

AZB ARIZONA BUSINESS

ARIZONA STATE UNIVERSITY'S MONTHLY NEWSLETTER ON THE ARIZONA ECONOMY

Office, retail offerings must evolve with changing needs

Commercial Real Estate

For the last 10 years, single-family housing has dominated the local real estate market, with limited participation from the commercial sector. This article will review two important commercial sectors, retail and office. Both sectors are needed to support a rapidly growing area by providing space for shopping and working.

The office building plays many different roles in a modern urban area. It provides the skyline, the central hub for economic activity and the symbol of corporate and civic importance. On the most basic level, the office building provides enclosed space to satisfy the need of businesses, institutions, governments and individuals. In an economic sense, it provides space for people to earn wages and salaries and businesses to generate earnings.

While office buildings provide space to earn money, the retail sector provides space to spend money. Thus, the shopping center in some form has been with us since the earliest of times, ranging from the tripartite pillared buildings of ancient Israel to Trajan's market in Rome to the latest "main street" or "lifestyle" design. Because stores serve the needs of customers, retail development tends to follow the population to serve the growing areas of homes and people.

THE RETAIL SECTOR

Since 1990 [see Table 1], retail space has increased from 64 million square feet to a current 99 million square feet, as it followed people to newly expanding areas of the Valley [see Table 3]. In 1986, every home in the Valley was supported by 89 square feet of retail, while it is now at 110 square feet. For the individual, it has grown from 23 to 29 square feet. As the retail sector has grown, it changed in response to the demands of selective consumers.

The market is driven by a set of factors. The first is the increasing use of technology to perform the retail function. While e-commerce has yet to live up to the expectations of the 1990s, it exists and is shaping retail of the future. It's impact has been felt by the music industry and the video/DVD rental business. Widely available information has begun to affect the way consumers buy homes and automobiles. Even within stores, technology has affected many aspects from distribution to self-service checkout. Combinations of technology and cost-cutting forces of competition have even affected retail employment. In 1986, each

employee managed 280 square feet; the ratio is now one employee per 325 square feet.

As stores come and go, consumers have become increasingly "channel neutral" and are not typically loyal to a particular store or chain. They are driven basically by value and convenience. Value encompasses more than price; it also includes variety or choice of items, and service. These factors have benefited a wide range of retail options. The most obvious is the growth of the super-stores such as Home Depot, Wal-Mart and Target. They offer, in one place, a wide range of goods at competitive prices. The development of these giants has greatly impacted many industries, including toys and groceries. Since these large entities cannot be on every street corner, others, such as Ace Hardware and Walgreens, are stressing convenience through such items as drive-ups and/or numerous locations. The most basic of retail is the grocery store, but today drugstores have their own food centers, and many grocery stores provide pharmacies. In grocery stores of varying sizes there are ready-to-eat meals, gourmet and organic foods, flowers and plants, cards and gifts. Some stores have drive-up windows, while others offer home delivery. Thus, retail at every level is trying to serve the needs of the consumer especially as to value and convenience.

Retailing involves not just buying goods; it is an important social activity. In the past, there was little expected from the retail center itself as long as it had a functional design and good accessibility. Now, tenants expect the retail development to contribute to the attraction and retention of customers—to make shopping an interesting and unique experience. While every new center is trying to capture this experience, the development of the lifestyle center

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especially targets upscale demographics to provide an exciting shopping experience for the consumer. This not only includes unique tenants, but also a physical design that is more pedestrian-driven and provides a friendlier ambient environment such as sidewalk cafes and entertainment. A key to developing these centers is to locate them in upscale areas, such as Kierland Commons and Desert Ridge Marketplace. According to the 2000 Census, the median household income in the Valley was \$45,360. In the area surrounding Kierland Commons it was \$69,100, and near Desert Ridge, \$78,830. It will be interesting to see if this concept succeeds in less upscale areas as retail developers strive to enhance social activity in response to the e-commerce challenge and to the enhanced competition from other retail centers.

While much emphasis has been placed on the development of new retail space, there is increasing interest in redeveloping, repositioning, or revitalizing older centers. For some centers, the emphasis is on upgrading the design to make it more modern-looking, and leasing to new tenants to meet demographic changes in the trade area. Other centers, such as Fiesta Village, will be torn down to be replaced with new centers. Some redevelopment projects are doing well while others, such as Los Arcos, are stalled.

