

GAO

Report to the Subcommittee on Antitrust,
Competition Policy and Consumer
Rights, Committee on the Judiciary, U.S.
Senate

February 2004

TELECOMMUNICATIONS

Wire-Based
Competition Benefited
Consumers in Selected
Markets



G A O

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Highlights of [GAO-04-241](#), a report to the Subcommittee on Antitrust, Competition Policy and Consumer Rights, Committee on the Judiciary, U.S. Senate

Why GAO Did This Study

One of the primary purposes of the Telecommunications Act of 1996 was to promote competition in telecommunication markets, but wire-based competition has not developed as fully as expected. However, a new kind of entrant, called *broadband service providers* (BSP), offers an alternative wire-based option for local telephone, subscription television, and high-speed Internet services to consumers in the markets they have chosen to enter. This report provides information on (1) BSPs' business strategy, (2) the impact of BSPs' market entry on incumbent companies' behavior and consumer prices for telecommunications services, (3) the key factors that BSPs consider when making decisions about which local markets to enter, and (4) the success of BSPs in attaining subscribership and any key factors that may limit their success.

We developed a case-study approach to compare 6 cities where a BSP has been operating for at least 1 year with 6 similar cities that do not have such a competitor. The 6 markets with a BSP presently account for more than 20 percent of the households nationwide that are in areas where BSPs currently offer the three-service package, but the results of these case studies are not generalizable to all markets.

www.gao.gov/cgi-bin/getrpt?GAO-04-241.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Mark Goldstein at (202) 512-2834 or goldsteinm@gao.gov.

TELECOMMUNICATIONS

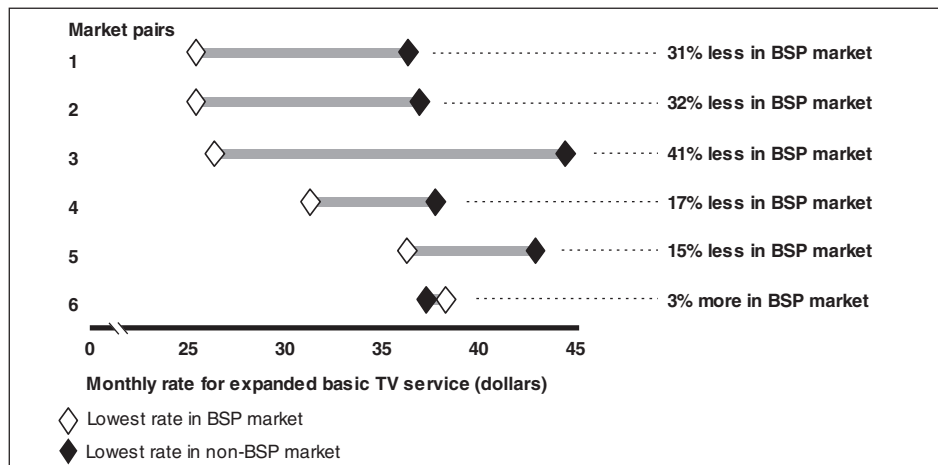
Wire-Based Competition Benefited Consumers in Selected Markets

What GAO Found

BSPs' primary business strategy is to build a fiber-optic network to provide consumers with a *bundle* of services, including subscription television, high-speed Internet access, and local telephone. To entice consumers to purchase more than one service of the three services they offer—a key marketing goal—all of the BSPs we reviewed offer substantial savings to consumers who buy more than one service.

The rates for telecommunications services were generally lower in the 6 markets with BSPs than in the 6 markets without a BSP. For example, expanded basic cable television rates were 15 to 41 percent lower in 5 of the 6 markets with a BSP when compared with their matched market.

Comparison of Monthly Cable TV Rates in 6 Matched-Pair Markets



Source: GAO.

The 6 BSPs we interviewed said that demographic factors, such as city size, income, and computer use were important factors in their decision to enter a market. For example, most of the BSPs avoided entering large cities. Location of the markets to key facilities and receptivity of local government officials were also considered when deciding which markets to enter.

The 6 BSPs we interviewed have gained significant market shares for the services they provide, but they have also faced a number of obstacles that may be hindering their success. For example, the BSPs we spoke with are experiencing some financial difficulties and are putting off network expansion. Two of these companies also currently lack the resources necessary to adequately market their services within their existing markets.

We provided a draft of this report to the FCC and DOJ. The DOJ did not provide any comments, and FCC provided technical comments that we incorporated. We invited the Broadband Service Provider Association, the National Association of Telecommunications Officers and Administrators, the National Cable & Telecommunications Association (NCTA), and the United States Telecom Association to comment on a draft of this report. We summarize and discuss NCTA's detailed comments in the report.

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Abbreviations

BSP	broadband service provider
BSPA	Broadband Service Provider Association
FCC	Federal Communications Commission
NATOA	National Association of Telecommunications Officers and Administrators
NCTA	National Cable & Telecommunications Association
USTA	United States Telecom Association

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United States General Accounting Office
Washington, D.C. 20548

February 2, 2004

The Honorable Mike DeWine
Chairman
The Honorable Herb Kohl
Ranking Minority Member
Subcommittee on Antitrust, Competition
Policy and Consumer Rights
Committee on the Judiciary
United States Senate

One of the primary purposes of the Telecommunications Act of 1996 was to promote competition in telecommunications markets. In local telephone markets, companies began to provide competition to local telephone companies after passage of the act. Much of that competition focused on service to business customers, and many of these companies have gone out of business in the past few years. Regarding the subscription television market—that is, the market for pay television service—there were expectations that certain provisions of the act, along with some provisions of the earlier Cable Television Consumer Protection and Competition Act of 1992, would spur new competition in a market that had long been dominated by cable television providers. However, entry by wire-based providers (such as telephone companies) into the subscription television market has not developed as fully as expected.

In the past few years, a new kind of wire-based provider—typically known as a broadband service provider (BSP)—has emerged to provide competition to local incumbent telephone and cable television providers through a *bundled offering* of subscription television, local telephone, and high-speed (or broadband) Internet services. These BSPs could enhance the competitiveness of these markets, but they also may face certain challenges that make it difficult for them to become fully viable competitors.

You asked us to provide information about a variety of issues related to BSPs' operations and the influence of their entry into selected markets. For a selected set of markets, this report provides information on (1) BSPs' business strategy; (2) the impact of BSPs' market entry on incumbent cable and telephone companies' market behavior and on consumer prices of subscription television, high-speed Internet, and local telephone services; (3) the key factors that BSPs consider when making decisions about which local markets to enter; and (4) the success of BSPs in attaining

subscribership and any key factors that may limit their success. We also recently issued a report on cable rates that examined several related issues.¹

To address these objectives, we developed a matched-pair case-study approach to compare cities, or markets, where a BSP is operating with similar cities that do not have such a competitor. We selected 6 cities in which a BSP had offered three services—local telephone, subscription television, and high-speed Internet access—for at least 1 year. We then chose a *match* for each of the 6 cities by selecting another city in the same state, where possible, which was of a similar size and demographic profile, but that did not have a BSP. See figure 1 for a list of 12 cities that were chosen. Of the 6 city pairs, 3 were small city pairs, 2 were medium-sized city pairs, and 1 was a large city pair. In the case of the large city with a BSP—Boston—we chose a matched city that was not in the same state because there was no appropriate in-state match for Boston, nor were there other large cities that had an extensive BSP presence. The 6 case-study markets with a BSP presently account for more than 20 percent of the households nationwide that are in areas where BSPs currently offer the three-service package.²

