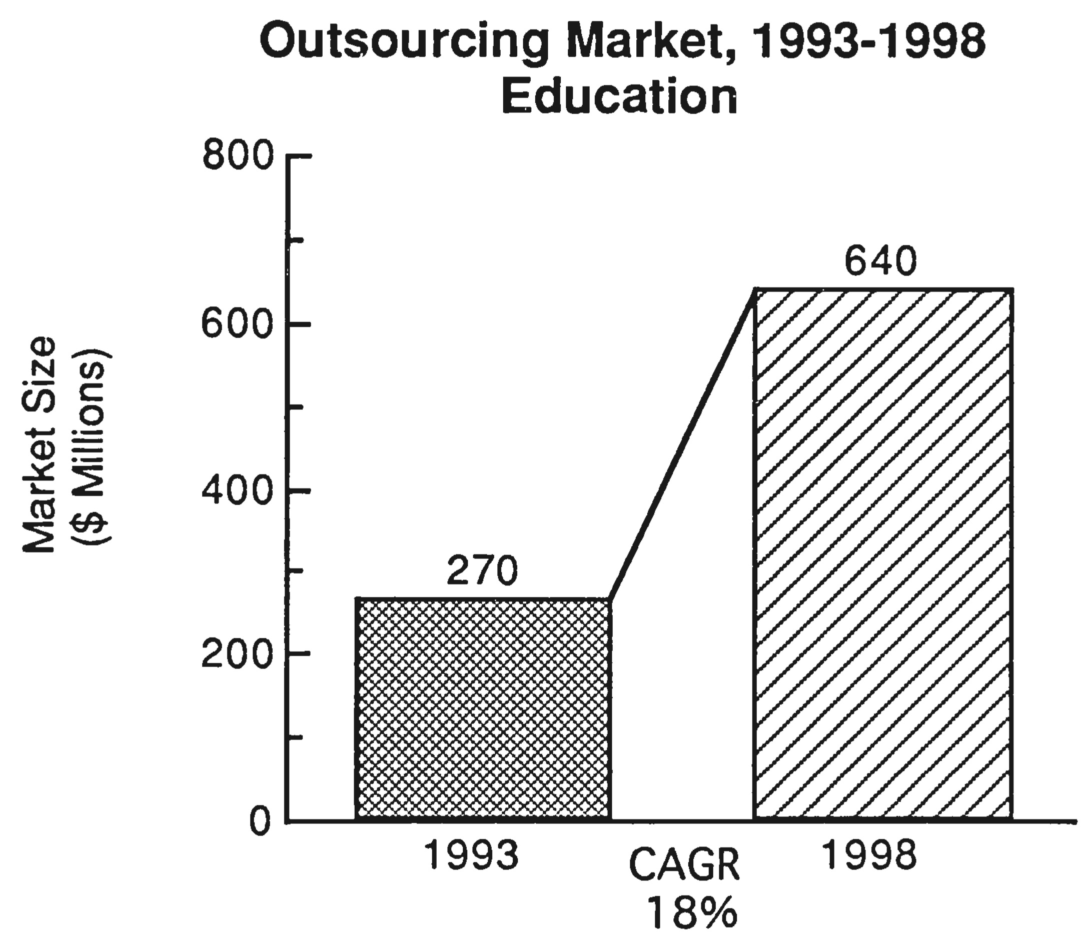
Plenty of PCs and workstations are now available to students, thanks in large part to corporate programs around the country. Most students are now comfortable with the use of computers in their work. Yet much more could be done to use these more effectively if some investment could be made in better interconnection of the equipment, for example.

Isolated success stories exist, but these do not make for an effective change to this industry that can be identified as a quantum improvement in delivery or effectiveness of the educational message.

### b. Activity

Exhibit IV-11 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $270 million will grow to $640 million by 1998, at a CAGR of 18% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

EXHIBIT IV-11




Systems and Computer Technology (SCT) continues to be the major outsourcing supplier in this market. The list of universities it has outsourcing agreements with now includes George Washington University, the University of Richmond and Fairfield University, among others. SCT's acquisition of the AI division of Dun and Bradstreet has generated substantial software revenue for it but has not yet been leveraged into outsourcing contracts.