The primary driving force for retail development has been new home development facilitated by low mortgage rates. In the next few years, higher interest rates and less residential development could slow down the retail market. Additionally, challenges for the retail sector include e-commerce, retail consolidation and heightened competition among retailers and centers. There can be little doubt that change is coming, but no one knows how retailing will evolve to confront these issues in the coming years.

THE OFFICE BUILDING SECTOR

The Greater Phoenix area entered the 1990s like most metropolitan areas, with a serious oversupply of vacant office buildings. The primary reason was the record level of development activity (27.8 million square feet) that occurred in the 1980s. The office building sector started the 1980s with 8.7 million square feet and a vacancy rate of 12.6 percent, and ended the decade with an inventory of 36.5 million square feet and a 25 percent vacancy rate. With limited new construction during the 1990s, the inventory increased to 38.8 million square feet in 1997, and the vacancy rate dropped to 7.5 percent.

Since then, the inventory has increased to 56.2 million square feet in 2003 and vacancy rate of 21.8 percent.

During the 1990s, new development was limited with only 26,000 square feet being added in 1996, but over 16 million square feet has since been added. This development activity was driven by a host of related factors, including a strong economy, extremely optimistic outlooks, readily available and inexpensive financing and a maturing local economy. During strong economic growth, increasing demand absorbs most of the vacant space and drives up rents, which heightens the economic potential of new projects. Because it takes considerable time to build a new project, over time the economic and market conditions typically slow, resulting in an increase in vacant space. Unlike the 1980s when new development greatly outpaced demand, many of the new projects in the 1990s were started with strong pre-leasing activity. However, a

weakening economy eliminated some tenants, while consolidation and downsizing eliminated others. Thus, the expected tenants disappeared while the buildings under construction still had to be brought into existence.

A weak economic environment and advanced new technology further affected the problem for new and existing buildings alike. The weak economy required firms to reduce operating costs by terminating employees and eliminating unneeded space. In addition, space requirements were further reduced by business failures and firm merger/consolidation, especially among the new economy companies. Emerging technology allowed firms to successfully operate with fewer employees and less space, especially for storage of records and library functions.

The positive economic environment for much of the 1990s allowed many tenants to seek out new space. Further, over most of the century, numerous technologies, such as

TABLE 1
GREATER PHOENIX RETAIL MARKET
(Selected Years)

<i>Year</i>	<i>Inventory</i>	<i>Occupied Space</i>	<i>Vacant Space</i>	<i>Vacancy Rate (Percent)</i>	<i>Absorption</i>
1986	47,112,069	42,359,766	4,752,303	10.0	3,128,837
1990	63,812,023	53,754,477	10,057,546	15.8	3,610,685
1995	75,687,515	68,260,120	7,427,395	11.5	2,730,225
2000	87,202,712	80,179,633	7,023,079	8.1	1,395,367
2003	98,987,050	88,439,397	10,547,653	10.7	3,342,760

TABLE 2
GREATER PHOENIX RETAIL MARKET
Type of Center and Square Footage (Selected Years)

<i>Year</i>	<i>Regional</i>	<i>Community/Power</i>	<i>Neighborhood</i>	<i>Strip/Specialty</i>
1986	10,766,469	9,105,535	20,556,068	6,613,513
1990	12,701,407	14,464,221	26,935,363	9,711,042
1995	14,273,193	20,748,879	29,397,518	10,433,505
2000	13,272,016	27,153,988	36,255,761	10,556,947
2003	14,572,016	33,620,102	39,410,174	11,398,758

TABLE 3
GREATER PHOENIX RETAIL MARKET
Submarkets and Square Footage (Selected Years)

<i>Year</i>	<i>Central</i>	<i>Northeast</i>	<i>Northwest</i>	<i>Southeast</i>	<i>Southwest</i>
1986	9,869,733	8,364,084	11,618,877	14,460,237	2,728,654
1990	10,396,922	11,260,372	15,794,649	22,184,490	4,175,590
1995	10,882,783	14,727,158	18,214,354	27,066,046	4,797,174
2000	10,533,784	17,134,267	21,238,566	33,451,526	4,844,569
2003	10,588,469	20,423,423	23,717,896	38,368,241	5,889,021