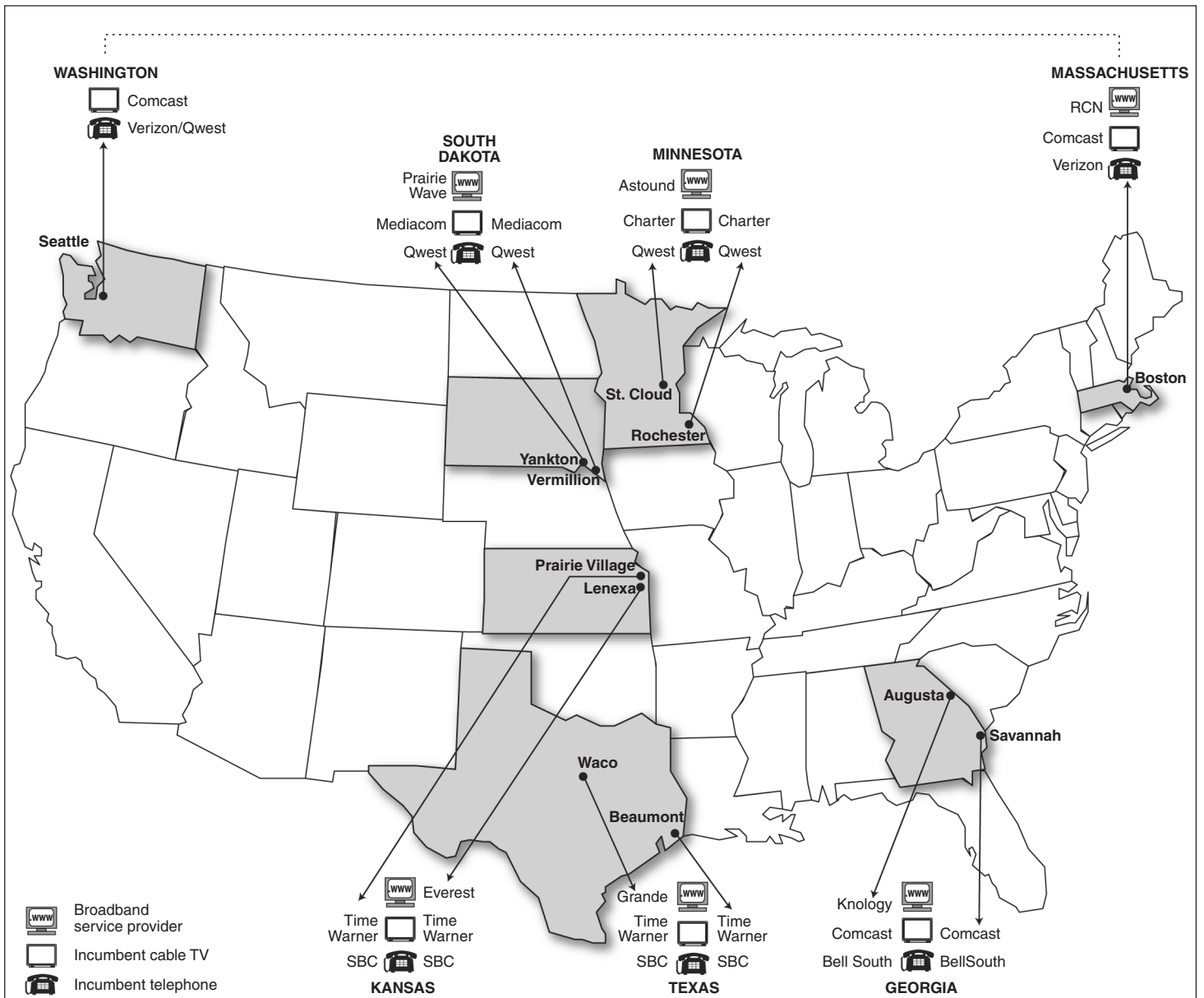
In each of the cities, we conducted semistructured interviews with relevant industry representatives as well as state and local regulatory officials. As depicted in figure 1, we interviewed officials from

- six BSPs in the cities where there was such a provider,
- four incumbent cable companies that operate in our 6 matched-pair cities,
- four incumbent telephone companies that operate in our 6 matched-pair cities,
- twelve local franchising authorities, and
- seven state public utility commissions.

¹See U.S. General Accounting Office, *TELECOMMUNICATIONS: Issues Related to Competition and Subscriber Rates in the Cable Television Industry*, [GAO-04-8](#) (Washington, D.C.: Oct. 24, 2003).

²The Broadband Service Provider Association (BSPA) has 11 members, 6 of which provide all three services to more than one market. (See app. III for a list of BSPs that are members of the BSPA.) For our sample, we selected 1 city for each of the providers serving multiple markets.

Figure 1: Case-Study Locations and Telecommunications Companies Interviewed



Sources: GAO analysis; Nova Development (clip art).

Although our analysis provides details on the 12 geographic locations we examined, because we used a case-study method, our results are not generalizable to all markets. Statistics presented in the Background section of this report regarding the local telephone, subscription video, and high-speed Internet markets were obtained from the Federal Communications Commission (FCC). This information was presented for background and illustrative purposes only; therefore, we did not assess the reliability of this information.

We performed our work from May 2003 through December 2003 in accordance with generally accepted government auditing standards. See appendix I for a more detailed discussion of our scope and methodology.

Results in Brief

BSPs focus on a core business strategy of building a new fiber-optic network over which they can provide three services to consumers: local telephone, subscription television, and high-speed Internet services. The BSPs we interviewed attempt to entice subscribers to take more than one service, and they have specific targets for the average revenues that they hope to obtain per subscriber. In order to encourage subscribers to take more than one of the three services they offer, these providers offer significant discounts for purchases of packaged services.

On the basis of 12 markets we examined, it appears that BSPs' entry into a market benefited consumers in the form of lower prices for subscription television, high-speed Internet access, and local telephone services. Incumbent cable operators often responded to BSP entry by lowering prices, enhancing the services that they provide, and improving customer service. Incumbent local telephone providers did not appear to have responded as much to BSP entry as was the case with cable providers; these local telephone providers told us that certain federal and state laws limit their ability to respond to new entrants. The combined effect of BSP entry and incumbent companies' response provides significant benefits for consumers. The rates for telecommunications services were generally lower in the 6 markets with BSPs than in the 6 markets without a BSP. For example, expanded basic cable television rates were 15 to 41 percent lower in 5 of the 6 markets with a BSP when compared with their matched market. The prices were also generally lower in markets with BSPs for local telephone and high-speed Internet services. In some cases, the lowest price in the BSP market was that offered by the BSP, while, in other cases the lowest price in that market was that offered by the incumbent provider.

Some of the rate impacts that we found may be due to factors other than the BSP entry, such as population density.

BSPs analyze a variety of factors when determining which local markets to enter. For the 6 BSPs we interviewed, demographic characteristics, such as the size of the city and the income and level of computer use of its residents, were important factors that BSPs considered when determining which markets to enter. For example, these providers generally targeted small to medium markets because, in their view, it would be difficult to quickly construct infrastructure in larger markets. Also, the BSPs we interviewed enter markets that are geographically close to a parent company or close in proximity to other key facilities, such as the BSP's headquarters, network, or other needed infrastructure. Finally, 5 of the 6 providers selected specific markets that, in their view, had officials in city government who were actively interested in having new competition and who took steps to ease the providers' entry.

Despite making significant progress in attracting customers to purchase their services, the BSPs we interviewed face some obstacles in the application of their business strategy. In the 6 markets we reviewed, the BSPs have attracted, on average, 25 percent of households to their subscription television service, 29 percent to their local telephone service, and 17 percent to their high-speed Internet services. The penetration levels—that is, the percentage of the population in an area that are subscribing to a BSP's service—vary considerably across the markets and services, ranging from a low of 6 percent penetration for high-speed Internet in 1 market to a high of 63 percent penetration in telephone service in another market. We also found that BSPs' business strategy can be difficult to implement because of certain factors that may limit their success. First, BSPs we interviewed noted that certain factors could hinder their ability to effectively compete in the specific markets that they have entered. For example, some of these providers said that an inability to gain access to certain cable networks that subscribers want to receive, or difficulty being able to provide service to residents of some apartment and condominium complexes, created barriers to their success in certain markets. Second, the BSPs we interviewed may be facing more competition in the markets they have entered than they may have envisioned when they developed their marketing plans, which is making it difficult to reach the penetration targets they had set. Lastly, the BSPs we interviewed have had difficulties securing continued access to adequate financial resources that are needed to rapidly construct their networks and market their services. As a result, the BSPs we interviewed are currently

experiencing varying states of financial problems due to a lack of capital. None of the 6 companies are actively expanding their networks, and 2 currently lack the resources that are necessary to adequately market their services within their existing markets. These financial problems may be alleviated as the nation's telecommunications sector recovers.

We provided a draft of this report to the FCC and the Antitrust Division of the Department of Justice for their review and comment. The Department of Justice did not provide any comments, and the FCC provided technical comments that we have incorporated.

We also invited representatives from the Broadband Service Provider Association (BSPA), the National Association of Telecommunications Officers and Administrators (NATOA), the National Cable & Telecommunications Association (NCTA), and the United States Telecom Association (USTA) to review and comment on the draft report. USTA did not provide any comments. BSPA and NATOA provided technical comments that we have incorporated as appropriate. NCTA provided detailed comments. In particular, NCTA stated that because the sample of franchises examined as part of this case study was so small, no broad conclusions should be drawn. Moreover, they noted that the observed pricing differences between cities with and those without a BSP entrant could have occurred for reasons other than competitive entry. Finally, they noted that GAO did not evaluate whether the lower prices available in cities with BSPs represented economically sustainable price levels. GAO's response to these comments, as well as a more complete summary of NCTA's comments appears at the end of this report.

Background

Today, 95 percent of American households purchase local telephone service, 85 percent purchase subscription television service (usually from a cable company or a satellite provider), and about 62 percent purchase some form of access to the Internet. Of those with access to the Internet, about 39 percent have a high-speed—or broadband—connection usually through either a cable modem or a digital subscriber line provided over a telephone connection.