The rest of the education market continues to be difficult for an outsourcing vendor to penetrate, often because of the diversity of the buying authorities involved. Is the municipality, county or special school district vested with the purchasing authority in a particular jurisdiction? All of them procure services differently.

### 3. Wholesale Distribution

This vertical industry is suffering much from the advent of electronic commerce. Many retailers are beginning to bypass the middleman—the wholesaler—and no significant activity is expected in this market.

#### a. Environment

This relatively small market segment has experienced some technology trends that were identified by participants in the market.

- The masses of data collected in the process of conducting business are being transferred down to the PC level to be more accessible to the end user.

- These same PCs are being loaded more and more with off-the-shelf software rather than custom software as these packages become much more powerful and usable.

- LANs are proliferating in the work environment and EDI is gaining widespread usage.

- Increasing automation of both the logistics and the warehousing functions are occurring, generating even more data for the databases.

These developments are setting up the wholesale distributor as a likely prospect for network management and/or desk top services arrangements with outsourcing vendors.

#### b. Activity

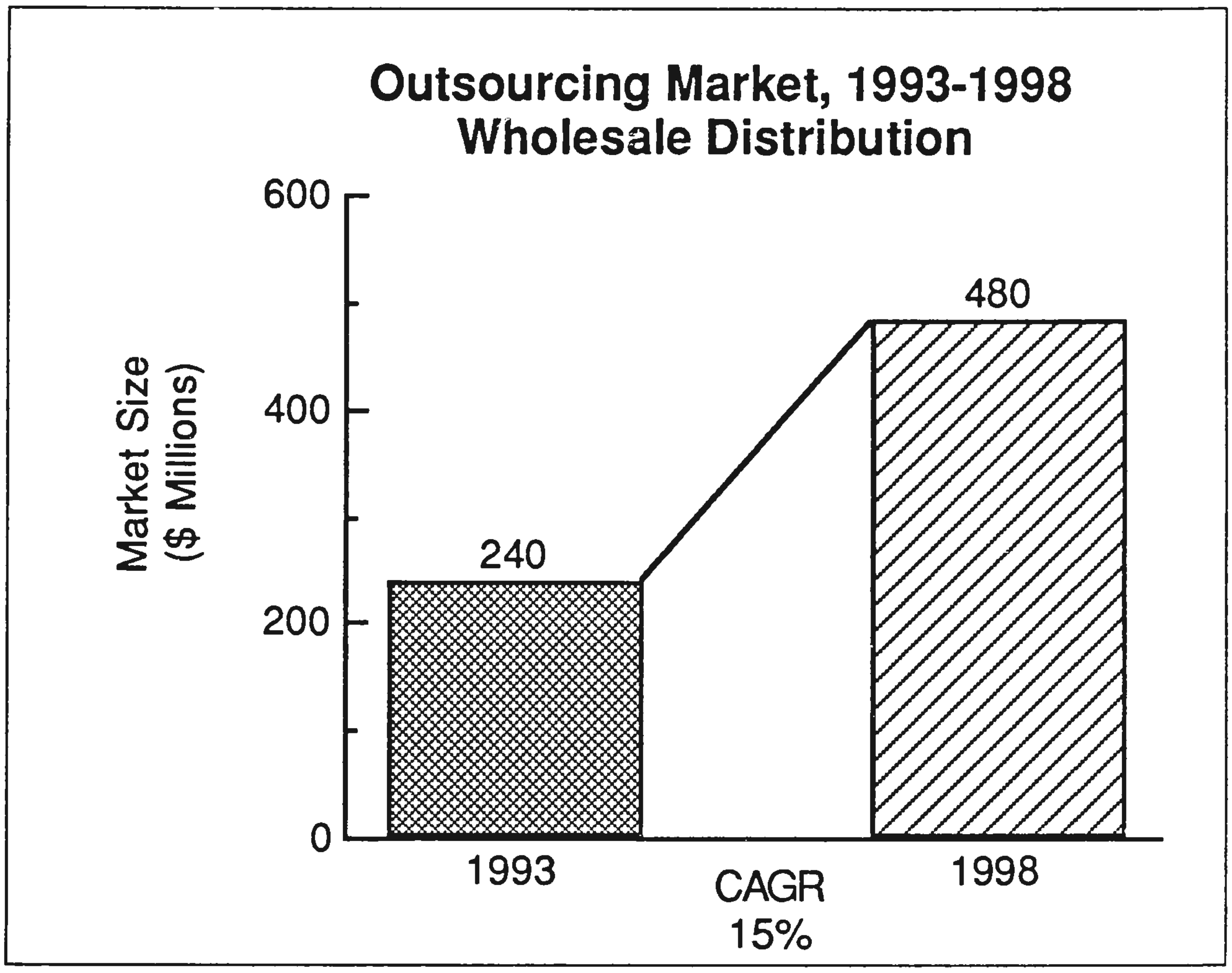
Exhibit IV-12 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $240 million will grow to $485 million by 1998, at a CAGR of 15% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