Source (Tables 1,2,3): Arizona Real Estate Center, L. William Seidman Research Institute, W. P. Carey School of Business, Arizona State University.

airplanes and telephones, freed companies from having to locate in specific geographic regions. But within cities, office activities tended to remain in clustered downtown areas. This facilitated the interaction of businesses. Until recently, the largest office markets, biggest companies and buildings were in the central business district, while the smaller markets, companies and buildings were in the suburban markets.

Now, both new technological work patterns and the strong economy have expanded the office market in several submarkets throughout the Greater Phoenix area. For example, in 1980, the downtown submarket accounted for 21 percent of office space, while the Northeast submarket was only 10 percent. At the end of 2003, the downtown submarket represented 11 percent and the Northeast, 20 percent.

Typically, the high-rise office building is the "status" building with the major tenants and the highest rents, and during the 1980s, was the primary development focus. From 1985 to 1990, total square footage in high-rise office buildings increased 4.5 million square feet. Much of this development activity occurred in the uptown submarket, with 2.5 million square feet added, so the uptown submarket now contains the majority of high-rise buildings with 6.7 million square feet or 60 percent of the high-rise inventory.

However, the market changed, leading to growth in the suburban markets. Tenants now want to be closer to clients, have accessible and secured parking, improved freeway systems and area amenities. Although the high-rise was the primary development focus of the 1980s, the low-rise or garden style office building has become popular again as it provides easy-access parking for both employees and clients, has lower operating expenses and lower construction costs, which frequently means lower rents. Currently, the low-rise accounts for 36.4 million square feet of the total inventory of 56.2 million square feet. Because this low-density style is typical for suburban development, it is not unusual to see much activity in the suburban markets, such as Northeast (10.1 million square feet), Southeast (6.5 million square feet) or Northwest (6.3 million square feet).

While less than 1 million square feet is under construction, there are some emerging trends that could impact the market. The first is the increasing construction activity on Indian land along Highway 101. These buildings offer a Scottsdale address and great location access along the freeway. Another trend is the increased development of office con-

miniums throughout the Valley. These projects provide not only investment opportunities, but attractive space for smaller tenants that would be renting in smaller office buildings or even retail space. Office condominiums have been popular with medical firms and real estate brokerage firms. Thus, new development is occurring that could impact the recovery of the office building market and its physical design and location.

Advancing technologies (the Internet and e-commerce) not only are affecting how companies compete but also how they network with employees and clients. The movement of new technology-based companies into classic office sectors such as brokerage, mortgage lending and banking, have required companies to be even more focused on the bottom line. Because these companies do not meet directly with their clients, there is even less need for expensive office space. Many are moving into other types of spaces, such as industrial, retail and even decommissioned military space.

Although telecommuting probably will not replace the traditional office concept, it is continuing to reduce some space needs, especially for those employees who are frequently out meeting with clients and/or customers. For these people, permanent office space typically has been replaced with a smaller cubicle or some concept of shared space. Further, the use of voice mail and e-mail have reduced the need for support staff.

Although changing space requirements frequently reduces space needs, they also frequently require new structures to meet their respective requirements. With tenants needing flexible layouts to meet employee and technological needs, many older buildings have become obsolete. Because new buildings are frequently the focal point of analysis and interest, the real test of the market is how the second- or third-generation space rents up. If it is slow or nonexistent, then the market has some very fundamental weaknesses. If the space fills at market rents, then the office building market still is robust. However, these older buildings will be in increased competition with office condominiums. Thus, to divine the strength of the office building market, one must carefully consider how the older buildings are being occupied and at what rent levels.

As the economy is going through wrenching changes regarding human needs, globalization and rapidly changing technologies, the space that contains this activity must also change or become obsolete. Although the local office building market appears to be weak, rapid environmental changes mean that the office sector will be required to change, even if the market is not growing, to meet the needs of the local economy.