Local telephone service has been available since the late 1800s, and, by 1950, over 60 percent of households had telephone service. Since the early 20th century, certain aspects of telephone service, such as its price, have been regulated by state public utility commissions and by the FCC. With the Telecommunications Act of 1996, the Congress sought to increase

competition in the local telephone market. Today, incumbent local telephone companies face competition from a variety of types of companies. However, nearly 87 percent of residential local telephone subscribers continue to receive service from an incumbent, or traditional, local telephone company.

Subscription television service has been available since the late 1940s when cable television providers first emerged, and, by the late 1980s, cable service was available to nearly 90 percent of households throughout the United States. Today, according to FCC, about 67 percent of American households purchase cable service.³ The 1992 Cable Television Competition and Consumer Protection Act took steps to increase competition to cable providers. The act prohibited the awarding of exclusive franchises by local franchising authorities. Also, as required by the act, FCC developed rules—commonly referred to as *program access* rules—that require cable operators that have affiliated cable networks to make those networks (if they are delivered to the cable operator via satellite) available to competitors.⁴ The Telecommunications Act of 1996 also took steps to allow telephone and electric companies to enter the subscription television market. In the 1990s, direct broadcast satellite providers (such as DIRECTV and EchoStar) began offering subscription television service through satellites. According to FCC, over 17 percent of American homes currently purchase satellite television service, and these providers have become the primary competitors to the cable television industry. At this time, competition in the subscription video market from wire-based providers exists in only about 2 percent of markets nationwide, according to FCC information.

³Cable operators obtain a franchise license under agreed-upon terms and conditions from a franchising authority—referred to as a local franchising authority—such as a township or county. In some instances, the state public utility or public service commission regulates cable television service. These franchise agreements govern many aspects of cable television service, including access to rights-of-way; the schedule for the company to build its infrastructure; and the provision of public, educational, and governmental channels.

⁴Cable networks typically deliver their programming to cable operators via satellite. However, if the cable network delivers its programming to the affiliated cable operator via a different technology (such as a wire), then the program access obligations do not apply.

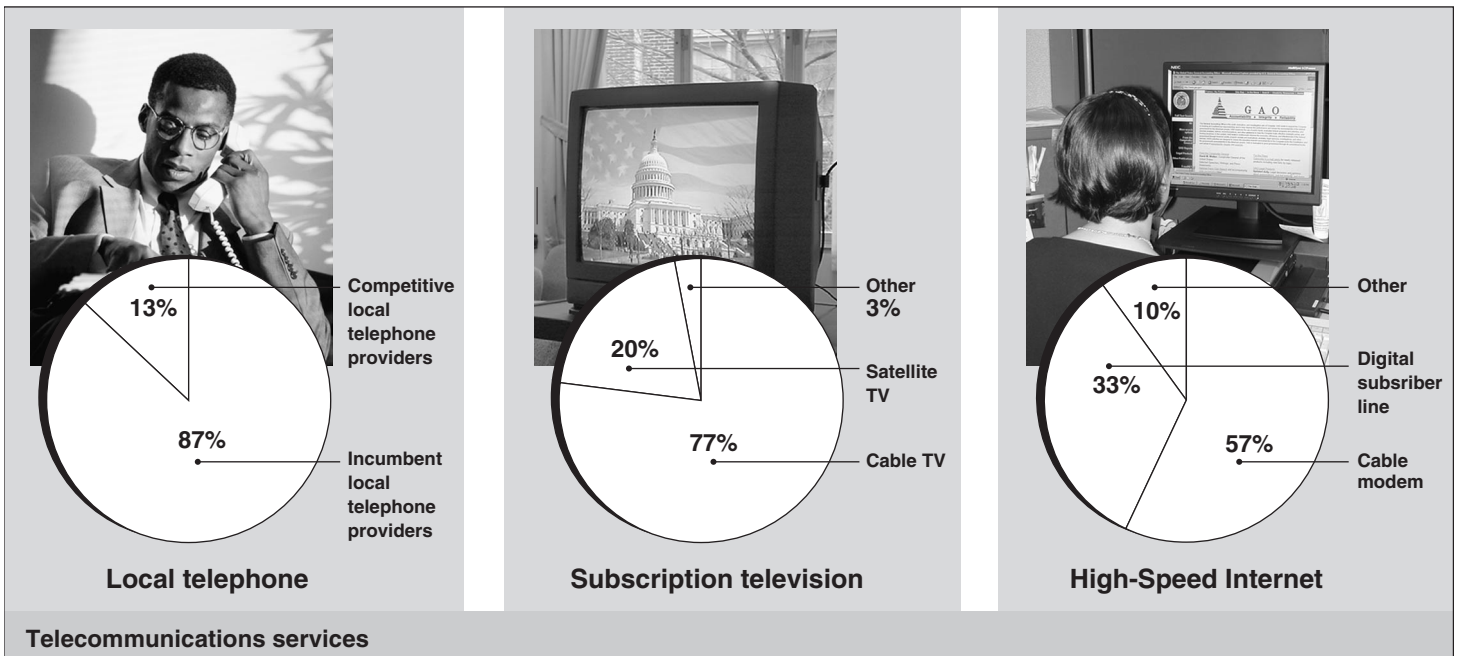
High-speed Internet is a relatively new service that provides a continuous, high-speed, high-capacity connection to the Internet.⁵ High-speed connections to the Internet became widely available in the late 1990s, and, as of mid-2002, nearly 15 percent of American homes had a high-speed connection to the Internet. In recent years, local telephone companies adapted their networks to provide new services, such as digital subscriber line service, which is a form of high-speed Internet service. Through their digital subscriber line service, telephone companies serve approximately 33 percent of subscribers who purchase a broadband connection. Similar to local telephone companies, many cable television companies upgraded their networks to provide high-speed Internet service through cable modem service. Cable modem service is the most widely subscribed to high-speed service with approximately 57 percent of subscribers purchasing this service.⁶

Figure 2 provides information on the extent of competition in the local telephone, subscription television, and high-speed Internet markets.

⁵With high-speed Internet service, subscribers can download material sometimes as much as 50 times faster than a dial-up modem. This additional capacity allows users to download more material and also makes other services, such as streaming video, possible.

⁶In addition to digital subscriber line and cable modem service, households can acquire high-speed Internet service from other wire-based, fiber, and wireless technologies. These technologies serve the remaining 10 percent of high-speed Internet customers.

Figure 2: Telecommunications Service Subscriptions



Sources: GAO and Nova Development.

BSPs' Business Strategy Focuses on Providing Bundled Telecommunications Services

Broadband service providers are a new type of telecommunications provider. Unlike local telephone and cable television companies, which are adapting their existing networks to provide additional services, and other entrants that focus on providing service in one communications market, broadband service providers focus on a core business strategy of building a new fiber-optic network over which they can provide local telephone, subscription television, and high-speed Internet services.

A fiber-optic network requires a long-term commitment to build. According to the BSPA, companies must first obtain a local franchise that authorizes them to begin construction. They then must obtain the rights-of-ways to build the network and work with utility companies to make sure that they do not disrupt other services. Once the BSP begins building its network, construction usually takes between 2.5 to 4 years if the company (1) has steady access to capital and has no difficulties in obtaining the necessary local government accommodations and (2) is able to receive

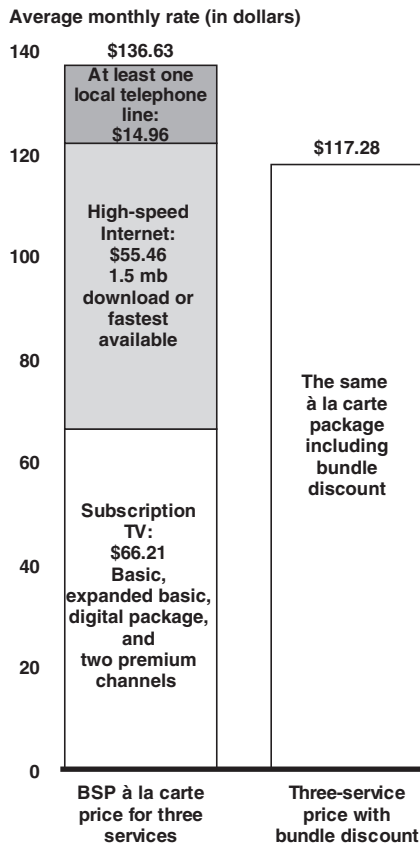
needed information from utility companies. According to the BSPA, the time it takes to build a network varies with the size of the market and whether the BSP can string its cable on poles or if it must bury the cable in the ground. Because it takes 4 to 5 times longer for a BSP to build a network if it must bury the cable, some BSPs target communities that allow them to string their cable on poles according to the BSPA. A BSPA document indicates that BSPs have spent over \$6 billion in capital investments to build 32,000 miles of fiber network. BSPs' networks currently expand across areas that would enable them to service up to 4 million homes as of June 2003; of this possible subscriber base, these companies have gained over 1 million subscribers.