The only vendor of note that has been successful in this market is Martin Marietta. It has contracts with both Monarch Foods and J P Foods. There is little other activity in this market.

### 4. Business Services

The market for outsourcing vendors in this vertical industry should be greater than the current market size. Recent activity has stimulated growth in this segment, but there are other market structures that work against a surge of activity.

EXHIBIT IV-12




### a. Environment

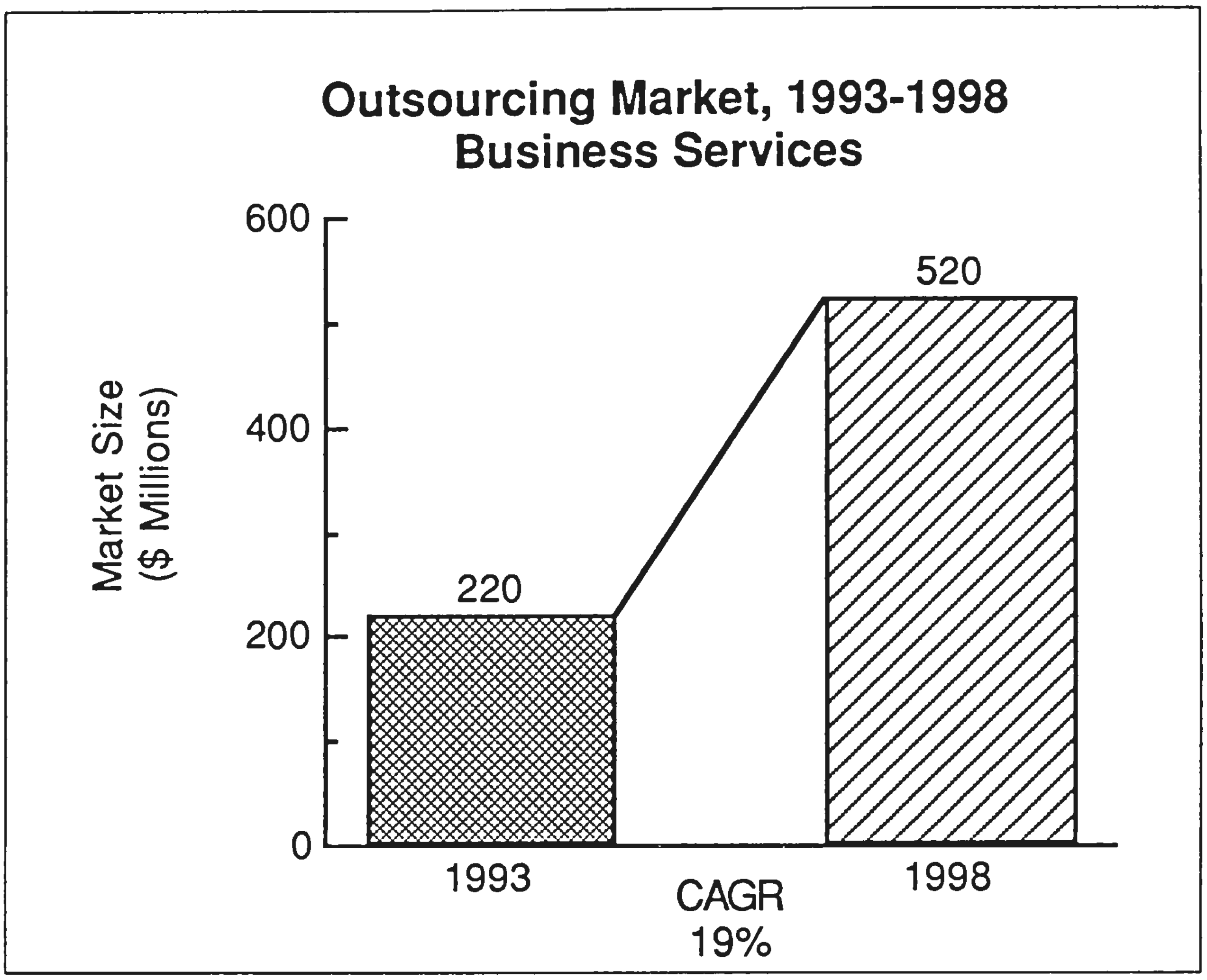
The diversity of the types of firms in this vertical industry makes it difficult to identify some common trends in this market. Rather, INPUT has chosen to focus on the segments of the market that have adopted outsourcing to some degree. The hospitality and car rental segments in particular have some existing outsourcing arrangements that are discussed below.