— Jay Q. Butler
Director
Arizona Real Estate Center

TABLE 4
GREATER PHOENIX OFFICE BUILDING MARKET
Square Footage (Selected Years)

Year	Inventory	Occupied Space	Vacant Space	Vacancy Rate (Percent)	Absorption	New Space
1986	28,603,932	19,989,357	8,614,575	30.1	2,967,490	5,605,456
1990	37,717,755	27,726,123	9,991,632	26.5	873,768	1,682,184
1995	38,002,673	34,214,413	3,788,260	10	1,072,546	0
2000	47,511,703	41,487,655	6,024,048	12.7	3,417,226	2,688,347
2003	56,244,915	43,959,880	12,285,035	21.8	947,202	1,348,659

TABLE 5
SELECTED OFFICE BUILDING SUBMARKETS
Square Footage (Selected Years)

Year	Downtown	Uptown	Camelback	Northeast	Southeast
1986	2,663,589	7,678,827	4,442,326	4,870,545	3,144,652
1990	4,534,052	9,621,677	5,696,388	5,662,467	4,624,053
1995	4,569,052	10,143,033	5,662,957	5,585,300	4,512,739
2000	5,147,967	11,119,594	6,778,534	8,807,153	6,082,653
2003	6,357,767	11,119,594	7,570,108	11,250,941	8,309,855

Source (Tables 4 and 5): Arizona Real Estate Center, L. William Seidman Research Institute, W. P. Carey School of Business, Arizona State University.

Resale market enjoys highest first-quarter sales level

The single-family market continues to provide a halcyon influence amid the storm of a struggling economy, uncertain job outlook, and an unstable international situation. While recorded sales activity represents decisions made several months earlier, home buyers apparently remain confident that homes are excellent investments.

The Greater Phoenix housing market opened the new year at a torrid pace, with 31,935 recorded sales for first quarter 2004 compared to last year's 25,725. While this is a record for the initial quarter of a year, it is below the quarterly record of 33,435 sales set in third quarter 2003. While sales activity remains strong, there is mounting concern that the housing market will begin to slow in the later part of 2004.

AFFORDABILITY

In response to the anemic recovery, the Federal Reserve continued to hold interest rates low. Because inflation has remained low and the volatile stock market has yet to draw any meaningful levels of capital from the bond market, 30-year mortgage rates fell from 5.3 percent in January to 5.1 percent in March. Mortgage rates averaged 5.2 percent in first quarter 2004.

Resale home prices maintained record levels, with the median price rising from the previous record (\$159,000) in third quarter 2003 to \$159,705, compared to \$148,750 a year ago. In new homes, the median price

also set a new record at \$180,510, up from \$177,820 in fourth quarter 2003 and \$163,545 a year ago.

Low inflation and a nearly jobless recovery combined to hold median household income to no growth. However, lower interest rates offset the increase in median home prices for a slight improvement in affordability.

The resale affordability index improved from 126 in fourth quarter to 127, but was well below last year's 131. The new home affordability index value followed a similar pattern, rising from 111 in fourth quarter 2003 to 113, while it was 119 for the initial quarter of 2003.

(An index value of 100 means the typical home buyer would be able to afford a median-priced resale home at an effective interest rate of 7.7 percent, based on the current median resale price and household income. A lower index value indicates less affordable homes.)

Since home prices and incomes vary throughout the Valley, so does the affordability index. For example, in the resale sector, the first-quarter 2004 index was 74 in Scottsdale, 132 in the Surprise area, 131 in the Mesa area and 152 in the Avondale area.

RESALE SINGLE-FAMILY HOMES

With 19,460 recorded sales, the Greater Phoenix resale home market improved from the 18,530 homes recorded sold in fourth quarter 2003 and 15,030 a year ago. How-

ever, it was below the record (20,560 sales) established in third quarter 2003. March set a monthly record (8,780 recorded sales), exceeding the previous record of 8,185 sales set in September 2003.

Median resale home prices ranged greatly across the area, from a high of \$895,000 (160 sales) in Paradise Valley to \$96,900 (135 sales) in the Sky Harbor area. Active areas were: Mesa with 2,380 sales (\$146,000 median price), Deer Valley with 1,640 (\$186,310), Glendale with 1,460 (\$146,000), and North Scottsdale with 1,375 (\$395,000). The median square footage for a resale home increased from last year's 1,640 to 1,655.