A representative of the BSPA said that most BSPs have specific targets regarding the minimum threshold of the potential customers in an area they need to attract in order to ensure that the large financial investment is profitable. Additionally, a common goal is to have most of their subscribers purchase more than one of the three offered services. Finally, we were told that the target average revenue per subscriber each month is about \$100. In order to be able to achieve these goals, BSPs use several marketing strategies. First, part of the BSP business strategy is to enter markets that do not have any wire-based providers other than the incumbent cable and telephone providers. That is, BSPs look to become the second major wire-based provider of subscription television and local telephone service in each of the markets they enter. Second, BSP officials told us that they attempt to entice customers to stay with their company in the long term by building the most modern network in the market, thus enabling the BSPs to upgrade services as new technologies become marketable. Third, and most central to the BSP business strategy, the 6 BSPs we interviewed offer pricing discounts to encourage the purchase of multiple services. This business focus allows the BSPs to capitalize on network efficiencies by generating more marginal revenue on the second or third service that the subscriber purchases.

In order to illustrate the savings available to consumers from BSPs' bundled telecommunications offerings, we compared the packaged price of a certain bundle of communications services offered by BSPs with the prices that these companies would charge for the same set of services individually. While some of the BSPs offered packaged deals on a relatively low end package of services, we found that to compare a similar package of services across the 6 BSPs we interviewed, we needed to examine the price for a higher end package of services that included such items as digital tiers of video service, premium channels, and higher end speeds of Internet

access. For the 6 markets with BSPs that we interviewed, figure 3 shows the average savings a consumer can receive by purchasing this particular set of telecommunications services in a bundle versus purchasing them individually. The average monthly BSP à la carte prices for this bundle of telecommunications services in the 6 markets is \$136.63. If purchased as a bundle, the subscriber is able to receive a discount that would bring the cost for this bundle of services down to \$117.28. That is, a BSP customer will save, on average, about \$20, or 14 percent, if they select three services as a bundle package rather than buy them individually from the BSP. Across the 6 markets with BSPs that we interviewed, the additional savings a consumer could receive by purchasing this basket of services as a bundle ranged from \$11.66 to \$28.74 per month.

Figure 3: Average BSP À la carte and Bundle Price for Premium Three-Service Bundle



Telecommunications services

Source: GAO analysis of BSP data.

Consumers Enjoy Lower Rates in Markets with BSPs

In the 12 markets we reviewed, the entry of a BSP appears to induce incumbent cable operators to respond by providing more and better services and by reducing rates and offering special deals. Incumbent telephone providers have not shown as much of a competitive response to BSP entry. The ultimate result of the BSP operations, along with incumbents' response, is substantially lower prices for consumers.

Incumbent Cable Operators Responded to BSP Entry by Lowering Prices and Improving Services, but Incumbent Telephone Operators Show Less Response to BSP Entry

In the 6 markets we reviewed that had a BSP providing service, incumbent cable operators appear to respond competitively to the presence of the BSP. Although cable operators told us they generally viewed satellite providers as their primary competitors, they indicated that BSP competition in individual markets can be a significant factor when they develop their business strategies for that market. In particular, incumbent cable providers facing competition from a BSP told us that they responded to the BSP activity by lowering rates or offering special deals or packages and, in some cases by providing more local content and advanced services. For example:

- Almost all of the incumbent cable operators we contacted said they lowered their cable and high-speed Internet prices in the markets where a BSP was operating in order to be more competitive. Moreover, we found that one incumbent cable provider in a BSP market chose to offer discounts to subscribers who purchased both cable and high-speed Internet service, thus enabling it to compete directly with the BSP's packaged offerings. In this market, the incumbent cable operator priced a package combining cable and high-speed Internet services at a 45 percent discount when compared with the same package that the cable operator offered in the non-BSP matched market.
- Two incumbent cable operators also said that exclusive programming helps them to differentiate themselves from the BSP. For example, one incumbent cable operator said that they respond to BSP entry in a number of ways, including providing more local programming and advanced services. Another cable operator told us that its provision of local high school sports games, a community-focused talk show, and city council meetings provides an advantage over the BSP. However, the incumbent cable provider said that it provided this programming before the BSP's entry into the market.
- Some incumbent cable providers also responded to BSP competition by improving their customer service. For example, one cable operator noted that its company initiated door-to-door visits to customers to ensure good picture reception and answer customer questions. Similarly, on the basis of the information we gathered from local franchising authorities, it appeared that in some cases customer satisfaction with the incumbent cable providers improved after the BSP entered the market.

The incumbent telephone companies that we interviewed had not generally taken steps to respond to the BSP presence in their markets. Incumbent telephone providers told us that their primary competition comes from providers other than BSPs. The telephone companies varied in terms of which other providers they viewed as providing the most competition to their services, but this list of important competitors included a variety of provider types, such as long-distance telephone providers, wireless carriers, and Internet-based providers of telephony services.

Incumbent local telephone providers we spoke with told us that they do not perceive BSPs as a significant source of competition because the BSPs have a very small presence focused only in scattered markets, and because they face greater sources of competition, such as wireless and long distance providers.⁷ For example, these providers generally did not lower prices or enhance their services in markets where BSPs provided telephone service. However, the incumbent telephone providers told us that their ability to respond to BSP competition was limited by federal and state laws and regulations that they view as restrictive.⁸ Regarding the high-speed Internet market, incumbent telephone providers also noted that they did not view BSPs as important competitors. Instead, telephone companies told us that their most important competitors in the high-speed Internet market are incumbent cable television providers. Moreover, they noted that, in their opinion, cable operators were likely to remain dominant in the high-speed Internet market. In fact, one incumbent local phone provider said that it reduced prices for high-speed Internet service to compete with cable operators' cable modem service—not because of competition from BSPs.

⁷One incumbent telephone company provided data indicating that wireless lines have increased so much in recent years that they now surpass the aggregate number of wire-based lines provided by the largest telephone companies by as much as 15 million in 2003. By contrast, the number of telephone lines served by BSPs number only about 540,000.

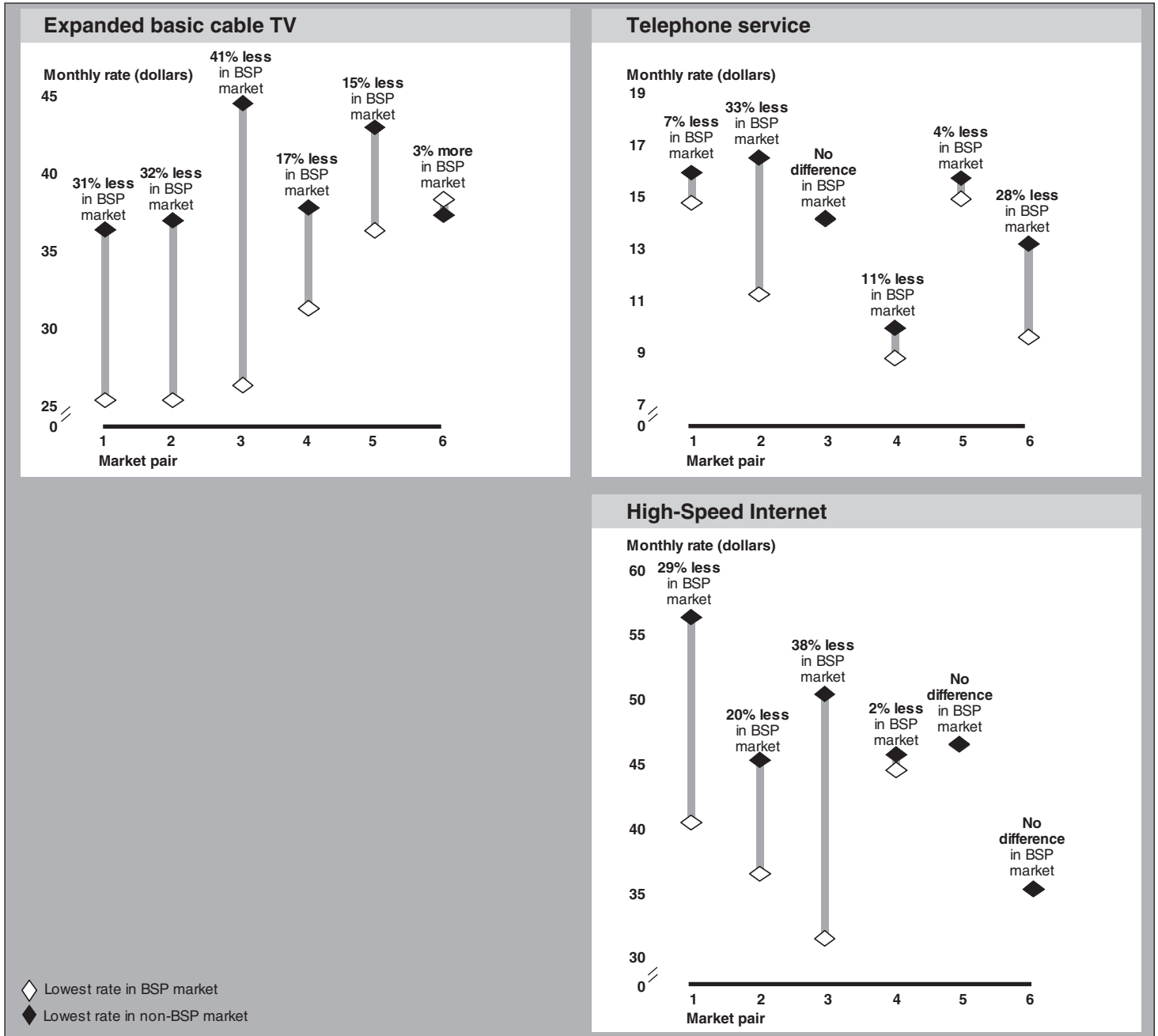
⁸For example, all 4 of the incumbent telephone providers we spoke with stated that provisions of the 1996 Telecommunications Act force them to lease critical network elements to competing entities at government-mandated rates that these providers view as being below cost.