Both of these segments of the business services market were severely impacted by the recession just ending. The news is improving in this market, however, as room occupancy rates go up and auto rental revenues also rise. It is unknown whether increased revenues will stimulate the move to outsourcing or not. Cost containment pressures are not being reduced much because competition is still keen and these organizations are striving to deliver better service to their clients to meet competition.

### b. Activity

Exhibit IV-13 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $220 million will grow to $520 million by 1998, at a CAGR of 19% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

EXHIBIT IV-13




The most recent major contract in this vertical industry was the agreement between Litton Computer Services and the Budget Rent-a-Car/Hilton Hotels grouping to have Litton manage the joint center which provides reservation and administrative support to the two clients. EDS had been represented here with the Hospitality Franchise System deal and the National Car Rental agreement. ISSC still does not seem to have found a major client in this market, though one was predicted last year.

Another interesting contract in this sector is the $200 million, 10-year contract between TransUnion and Acxiom. This marks the first major outsourcing award for Acxiom and appears to be the start of a new market direction for this vendor, already well known for its marketing database management skills.

There are major opportunities for network management arrangements in this vertical market that have not been realized. The widely dispersed nature of many of the organizations in this industry, whether car rental firms, hotel chains or others, makes this a natural outsourcing opportunity, but one that has not yet been much taken advantage of.

## 5. Federal Government

The growth rate for the federal government segment of the outsourcing market is the lowest of all the vertical industries. Still a large component of the total outsourcing market, it is suffering from much consolidation activity in the defense agencies and some job protection activities in the civilian sector. This situation is not expected to improve soon.

### a. Environment

The federal government continues to strive to improve its own performance while at the same time reducing staffing levels and operating costs. A series of initiatives by the Clinton administration are aimed at providing more responsive government services to the citizen by rethinking and redesigning the way service is provided and taking advantage of newer technology to deliver that service.

The National Performance Review (NPR) Board recommendations, issued in September, are the prime vehicle for this change. Developed by a large task force of federal employees and championed actively by Vice President Gore, these initiatives have a strong chance of succeeding.