NEW SINGLE-FAMILY HOMES

Based on a strong March (3,375 sales), the new home market continued its strong pace with 8,135 recorded sales, up from 7,125 a year ago, but well below the 9,270 sales recorded in the last quarter of 2004.

The West Valley communities represented 28 percent of the Greater Phoenix new home market. A big reason for this growth is the greater affordability of new homes in the West Valley. The following examples illustrate the disparity: In the East Valley, the median price in Gilbert is \$219,500 for a 2,550-square foot home and in Mesa, \$202,400 for 2,300 square feet. In the West Valley, the median price is \$151,295 for a 1,780 square foot home in Avondale and \$133,560 for 1,550 square feet in El Mirage.

TABLE 1
HOUSING AFFORDABILITY INDEXES
Greater Phoenix, Single-family Only

Quarter	Resale Homes					New Homes		
	Median Gross Monthly Income	Effective Interest Rate	Median Sales Price	Monthly Housing Payment	Affordability Index	Median Sales Price	Monthly Housing Payment	Affordability Index
First Quarter 2002	\$4,000	6.9	\$139,700	\$920	122	\$158,015	\$1,040	108
Second Quarter 2002	4,020	6.6	144,000	920	122	155,250	995	114
Third Quarter 2002	4,030	6.2	146,000	895	126	159,535	975	115
Fourth Quarter 2002	4,040	6.0	147,000	880	128	164,540	990	115
First Quarter 2003	4,050	5.7	148,750	865	131	163,545	950	119
Second Quarter 2003	4,060	5.4	155,000	870	131	176,085	995	115
Third Quarter 2003	4,060	5.9	159,500	945	120	173,895	1,030	110
Fourth Quarter 2003	4,075	5.7	155,800	905	126	177,820	1,030	111
First Quarter 2004	4,075	5.4	159,705	900	127	180,510	1,015	113

Source: Arizona Real Estate Center, L. William Seidman Research Institute, W. P. Carey School of Business, Arizona State University.

With 88 of the 100 new home sales priced in excess of \$300,000, North Scottsdale had a median sales price of \$584,845; the lowest was \$133,560 in El Mirage, based on 115 sales. Other active markets were: Deer Valley with 780 sales (\$247,425 median price), Superstition Springs with 280 (\$215,675) and Union Hills with 100 (\$222,535).

The median square footage for a new single-family home recorded sold in first quarter 2004 was 2,330, slightly bigger than the 2,275 square feet reported a year ago.

TOWNHOUSE/CONDOMINIUMS

Both investors and occupying owners recognize the advantages of the low maintenance, recreational facilities and security offered by the townhouse/condominium housing style. The median sale price for resale units increased from \$85,000 in first quarter 2000 to \$110,000 in first quarter 2004. However, even with the rapid increase, the median price represents only 67 percent of that for single-family homes. Higher prices might be one explanation for the sales activity declining from a record 4,165 units in second quarter 2003 to 3,765 units, compared to last year's 3,215 sales.

Many of the newer developments are at the high end of the market; the median price of \$161,910 for new units represents 90 percent of the \$180,510 for new single-family homes.

The primary reason is that 35 percent of the 575 sales were in North Scottsdale, at a median price of \$244,990. Other active areas were Superstition Springs (65 sales, \$143,735), southwest Maricopa County (80 sales, \$89,900) and East Mesa (60 sales, \$120,085).

In the resale townhouse/condominium sector, the median square footage of 1,185 was the same as reported a year ago. The most active resale areas were North Scottsdale with 580 sales (\$196,530 median price), South Scottsdale with 400 (\$124,250), South Mesa with 220 (\$92,900) and Sun City/Peoria with 295 (\$83,000).

LOOKING AHEAD

Although the home-buying appetite seems insatiable, there are some mounting concerns about affordability. The current economic recovery has been described as a "jobless recovery." While job growth is expected to return this year, the fundamental issue is whether the new jobs will provide the income and the opportunities for career advancement that will translate into greater and sustainable demand for residential properties. Even with existing jobs, companies are trying to transfer pension and health care costs to the employees, which affects their ability to purchase and maintain homes.