Consumers Benefited from Lower Prices for Telecommunications Services in the 6 Markets With BSPs That We Reviewed

Rates were generally lower for the subscription television, high-speed Internet, and local telephone services in the 6 markets we examined with a BSP present than in the 6 markets that did not have BSP competition. However, the extent to which prices were lower in a BSP markets compared to its “matched market” varied considerably across markets and services. For example, in 1 BSP market, the monthly rate for cable television service was 41 percent lower compared with the matched market, and in 2 other BSP locations, cable rates were more than 30 percent lower when compared with their matched markets. On the other hand, in 1 market, the price for cable television service was 3 percent *higher* in the BSP market than it was in the matched market. Also, we found that rates for high-speed Internet service were at least 20 percent lower in the 3 BSP markets compared each of their matched markets, but for the other 3 market-pairs, high-speed Internet rates were roughly the same across BSP markets and their matched markets. The extent to which rates were lower for one local phone line in BSP markets compared to their matched market varied considerably: rates were 4 to 33 percent lower in 5 of the 6 markets with a BSP we reviewed, and the rates for local telephone service were the same in 1 of the matched-pair markets we reviewed. See figure 4 and appendix II for more information on pricing patterns between market-pairs.

In some cases, the lowest price in the market with a BSP was the BSP price, however, in other cases, the lowest price was the incumbent’s price. Specifically, in the 6 markets with a BSP, the BSP price was lowest for cable television in 4 markets, the BSP price was lowest for high-speed Internet in 2 markets, and the BSP price was lowest for local telephone service in 5 markets.

Figure 4: Extent to Which Rates For Telecommunications Services Were Lower in the 6 Markets with BSP Competition When Compared with Each BSP Markets' Matched-Pair



Source: GAO.

Note: For markets with a BSP, we used the lowest price that could have been offered by the incumbent provider or by the BSP. In markets without a BSP, the lowest price is that offered by the incumbent provider.

It is possible that some of the differences in pricing we observed are caused by factors other than the presence of a BSP in certain markets. For example, our earlier study on cable pricing included an econometric model that showed that several factors, such as the number of cable channels, direct broadcast satellite penetration, and population density, influence cable prices. We attempted to minimize the influence that other factors would have on price differences across markets by choosing case-study markets and matched-pair markets that had certain similarities. Because the number of channels is known to be an influence on cable rates, we examined channel line-ups of each of the 12 providers. Our analysis showed that the provider with the best price in the markets with a BSP also offered more channels than the provider in their matched market in 4 of the 6 cases and offered the same number of channels in the other two matched-pair markets. This indicates that the number of channels is not a cause of lower prices in markets with BSPs. See appendix I for a discussion of our methods and appendix II for a more complete listing of the channel line-up analysis.

BSPs Consider Specific Demographic, Geographic, and Local Government Factors When Deciding Which Markets to Enter

The BSPs we analyzed considered a variety of factors when determining which markets to enter. These considerations were directly tied to the ability to enter a market quickly and to further their business strategy of selling multiple services to most of their subscribers. The primary factors considered regarding market selection fell into the following three categories: demographic factors, geographic factors, and factors related to the local governments in the communities of interest.

Demographic Factors Were Considered in Market Selection

Three primary demographic factors were considered by the BSPs we interviewed when deciding which markets to enter and provide service. In particular, the size of the city, the level of income of residents, and the level of computer use among residents were primary determinants of market selection. Despite the commonality in the factors considered, there was some variation in how BSPs considered each of these demographic factors.

All 6 of the BSPs we interviewed mentioned the size of the market as a key factor that they considered in market selection. Only 1 BSP focused its

business development toward larger cities. This company was the first to take the approach of competing with an incumbent by offering bundled service packages; thus this BSP believed that in order to attract adequate venture capital, it was important to focus its operations in major markets. This BSP also told us that it believed a large-city focus would have the benefit of enabling the company to rapidly gain subscribers in high-density corridors where a greater number of customers could be served with a given amount of infrastructure deployed. This BSP further noted that a downside of entering large markets was that construction in larger cities is significantly harder and more costly than in smaller cities, which made it difficult to meet an aggressive construction schedule. In fact, this BSP was unable to meet the 4-year construction deadline that was mandated by its franchise agreement.

Five BSPs built new infrastructure in medium and smaller cities. They told us that they took this approach, in part, because they recognized how difficult it would be to meet construction requirements in a large city. These BSPs also said that a benefit of entering a smaller city is that incumbent cable operators are less likely to vigorously compete with them as would likely, in their view, be the case if they entered a major city. Representatives from 3 BSPs also told us that they enter smaller markets because they may be able to leverage customers' dissatisfaction with the incumbent—which they believe tend to be more of an issue in smaller markets. Similarly, 3 of the BSPs told us that small and medium markets tend to have old networks, and this provided an opportunity for the entrant with an upgraded system to successfully compete for subscribers.⁹ Representatives from the 5 BSPs also noted that entering smaller sized cities allows them to better target markets with favorable demographics, rather than have to serve the wide array of residents that would live in a larger market.

Four of the 6 BSPs we spoke with stated that the average household income in a market was a key criterion in their decisions about what markets to enter. However, BSPs took various approaches regarding what income levels they were targeting. For example, 2 BSPs told us that they choose to enter markets with high-income level populations because these subscribers are more likely to take two or more telecommunications

⁹Three BSPs we interviewed stated that incumbent providers focus more attention on their largest markets. As such, the quality of infrastructure as well as customer service may, in their view, be lower in smaller cities.

services. On the other hand, the other 2 BSPs look more for markets with a balance of varied income levels. Representatives of these companies told us that a mix of income levels among subscribers helps to ensure that each of the communications services offered by the company has a target audience. In fact, 1 BSP stated that higher level income subscribers may be most likely to subscribe to broadband service, but middle income subscribers may be most likely to subscribe to subscription television service.

Two of the 6 BSPs noted that high levels of computer use and Internet connections among residents of a community are factors they consider when determining what markets to enter because high-speed Internet service has a high profit margin. In particular, these BSPs told us that they selected markets with a high number of college students because the academic environment has a large amount of computer ownership and Internet use.

Geographic Factors Were Considered in Market Selection

We found that BSPs consider certain geographic factors when deciding which markets to enter and provide services. In particular, BSPs looked for markets that were in close proximity to other markets that were served by a parent company or in proximity to other key facilities, such as the BSP headquarters or network, or other needed infrastructure.

Officials of 2 BSPs that are subsidiaries of energy companies told us that a key factor considered in market selection was proximity to the parent company's service area, which they said helps to leverage the parent company's name brand, infrastructure, and human capital. For example, a BSP representative told us that his BSP chose to enter one of the markets we studied because it was close to its parent company, and the BSP was thus able to benefit from the parent company's good reputation within the community as a power provider. The local franchising official in that market agreed that the community's positive relationship with the parent power company gave citizens confidence in the BSP's proposal and to trust that it would fulfill its infrastructure construction requirements. In addition to name recognition, another BSP official said that entering cities where the parent company has a presence allows the BSP to take advantage of the parent company's workforce to assist with the construction of the new infrastructure.

Two BSP representatives said that their BSP chose to enter markets on the basis of close proximity to their BSPs' headquarters or physical network.

For example, 1 BSP that we interviewed chose markets that were close to the BSP headquarters. Another BSP told us that choosing cities in close proximity to its existing physical network was important in order to minimize the cost of fiber connecting any new market to the company's network. In fact, some markets that this BSP chose not to enter were too far from existing infrastructure and would have been very costly to connect.

Characteristics of Local Government Were Considered in Market Selection

We found that when deciding which markets to enter, BSPs considered the receptivity of local government officials to new entrants. Moreover, the degree to which government officials took steps to reduce administrative requirements—which BSPs told us could be considerable—was a key factor for some BSPs when considering market entry.

Representatives from 5 BSPs indicated that specific markets were selected because the city government officials had a positive attitude toward competition, were easy to work with, or invited the BSP to provide services in their market. Similarly, one BSP told us that they avoided entering markets that had local franchising officials who showed limited interest in their services.