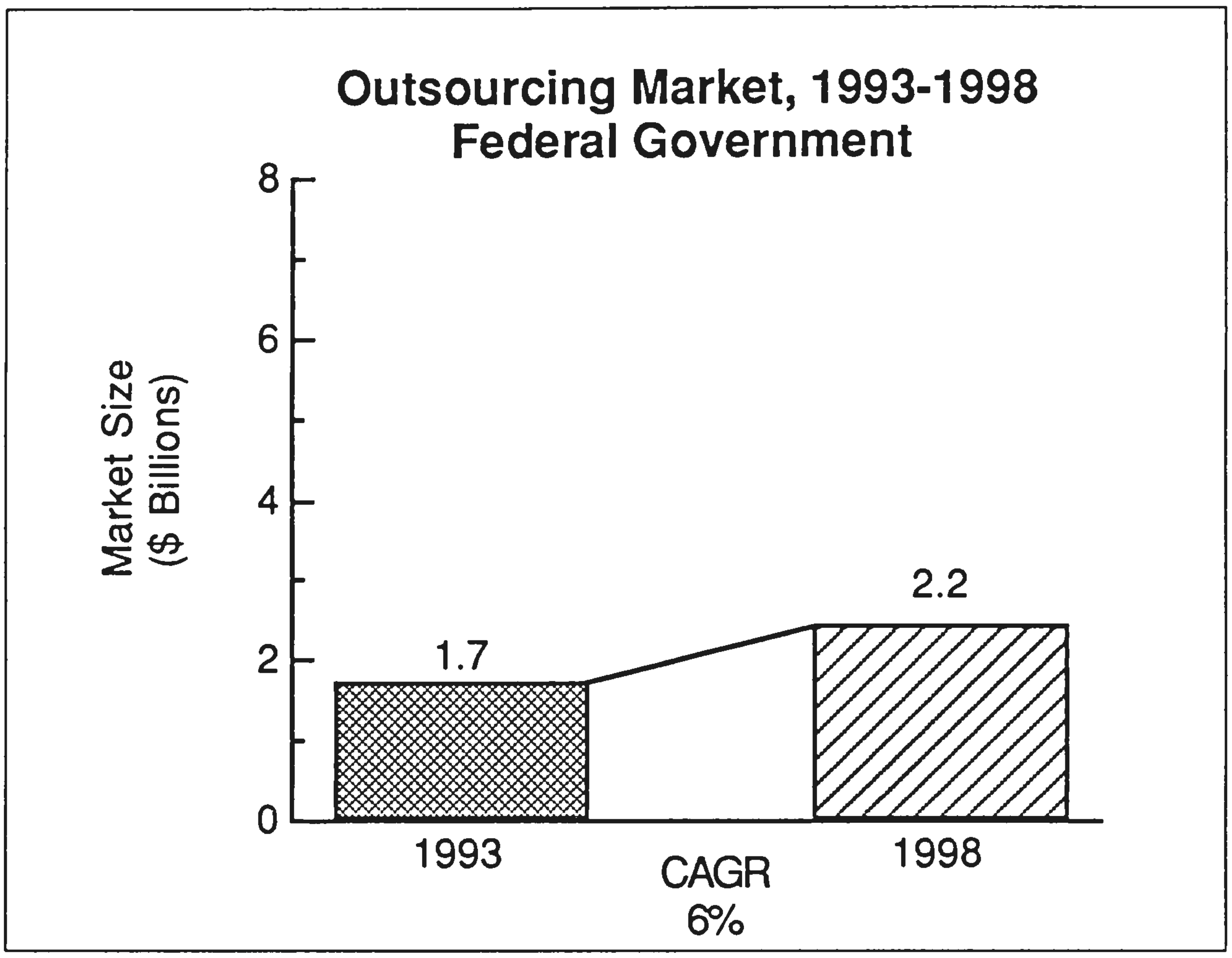
They cover all government activities, ranging from the reform of the procurement policies in the government to the provision of data for citizens from a centralized source such as an easily accessible public kiosk. None of these are easy, but they are more likely to be implemented because they were developed by federal employees themselves, not by an independent, external body, as had been the case with previous such attempts.