Further, the strengthening economy, concerns about the deficit and the possible

inflationary pressures of rapidly increasing energy costs could lead to higher mortgage rates. Higher interest rates combined with stable incomes and higher home prices would adversely impact the affordability of housing, leading to a slowdown of activity. Further, people with low interest rate mortgages have little incentive to move to provide some additional stimulus to the market. Since some of the current purchases are being financed by adjustable rate mortgages, higher interest rates could impact the ability of some of these home buyers to retain their homes.

The Greater Phoenix area has grown by providing jobs and affordable housing to a diverse population. The growth is especially evident in the residential development of the West Valley communities and Pinal County. Since many of the communities are a distance from employment centers, the increasing pressure on the freeway system and higher energy costs make it even more important for the "newer" areas to advance beyond bedroom communities to more economically diverse ones.

The future of the housing market is tied directly to the area's ability to create and sustain jobs that pay well and offer advancement potential.

— Jay Q. Butler

Director

Arizona Real Estate Center

TABLE 2
GREATER PHOENIX HOME SALES

Median Sales Price	Single-family			Townhouse/Condominium			Grand Total
	Resale	New	Total	Resale	New	Total	
First Quarter 2003	\$148,750	\$163,545	\$153,610	\$101,000	\$180,000	\$107,000	\$148,380
Second Quarter 2003	155,000	176,805	160,000	103,375	181,835	109,000	154,000
Third Quarter 2003	159,000	173,895	163,785	103,000	188,690	108,620	158,000
Fourth Quarter 2003	155,800	177,820	163,995	105,000	187,775	110,500	158,240
First Quarter 2004	159,705	180,510	165,585	110,000	161,910	115,000	160,000
<i>Number of Sales</i>							
First Quarter 2002	12,655	6,015	18,670	2,970	315	3,285	21,955
Second Quarter 2002	17,325	6,795	24,120	3,685	355	4,040	28,160
Third Quarter 2002	16,865	7,670	24,535	3,330	390	3,720	28,255
Fourth Quarter 2002	15,780	8,645	24,425	3,315	425	3,740	28,165
First Quarter 2003	15,030	7,125	22,155	3,215	355	3,570	25,725
Second Quarter 2003	19,845	7,680	27,525	4,165	470	4,635	32,160
Third Quarter 2003	20,560	8,630	29,190	3,745	500	4,245	33,435
Fourth Quarter 2003	18,350	9,270	27,620	3,565	500	4,065	31,685
First Quarter 2004	19,460	8,135	27,595	3,765	575	4,340	31,935

Source: Arizona Real Estate Center, L. William Seidman Research Institute, W. P. Carey School of Business, Arizona State University.

Investment in early child care brings high returns

A more complete account of the information and analysis presented in this article is available in the report "The Economics of Early Care and Education," published in March 2004 by the Center for Business Research, L. William Seidman Research Institute, W.P. Carey School of Business, Arizona State University.

From a purely economic perspective, enriched early care programs for young children (e.g., up to age 5) represent an investment with a very high return. Children who participate in enriched early childhood programs are more successful in school and earn more income throughout their working lives. They are also less likely to impose costs on others, both in terms of classroom disruption and grade retention when they are young or by engaging in antisocial or criminal behavior later when they become adults.

In the absence of any public policy toward early care and education, however, the nation is likely to seriously underinvest in its children. In surveys, working parents commonly report that they find it difficult to judge the quality of child care programs. One useful role for public policy, then, is to assist parents in obtaining information about the quality of early care programs. Another case for public policy in child care involves affordability. Parents who lack the financial resources to pay for high quality care may not be able to finance what could prove to be an investment with a high return. Another important argument for public support of early care and education involves externalities that may be associated with negligent care of young children. Children who do not understand how to get along in society impose costs on others in the form of crime and higher taxes.

The government has taken on an increasingly important role in helping families with child care expenses, especially low-income families. Federal government support of child care through the Child Care and Development Fund, Head Start, the Child and Dependent Care Tax Credit and other programs increased from \$2.8 billion in 1980 to \$19.8 billion in 2000. States are also taking on a greater responsibility for meeting the child care needs of low-income families.