During our interviews, BSPs mentioned that they needed to overcome a variety of administrative issues before market entry. Gaining access to rights-of-way, fulfilling costly franchise requirements,¹⁰ and obtaining access to apartment buildings that have exclusive contracts with the incumbent cable operators were a few of the varied administrative issues that were mentioned by the BSPs. Representatives from 2 BSPs told us that when government officials are welcoming to the new entrants, the officials often take steps to mitigate administrative costs and requirements. For example, one local franchising authority, which was eager to have a BSP offer services in its market, presented a franchise agreement with reduced-fee payments for rights-of-way access and construction permits. Also, 2 different BSPs told us that the timeliness for gaining approvals for various required applications often were directly influenced by the receptivity of the regulators. We were told that two enthusiastic local

¹⁰Franchise requirements are agreed-upon terms and conditions between the local government officials and cable operators, which can include provisions such as fees, Public Education and Government channels, construction schedules, and customer service requirements.

franchising authorities took only 120 days to approve a BSP's application for a franchise. In contrast, another BSP told us that it was unable to obtain a franchise after 2 and 1/2 years of working with a local franchising authority that was not receptive to competition, and the BSP did not succeed in entering that market.

Five of the 6 case study markets that do not have a BSP competitor had companies express interest in entering their cities, but, according to local government officials, these companies decided not to enter for several reasons. For example, one local official told us that the level-playing-field law in his state—which are laws that require any new cable franchiser to agree to the same terms and conditions that the incumbent cable provider must meet—was a factor in an interested competitive cable company's (not 1 of the 6 companies we studied) retracting a franchise application.¹¹ Another factor that may cause BSPs to choose not to enter a market is the local government's lack of administrative resources. Specifically, one local official said that the lack of administrative resources to process applications quickly caused some BSPs to withdraw their applications and seek more receptive markets.

BSPs Are Gaining Market Share, but a Variety of Factors May Hinder Their Success

BSPs are gaining market share in the service markets they have entered, with varying success. BSPs we interviewed said that certain factors, such as difficulty in gaining access to certain programming, can create obstacles to their ability to compete effectively. Moreover, BSPs may be finding that these telecommunications markets are more competitive than they had expected when they first developed their business strategy. Currently, all of the BSPs we interviewed are having problems with access to capital and, thus are struggling to continue expanding their market presence.

BSPs Are Having Varied Success in Gaining Subscribers

On the basis of statistics provided by the 6 BSPs we interviewed, these companies appear to be having varied success in gaining subscribers for their television, local telephone, and high-speed Internet services. The 6 BSPs have made significant inroads in gaining market share in the three service markets. In particular, for the 6 cities with BSPs we interviewed, the average BSP market penetration for subscription television service was 25 percent, the average penetration of subscribers for local telephone

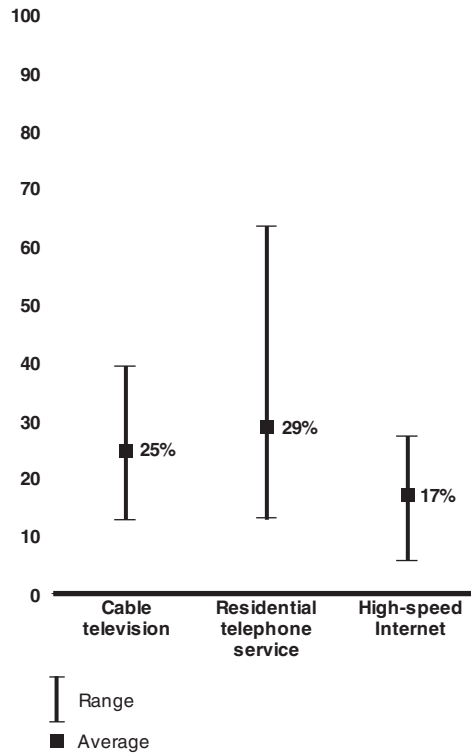
¹¹According to a recent article, at least 12 states have level-playing-field laws.

service was 29 percent, and the average subscriber penetration for high-speed Internet service was 17 percent.¹² As figure 5 shows, there was substantial variation across the companies in the penetration rates for each service—ranging from a low of 6 percent penetration for high-speed Internet in 1 market to a high of 63 percent penetration in telephone service in another market. We found that entering smaller markets may be associated with an ability to gain greater market penetration. For example, we found that in the 3 smaller markets we examined, the BSPs were able to attract a larger share of the potential subscribers—that is, to achieve a higher level of penetration—than was the case for BSPs that entered the medium and the larger markets included in our case study.

¹²In its comments on a draft of this report, the BSPA noted that an additional benefit of BSP entry into markets is greater penetration of high-speed Internet access. In particular, BSPA noted that it believes that the total high-speed Internet access penetration rate in markets with BSPs is at least double that of the national average high-speed penetration rate.

Figure 5: Penetration of Subscription Television, High-Speed Internet, and Telephone Services for BSPs in Case-Study Markets, June 2003

Percentage of households that subscribe to BSP services in the 6 case-study markets



Source: GAO analysis of BSP data as of June 2003.

Certain Factors in Local Markets Can Hinder BSPs' Ability to Compete

All of the BSPs we interviewed noted that various barriers arise that can hinder their ability to effectively compete in the markets that they have entered. Although a host of issues were mentioned during our interviews, the greatest concern surrounded issues related to an inability to gain access to certain cable networks, an inability to serve certain apartment and condominium complexes, and restrictive local regulatory requirements.

Program Access Concerns

In 4 markets, BSP officials said they have experienced problems obtaining certain cable networks—such as regional sports, weather, and local informational channels—that the incumbent cable provider of that market

owns or holds exclusive rights to within that market. Of the 4 BSPs that expressed concern with program access, 2 specifically told us that they were unable to gain access to regional sports networks because the incumbent cable provider, which owned that network, provided the network to its own facilities *terrestrially*—that is, not via a satellite.¹³ Similarly, the third BSP stated that it could not obtain access to a popular local news network because the incumbent cable provider partially owned it. The incumbent, however, explained that FCC ruled that program exclusivity in this case was in the public interest and therefore FCC granted it an exemption to the program access rules. The last BSP stated that even though the incumbent cable provider had not produced a local sports network, it still could not obtain access because the incumbent had secured an exclusive deal with the producers of that network. The BSP was able to gain access to that cable network only after the network was sold from one owner to another.

While 4 of the BSPs said they had a problem with program access, only two cable operators we spoke with said that they were aware of program access issues in the markets we reviewed. Moreover, one incumbent cable provider told us that producing or having access to exclusive content can be a good marketing strategy for it and that without the ability to develop exclusive content, the incentive to produce innovative programming is minimized. Regarding the market where an incumbent cable provider had exclusive rights to certain programming, the incumbent's view was that it created the concept for the programming package and the BSP was unwilling to make such a commitment on an unproven product.

Multiple Dwelling Units

Three of the BSPs we interviewed expressed concern about being prevented from providing service to large segments of the population that live in apartments or condominiums, which are generally referred to as "multiple dwelling units." We were told that owners of multiple dwelling units often enter into exclusive contracts with one cable provider, thereby limiting a competitor's access to that building. Also, even when BSPs have gained access into a building, we were told that the building owners may not allow them to lay additional wires because of the associated costs and disruptions. In fact, 1 BSP we spoke with estimated that it could not provide service to 20 percent of subscribers in 1 of our case-study markets

¹³As required by the Cable Television Consumer Protection and Competition Act of 1992, FCC developed rules designed, in part, to ensure that vertically integrated cable operators generally make their *satellite-delivered* programming available to competitors.

because of problems gaining access to multiple dwelling units. The incumbent cable operators we interviewed said that in some cases they had exclusive contracts to serve multiple dwelling units. However, in 3 of the markets, these providers noted that the BSPs *also* had exclusive contracts with some multiple dwelling units.

Recently, FCC reviewed issues related to access by telecommunications companies to multiple dwelling units. In a January 2003 order, FCC did not establish federal access requirements or preempt state regulation of these matters.¹⁴ Likewise, FCC continued to permit exclusive or perpetual contracts for subscription television service in multiple dwelling units because, according to FCC, it found that it was not clear that there are anticompetitive effects from exclusive and perpetual contracts, and, as such, FCC could not support government intervention in privately negotiated contracts.

Burdensome Franchise Requirements

Some of the BSPs also told us that certain franchise requirements can be burdensome. As we previously noted, BSPs told us that the administrative requirements of local jurisdictions can influence the markets they enter, but we were also told that these requirements could affect how quickly they can begin providing service in markets they have chosen to enter. For example, we were told that required construction time frames often burden new entrants, even though these rules are generally designed to create a “level playing field” by ensuring that new providers must meet all of the same requirements that incumbent providers have had to meet. These construction rules can require extensive capital, reprioritization of the business plan, or the provision of service in areas that are not economic to serve. In some cases, BSPs have changed their legal status in order to avoid costly and labor-intensive construction requirements.¹⁵ One BSP noted that the incumbents effectively receive a longer build-out schedule because they were able to grow with the communities they serve.