Federal vendors, for outsourcing services as well as other functions, are actively discussing the NPR recommendations to position themselves to participate in the re-engineering and retooling of the IS functions that is likely to arise. They expect these initiatives to take some time to evolve, however, so the short-term market outlook is for slow growth.

### b. Activity

Exhibit IV-14 illustrates what the market for outsourcing services will be in the five-year period from 1993 to 1998. The 1993 value of $1.7 billion will grow to $2.2 billion by 1998, at a very low CAGR of 6% over the period. The details for the submodes for this industry can be found in the Appendix at the end of this report.

EXHIBIT IV-14




The vendors who traditionally provide outsourcing services to the federal government continue to seek new opportunities in this market in spite of the reduced budget expectations. Winning a federal outsourcing contract is still a major win that assures the vendor a substantial revenue stream for several years. CSC, EDS, IBM and many others have entire divisions dedicated to the identification and capture of these major contracts.

Such major awards as HUD's HIIPs project (valued at $525 million) to Martin Marietta and FAA's CORN project (valued at $500 million) to EDS occurred after long, competitive procurements in which a number of vendors invested substantial resources, only to lose in the end.

Currently, the major federal outsourcing procurements scheduled to be awarded in 1994 include:

- NASA's Goddard Space Flight Center's Systems Engineering and Analysis Services contract, valued at $185 million.

- NASA's Goddard Operations and Analysis Support contract, valued at $37 million.

- U.S. Customs' Data Center Facilities Management contract, valued at $44 million.

## D
## Summary

These industry profiles are intended to reflect how the environment and the activity in each vertical industry impacts the opportunities for outsourcing in that industry. For a complete analysis of any vertical industry, refer to INPUT's series of vertical industry reports published as part of the Market Analysis Program.

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A

# Appendix: Forecast and Reconciliation

EXHIBIT A-1

## Outsourcing U.S. Market Forecast by Industry Sector 1992-1998

| Industry Sector | 1992 ($M) | Growth 92 93 (%) | 1993 ($M) | 1994 ($M) | 1995 ($M) | 1996 ($M) | 1997 ($M) | 1998 ($M) | CAGR 93-98 (%) |
|---|---|---|---|---|---|---|---|---|---|
| Delivery Mode Total | 11,284 | 11 | 12,528 | 14,418 | 16,703 | 19,402 | 22,676 | 26,538 | 16 |
| Discrete Manufacturing | 705 | 20 | 846 | 1,017 | 1,226 | 1,479 | 1,789 | 2,168 | 21 |
| Process Manufacturing | 717 | 15 | 824 | 945 | 1,095 | 1,270 | 1,480 | 1,740 | 16 |
| Transportation | 206 | 14 | 235 | 278 | 321 | 363 | 415 | 477 | 15 |
| Utilities | 57 | 23 | 70 | 85 | 108 | 133 | 167 | 203 | 24 |
| Telecom-munications | 74 | 12 | 83 | 95 | 108 | 121 | 136 | 154 | 13 |
| Retail Distribution | 350 | 24 | 435 | 525 | 655 | 820 | 1,010 | 1,253 | 24 |
| Wholesale Distribution | 214 | 14 | 244 | 280 | 321 | 369 | 423 | 486 | 15 |
| Banking and Finance | 2,545 | 13 | 2,880 | 3,330 | 3,880 | 4,555 | 5,355 | 6,320 | 17 |
| Insurance | 1,225 | 16 | 1,420 | 1,660 | 1,950 | 2,313 | 2,642 | 3,083 | 17 |
| Health Services | 1,125 | 10 | 1,240 | 1,400 | 1,585 | 1,789 | 2,020 | 2,278 | 13 |
| Education | 235 | 17 | 275 | 325 | 375 | 445 | 535 | 640 | 18 |
| Business Services | 181 | 20 | 218 | 262 | 319 | 380 | 454 | 520 | 19 |
| Federal Government | 1,870 | -10 | 1,685 | 1,780 | 1,900 | 1,985 | 2,110 | 2,245 | 6 |
| State & Local Government | 1,760 | 16 | 2,050 | 2,410 | 2,830 | 3,345 | 4,100 | 4,925 | 19 |
| Miscellaneous Industries | 20 | 15 | 23 | 26 | 30 | 35 | 40 | 46 | 15 |