Despite the recent increase in government support of child care, many programs remain underfunded. Head Start, the public preschool program for disadvantaged children, now serves over 900,000 children at a cost of \$6.3 billion per year. However, there

are more than 400,000 children nationwide who meet eligibility requirements but are not served because of insufficient funding. At the local level, the Arizona Department of Economic Security estimates that the number of working adults who are eligible for child care assistance but are on a waiting list will reach over 14,000 by mid 2004.

In response to these funding issues and in recognition of the value of early childhood education, Governor Janet Napolitano in her 2004 State of the State address announced several new initiatives to improve access to and delivery of high quality child care. Following programs that have been successful in North Carolina, the governor has proposed (1) an increase in state funding of existing programs so that all eligible children and families can be served, and (2) a rating system of licensed child care centers that could help families judge the quality of a given program.

This article reviews national studies that have been influential in persuading educators, economists and other interested parties of the high value of early childhood education. The article also provides a cost-benefit analysis of a hypothetical early care and education program for Arizona. The program analyzed is one that is most easily connected to national studies, not the one proposed by the governor nor necessarily one that is best suited to Arizona. The hypothetical program is used simply to illustrate the size and nature of the economic return to investing in education for young children.

EARLY INTERVENTION PROGRAMS

Since the early 1960s, there have been dozens of childhood enrichment programs aimed at helping disadvantaged children improve their learning skills so they can begin school on a more equal footing with other children. The programs have been evaluated on the basis of a number of different outcomes including various measures of cognitive development, frequency of school remedial services, criminal and delinquent behavior, and adult educational and earnings attainment. Studies generally find that participating children enjoy significant short-term gains in intellectual development, such as IQ and achievement in math and reading, but that these gains "fade out." A report by the Consortium for Longitudinal Studies, for example, concludes that early IQ gains erode within three years of school entry and

academic gains erode within five to six years. Many programs, however, have produced long-term benefits in the form of higher educational attainment, higher adult earnings and a reduced likelihood of criminal behavior. This suggests that the long-term benefits to program participants may derive more from motivation and socialization than cognitive development.

Much of the evidence on the long-term benefits of early intervention is drawn from three programs: the Perry Preschool Project, the Carolina Abecedarian Project and Head Start. The first two programs were small-scale model programs. They are highly regarded because of their experimental design, low attrition and long-term follow-up of subjects. Head Start is a large-scale public program with a nonexperimental selection process. Studies of the long-term effects of Head Start have used statistical techniques and information on family background to control for nonrandom participation of children.

The Perry Preschool program was conducted in Michigan over the period 1962-1967. The program enrolled a total of 123 African-American children ages 3-4 who had scored low on socioeconomic status. Children attended half-day sessions, five days a week for two academic years. The program also included weekly 1½-hour home visits involving teachers and parents. The program had an experimental design, with children randomly assigned to treatment or control groups. Subjects have been followed throughout their lives with the most recent observations on subjects at age 27.

Members of the Perry program group had significantly more success in school than did the control group. The program group spent, on average, 1.3 fewer years in special education programs. The program group also had a significantly higher rate of high school graduation or the equivalent (71 percent vs. 54 percent). Perry participants also had more economic success later in life. When interviewed at age 27, subjects did not differ noticeably in their rate of employment during the previous five years. However, employed members of the program group had monthly earnings that were 24 percent higher than the earnings of employed non-program members.

Group differences in social responsibility, as measured by criminal arrests, were very strong and represented one of the most significant findings of the Perry study. According

to police records collected when participants were 27-32 years old, the program group averaged significantly fewer lifetime arrests (2.3 vs. 4.6 arrests). Also, significantly fewer program-group members were frequent offenders, i.e., arrested five or more times (7 percent vs. 35 percent).

The North Carolina Abecedarian project involved four cohorts of 28 African-American children over the period 1972-1977. Subjects were selected using a high-risk index based on parental education, income and IQ. The program schedule was unusually comprehensive. Children received center-based care and education services 8-9 hours a day, five days a week and 50 weeks a year from infancy until age 5. Like Perry, the Abecedarian program had an experimental design. The most recent follow-up of subjects has been through age 21.