¹⁴See *In the Matter of Telecommunications Inside Wiring*, 18 F.C.C.R. 1342 (FCC 1st order on recon., 2003)

¹⁵A company that wants to provide subscription television service in a community can elect to operate under the “open video system” (OVS) provisions of the 1996 Telecommunications Act. An OVS provider may not always need to obtain a franchise and as such may not generally face specific construction requirements. However, companies with OVS status must open portions of their network to competing entities.

BSPs May Have Underestimated the Level of Competition in Telecommunications Markets

One of the most significant factors that may hinder the BSP's marketing success is that the communications markets BSPs seek to serve may be more competitive today than these providers envisioned when they first developed their plans. We found that BSPs avoid markets where another new *wire-based* operator had entered the market, but this avoidance does not ensure that there are not other new competitors providing service in the three service markets.¹⁶ For example:

- Regarding subscription television service, direct broadcast satellite service (such as DIRECTV or EchoStar) service is available nationwide and, thus, represents a second and third formidable competitor in every market that a BSP may choose to enter. As the number of direct broadcast satellite subscribers continues to grow, it will be even harder for the BSPs to achieve the penetration rates that are necessary for profitability.¹⁷
- Competition in the market for local telephone service has been emerging. Incumbent local telephone companies noted that consumers are increasingly turning to mobile telephones as their sole telephone line in lieu of a wire line connection. If more consumers replace their wire line telephone service with wireless service (which is not traditionally provided by BSPs), such action will also have the effect of decreasing the number of potential subscribers to which BSPs can market their services. Also, incumbent local telephone providers view the large established cable operators as their primary competitive threat in the future. In fact, some established cable operators are increasingly providing telephone service in markets around the country.
- In the high-speed Internet market, BSPs already compete against cable *and* local telephone providers. In addition, new platforms for the

¹⁶Interestingly, none of the incumbent cable operators we interviewed chose to enter other markets to compete against an existing incumbent cable company despite the fact that incumbent cable providers have extensive know-how, reasonably reliable access to capital, and lucrative contracts for programming. These companies' lack of interest in competing in new markets may indicate a view that such entry poses a difficult business challenge.

¹⁷However, some BSPs and incumbent cable operators we spoke with noted that DBS subscribership is low in some of the markets with BSPs. For example, in 4 of the 6 markets with a BSP present, the incumbent cable provider or the BSP had data indicating that DBS penetration was well below the national average, and as low as 2 percent in 1 market. Representatives of the incumbent cable operator said that the low rate was due to the greater competition and lower prices in that market.

provision of Internet service may erode the market for all wire-based companies. For example, one incumbent local telephone company noted that the presence of a large university that provides free high-speed Internet service to its students and faculty reduces its potential high-speed Internet market. Other new means of Internet access, such as through wireless modes, are also becoming more widely available.

BSPs Serving the Markets We Reviewed Are Now Struggling to Obtain Adequate Access to Capital

The BSPs we spoke with gained financial capital to construct their infrastructure and operate their business in a variety of ways. Two BSPs that are providing services in the markets we reviewed were wholly owned subsidiaries of large power companies and were able to receive all of their investment capital from their parent company. Two other BSPs providing service in the markets we reviewed are, or had been, part of larger telecommunications companies and received their startup financing from these parent companies. The remaining BSPs serving markets we reviewed were funded through venture capital or a mixture of venture capital and money obtained through a partnership with an energy company.

Despite these sources of capital in the early stages of their business, the 6 BSPs we interviewed are currently experiencing some level of financial problems. In particular, they told us that their difficulty in obtaining access to necessary capital is threatening their ability to construct their networks and market their services. None of the 6 BSPs we studied are aggressively expanding their operations. Two of the BSPs are still completing construction within their current markets in order to comply with their agreed-upon schedule, but another BSP was currently unable to complete construction. Beyond their current markets, all of the BSPs we reviewed have had to put expansion plans on hold until the market conditions improve. Additionally, 2 BSPs told us that they do not have enough capital to advertise their service offerings to their current base of potential subscribers, and 1 BSP reorganized through a Chapter 11 bankruptcy proceeding.¹⁸ BSPs told us that, to a large extent, these financial problems are the result of the economic problems that have affected the entire telecommunications sector.

¹⁸The BSPA told us in their comments that the bankruptcy proceeding was a prepackaged conversion of debt to equity, through which no creditors lost money.

Conclusions

Although our study indicates that there are measurable consumer benefits in markets with BSPs compared with markets without such competition, the degree to which the BSP model is replicable throughout a broader set of markets remains unclear. For example, the majority of BSPs we spoke with stated that they avoid entering large metropolitan cities because they believe serving such markets might prove difficult. Moreover, even in the markets that they have successfully entered, the companies are struggling to achieve their key business targets. As a result, nationwide, BSPs serve only about 1 percent of the subscription television market and even less of the local telephone market, although BSPs do serve about 2 percent of all high-speed Internet subscribers. Nevertheless, at this time, with the telecommunications sector struggling to recover from diminished capital investments, it is difficult to determine the long-term prospects for success of BSPs as new telecommunications providers. The problems BSPs face may be mitigated as the current economic downturn of the telecommunications sector subsides, but the long-term viability of these providers is not clear.

Agency Comments

We provided a draft of this report to the Federal Communications Commission and the Antitrust Division of the Department of Justice for their review and comment. The Department of Justice did not provide comments on this report. The FCC provided technical comments that we incorporated.

Industry Association Comments and Our Evaluation

We also invited representatives from the Broadband Service Provider Association (BSPA), the National Association of Telecommunications Officers and Advisors (NATOA), the National Cable & Telecommunications Association (NCTA), and the United States Telecom Association (USTA) to review and comment on a draft of this report. The USTA did not provide any comments. The BSPA and NATOA provided some comments that we incorporated as appropriate.

NCTA officials provided extensive comments on the draft. These officials expressed concern with certain summary statistics on price differences in BSP markets compared with markets without BSPs that appeared in the draft of this report that they reviewed. We modified the presentation of the data on these price differences. In particular, rather than providing summary statistics on price differences across the markets with BSPs compared to the markets without BSPs, we provide information on the

price difference between each BSP market and its match. Additionally, NCTA made the following points:

- NCTA officials note that a case study of 6 markets with and 6 markets without a BSP competitor is a very small sample of the roughly 10,000 cable systems in operation in the United States. They view the study as thus having no statistical significance. In particular, NCTA officials express concern that our draft “implies vastly broader conclusions regarding the effect of BSPs on cable pricing than are warranted by the limited case studies.” They also note that, as we reported, the larger pricing differences were found for the 3 smaller city-pair case studies, while smaller price differences were found in the medium and larger city pairs. The officials stated that, as such, for the larger percentage of subscribers covered by the study, the differences were much smaller.

GAO response: We agree that our approach in this report—a case study analysis—is not generalizable to the universe of cable systems. We have stated this several times in the report, and have added more discussion of this in response to NCTA’s comments. However, as stated in the report, our BSP sample represents more than 20 percent of the households nationwide that are in areas where BSPs currently offer the three-service package. Given the caveats we place on our own work, we do not believe that our conclusions imply a broader interpretation than is warranted.

- NCTA officials note their concern that just 4 months after we released a report on cable pricing that was based on an econometric analysis, we would provide new information on cable pricing in competitive and noncompetitive markets that are based on a different methodology.

GAO response: We do not believe there is a problem in conducting a second study on cable rates and competition that analyzes the issue using an alternative methodology. The two studies used different data and different methods to examine an overlapping issue. The fundamental findings of both studies were similar, but the specifics were different—as would be expected given the different methods used. While our October 2003 study examined the issue of cable rates broadly, the current study focuses on 12 markets and compares rates in the 6 with a BSP to the 6 without such a competitor. The findings from this study relate to those 12 markets.

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- NCTA officials note that the reported pricing differences between markets with BSPs and those without BSPs could be misinterpreted as implying that BSP entry engenders a substantial price response by incumbent providers, when in fact, for cable pricing, the BSP (not the incumbent) offered the lower price in the BSP market in 4 out of the 6 case-study markets. Moreover, NCTA officials note that to the extent that incumbents are responding to competition, this response may be to competition from DBS providers, rather than competition from BSPs.

GAO response: We agree with NCTA that price differences in cable rates across the BSP markets compared to those without a BSP do not necessarily mean that the *incumbent* providers lowered their prices entirely in response to BSP entry. We added some discussion in the report to clarify this point. Also, we note in the report that incumbent cable providers told us that their most important competitors are the two DBS providers. However, almost all of the incumbent cable providers also told us that when faced with wire-based competitors in particular local markets, they tend to lower their prices.

- NCTA officials also note that any observed price difference between markets with and without BSPs could be related to *other* factors not controlled for by the case-study analysis. For example, they noted that the number of channels in a cable system's line up is a key factor that may drive pricing differences across locations and providers.