EXHIBIT A-2

## Outsourcing U.S. Market Forecast by Submode 1992-1998

| Delivery Mode/ Submode | 1992 ($M) | Growth 92 93 (%) | 1993 ($M) | 1994 ($M) | 1995 ($M) | 1996 ($M) | 1997 ($M) | 1998 ($M) | CAGR 93-98 (%) |
|---|---|---|---|---|---|---|---|---|---|
| Systems Operations | 11,284 | 11 | 12,528 | 14,418 | 16,703 | 19,402 | 22,677 | 26,538 | 16 |
| - Platform Operations | 3,781 | 8 | 4,095 | 4,565 | 5,106 | 5,695 | 6,347 | 7,092 | 12 |
| - Applications Operations | 4,962 | 11 | 5,485 | 6,239 | 7,186 | 8,285 | 9,649 | 11,328 | 16 |
| - Desktop Services | 1,358 | 12 | 1,520 | 1,838 | 2,222 | 2,690 | 3,288 | 8,875 | 21 |
| - Network Management | 1,183 | 21 | 1,423 | 1,776 | 2,189 | 2,733 | 3,393 | 4,244 | 24 |

EXHIBIT A-3

## Outsourcing Forecast Reconciliation

| Delivery Modes | 1992 Market | | | | 1997 Market | | | | 92-97 CAGR per data '92 Rpt (%) | 92-97 CAGR per data '93 Rpt (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1992 Market (Fcst) ($M) | 1993 Report (Actual) ($M) | Variance from 1992 Report ($M) | Variance from 1992 Report (%) | 1992 Market (Fcst) ($M) | 1993 Report (Actual) ($M) | Variance from 1992 Report ($M) | Variance from 1992 Report (%) | | |
| Total | 11,705 | 11,284 | -421 | -4 | 26,520 | 22,677 | -3,843 | -14 | 18 | 15 |
| Platform Operations | 3,895 | 3,781 | -114 | -3 | 7,000 | 6,347 | -653 | -9 | 12 | 11 |
| Applications Operations | 5,195 | 4,962 | -233 | -4 | 11,505 | 9,649 | -1,856 | -16 | 17 | 14 |
| Desktop Services | 1,175 | 1,358 | 183 | 16 | 4,470 | 3,288 | -1,182 | -26 | 31 | 19 |
| Network Management | 1,440 | 1,183 | -257 | -18 | 3,545 | 3,393 | -152 | -4 | 20 | 23 |

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# Outsourcing Reconciliation Comments

### 1. Short-Term Changes (1992 Market)

Minor changes in the platform and applications operations segments of the market reflect decreases in the activity in certain markets, particularly process manufacturing and the federal government.

The change in desktop services reflects a greater than anticipated increase in this activity. Last year was the first year INPUT separately identified this segment of the market, and the data this year is better, which enables a more accurate forecast.

The network management market was also forecast separately for the first time last year, and the discrepancy reflects some anticipated major contracts that did not occur until this year, such as NASDAQ and Metropolitan Life, among others.

### 2. Long-Term Changes (1997 Market)

The decreasing long-term growth rate of both platform and applications operations reflects the increased importance of transition outsourcing as a component of these two segments. These contracts tend to be of shorter duration and end after three years. These phenomena were not reflected sufficiently in last year's forecast. The expected continued slow growth of the federal market had an impact on this also.

The substantial change in the long-range forecast for desktop services reflects overoptimism in some of the data collected last year, and subsequent adjustment because actual experience has indicated that these contracts are not as large as had been anticipated.

The discrepancy in the 1997 figures for network management are much less than for the 1992 market and simply reflect the adjustment made in the 1992 figures. The growth rate for the long term is expected to increase, in fact, because there will be greater recognition of the value of outsourcing the network, and newer players will become even more active in this market.

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