GAO response: We agree with NCTA's point that some of the differences in cable rates across our case study locations with a BSP as compared to those without such a provider could be caused by factors other than the presence of the BSP. We have added language to that effect in the report. However, after receiving NCTA's comments, we also examined the number of channels provided in the case study markets—which NCTA specifically cited as a possible cause of rate differences—and found a similar number of channels available in the markets with a BSP when compared to its matched market. Moreover, when we asked incumbent cable operators why their prices differed across the markets in our sample, they usually cited the presence of the BSP as the primary cause.

- NCTA officials note that the draft report did not adequately address the possibility that in markets with BSPs, prices are uneconomically low and are unsustainable. That is, they noted that the low prices available in markets with BSPs may be of a transitory nature only. The officials

noted that this seems particularly possible in light of the fact that we found that all BSPs interviewed in the course of the study were facing various degrees of financial difficulty. NCTA officials also said that we did not fully describe the extent of financial problems currently experienced by the BSPs.

GAO response: We did not evaluate the long-term sustainability of the BSPs in the markets we reviewed. However, to address this to some extent, we only selected markets where the BSP had been in operation for at least a year.

- NCTA officials note that they believe that BSPs have overstated claims that certain local conditions (e.g., related to program access concerns, multiple dwelling unit access, and local franchising conditions) may hinder BSPs' ability to compete.

GAO response: We did not evaluate BSPs' concerns about the effect of local market conditions on their entry and success. Similarly, we did not evaluate the veracity of incumbent providers' statements on these issues. In this section of the report, we are simply reporting the views of these providers.

As agreed with your offices, unless you publicly release its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will provide copies to interested congressional committees; the Chairman, FCC; and other interested parties. We will also make copies available to others upon request. In addition, this report will be available at no charge on the GAO Web site at <http://www.gao.gov>. If you have any questions about this report, please contact me at (202) 512-2834 or goldsteinm@gao.gov. Key contacts and major contributors to this report are listed in appendix IV.



Mark L. Goldstein
Director, Physical Infrastructure Issues

Scope and Methodology

We employed a case-study approach in gathering information in responding to our four objectives. In particular, this report provides information on (1) BSPs' business strategy; (2) the impact of BSPs' market entry on incumbent cable and telephone companies' market behavior and consumer prices of subscription television, high-speed Internet, and local telephone services; (3) the key factors BSPs consider when making decisions about which local markets to enter; and (4) the success of BSPs in attaining subscribership and any key factors that may limit their success. The case study consisted of 6 matched pairs of cities (12 total) that shared certain key traits except that 1 city in each pair has a BSP providing service and the other does not.

In selecting the cities with BSPs, we considered several factors. We selected cities in various parts of the country with BSPs that met some basic criteria. To be considered for selection in our case study, a BSP had to provide subscription television, local telephone, and high-speed Internet services in the city for more than 1 year; had to have constructed its own network (rather than having purchased an existing network); and had to have a network that was nearly completed. We also analyzed population data to ensure that our case study included markets of varying sizes. We selected 3 small cities (with populations under 100,000), 2 medium-sized cities (with populations of 100,000 to 200,000) and 1 large city (with a population over 200,000). The 6 cities chosen for the case studies represented more than 20 percent of the households to which BSPs currently offer the three-service package. See appendix III for a detailed listing of the BSPs and areas of service.

To choose cities without BSPs for our analysis, we matched the 6 BSP cities with cities that were similar in terms of size and demographics. Where possible, we matched each BSP city with a city that did not have a BSP in the same state to avoid any possible differences caused by state laws or regulations and to help ensure reasonably similar demographic characteristics across the city-pairs. However, in the case of the only large city in our sample of BSP cities we selected a city in another state—Seattle—to match with Boston because there was no city in Massachusetts with similar size and demographics, and no other large cities had extensive BSP presence.¹ Each city-pair also has the same incumbent local telephone

¹Although Boston had the largest presence of a BSP for any large city, the BSP operating in Boston has not fully constructed a system.

and cable television providers, although in one case two incumbent telephone companies served different parts of a city.

We conducted semistructured interviews with a variety of industry and local government participants for each of the selected markets. Our interviews included questions about telecommunications competition in each city, the price of telecommunications services, and the factors that favor or discourage competition in each city. We interviewed the BSPs (in the 6 cities where they existed), the incumbent cable companies, the incumbent telephone companies, the local franchising authorities, and the public utility commissions. Table 1 provides the details of the cities we chose and the primary companies and local representatives we interviewed. In addition, we interviewed officials from the BSPA and the Mid-American Regional Council (a support organization for local governments).

Table 1: Case-Study Cities and Industry and Local Government Participants

State	Type of market			Incumbent telephone	Incumbent cable	Local franchising authority	State telecommunications regulator
	With BSP	Without BSP	BSP				
Kansas	Lenexa	Prairie Village	Everest	SBC	Time Warner	Lenexa Prairie Village	Kansas Corporation Commission
Texas	Waco	Beaumont	Grande	SBC	Time Warner	Waco Beaumont	Public Utility Commission of Texas
Minnesota	St. Cloud	Rochester	Astound	Qwest	Charter	St. Cloud Rochester	Minnesota Public Utilities Commission
South Dakota	Yankton	Vermillion	Prairie Wave	Qwest	Mediacom	Yankton Vermillion	South Dakota Public Utilities Commission
Georgia	Augusta	Savannah	Knology	BellSouth	Comcast	Augusta Savannah	Georgia Public Service Commission
Massachusetts & Washington	Boston	Seattle	RCN	Verizon Qwest	Comcast	Boston Seattle	Massachusetts Department of Telecommunications and Energy, Washington Utilities and Transportation Commission

Source: GAO.

Our analysis provides details on the competitive status of markets with BSPs. However, because we used a case-study method, our results are not generalizable to all markets with such providers. We performed our work

Appendix I
Scope and Methodology

between May 2003 and December 2003 in accordance with generally accepted government auditing standards.

Price and Channel Information in Six Market Pairs

The following table provides additional data on the price patterns between the matched pair markets. The percentage price difference between each matched market pair was calculated by subtracting the lowest price in the BSP market from the incumbent's price in the non-BSP market, and then dividing that difference by the incumbent's non-BSP market price.

Table 2: Price and Channel Information in Six Market Pairs

Case study market pair	Expanded basic cable television		High-Speed Internet service: Percentage monthly rate is lower in BSP market	One local telephone line: Percentage monthly rate is lower in BSP market
	Percentage monthly rate is lower in BSP market	Number of additional channels in BSP market		
Market pair 1	31%	No difference	29%	7%
Market pair 2	32%	No difference	20%	33%
Market pair 3	41%	3	38%	No difference
Market pair 4	17%	7	2%	11%
Market pair 5	15%	5	No difference	4%
Market pair 6	-3%	1	No difference	28%

Source: GAO.

Note: The difference in numbers of channels was based on the comparison of the channels offered by the provider with the lowest price in the market with a BSP and the channels offered by the sole wire-based provider in the comparison market.

Broadband Service Provider Association Member Markets as of February 2003

Broadband service provider	Markets under franchise	Total households under franchise	Percentage of network constructed ^a
Altrio	California: Arcadia	19,970	Low
Astound	Minnesota: St. Cloud California: Concord, Contra Costa County, and Walnut Creek	119,471	Moderate
Everest	Kansas: Lenexa , Overland Park, Shawnee, and Merriam Missouri: Kansas City and Kearney	321,000	Low
Grande	Texas: Austin, San Marcos, Corpus Christi, Midland, Odessa, San Antonio, and Waco	1,355,419	Low
Hiawatha	Minnesota: Winona	12,893	Substantial
Knology	Alabama: Huntsville and Montgomery Florida: Panama City Georgia: Augusta and Columbus South Carolina: Charleston Tennessee: Knoxville	628,392	Substantial
Prairie Wave	Iowa: Lakeside and Storm Lake Minnesota: Luverne, Marshall, Pipestone, Slayton, Tracy, and Worthington South Dakota: Canton, Coleman, Flandreau, Madison, North Sioux City, Watertown, and Yankton	43,667	Substantial
RCN	California: Gardena and San Francisco Illinois: Chicago New York: New York Massachusetts: Boston Pennsylvania: Philadelphia	4,575,362	Low
Starpower	Washington, D.C.	650,000	Low
Utilicom Networks	Indiana: Evansville	77,000	Substantial
WideOpenWest	Colorado: Lakewood	12,000	Substantial

Source: BSPA.

Notes: The markets noted in **bold** were those included in our case study. The table only includes markets in which these companies currently offer subscription television, local telephone, and high-speed Internet services.

Several changes in the membership of BSPA have taken place since we selected our case-study markets in early 2003.

^aLow is less than 25%; Moderate is from 25% to 75%; and Substantial is more than 75%.

GAO Contacts and Staff Acknowledgments

GAO Contacts

Amy Abramowitz (202) 512-2834
Keith Cunningham (202) 512-2834

Staff Acknowledgments

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