By age 12, program children had a lower lifetime incidence of special education (13 percent vs. 48 percent) and grade retention (38 percent vs. 57 percent). By age 21, there was only a small difference in the percent of participants who had graduated from high school (70 percent vs. 67 percent). However, a significantly higher percentage of program members were enrolled in a four-year college (36 percent vs. 14 percent).

Researchers have evaluated the incidence of crime among participants from age 16 to age 21. Surprisingly, no statistically significant differences have been found in either the amount or types of arrests. Other programs that report success in reducing crime and delinquency included services for parents, such as counseling on ways to manage children's behavior. This type of counseling was not given to parents of Abecedarian children.

One of the most significant findings in the Abecedarian project involved earnings of mothers of participating children. Group mothers were more likely to have a skilled job when their child was 21, and they held an earnings advantage over non-group mothers at almost all times since program entry. No such effect was found in the Perry Preschool data. This may have been due to the fact that Perry did not offer full-time year-round care.

Head Start is the largest and most well-known of all early intervention programs. Begun in 1965, the program now provides health, social and educational services to more than 900,000 low-income children nationwide. The program has changed over time but has generally provided half-day services for 34 weeks to 4-year olds.

A recent analysis of the long-term effects of Head Start has used data from the Panel Survey of Income Dynamics where in 1995 a supplement was added inquiring about participation in Head Start. These data provide measures of economic and social success of Head Start participants when they have reached adulthood. Incremental contributions of Head Start are identified after statistically controlling for observed family characteristics (parents' education, family income, etc.) and using information on siblings to control for unobserved family characteristics. Analysis has revealed that participation in Head Start is associated with a significantly higher chance of completing high school and attending college, as well as higher earnings when the participant is in his or her early twenties. Also, Head Start participants are less likely to have been booked or charged with a crime.

COST-BENEFIT STUDIES

There have been two formal cost-benefit studies of early childhood education programs: a study of the Perry Preschool Program and a study of the Carolina Abecedarian Project.

Benefits measured in the Perry study are those that accrue to participating children in the form of higher lifetime earnings and those that accrue to taxpayers and other societal members. The societal benefits are those that derive from avoidance of special education and grade retention, from reduced welfare payments and from reduced crime. When expressed in 1992 dollars and discounted at 3 percent, the present value of all benefits was \$108,002 per child. This is 8.7 times the cost of the two-year program. Benefits accruing to crime victims were the single largest benefit identified in the Perry study. Avoided victim costs alone were almost five times as large as program costs. Incremental earnings received by participants were 2.5 times the size of program costs.

Most of the benefits measured in the Abecedarian study accrued to program children or their mothers. These benefits include higher lifetime earnings for the child, higher maternal earnings and increased life expectancy of the child because of a lower probability that he or she will smoke. Societal benefits that were measured include reduced K-12 education costs and reduced welfare assistance. Crime costs were not considered since data analysis has not identified a statistically significant effect of the program on criminal and delinquent behavior. Expressed

in 2002 dollars and discounted at 3 percent, the present value of all measured benefits was \$135,546 per child. This is 3.8 times the size of the incremental costs of the five-year program. The largest benefits identified were those relating to maternal earnings. The present value of higher maternal earnings alone was more than twice as large as the program's incremental costs. Higher participant earnings were themselves slightly larger than incremental costs.

A HYPOTHETICAL ARIZONA PROGRAM

A cost-benefit analysis was conducted for a hypothetical early care and education program in Arizona. The program considered for study is a large-scale public program with an education component that is similar in structure and intensity to the Perry model, but one that offers full-time care for working parents. Many of the response parameters were set using findings from studies of model programs, including Perry. However, benchmark data specific to Arizona were used whenever possible.

Target population: As in other model programs, children selected to participate are assumed to be those with a high statistical chance of economic and social underachievement. Children could be selected on the basis of low socioeconomic status using measures such as family income and educational attainment of parents. It is assumed that participating children would not have had an enriched early care and education experience had they not been enrolled in the hypothetical program.

Program intensity: As with Perry, the education component of the program would consist of half-day classroom sessions five days a week for nine months, coinciding with the regular school calendar. Participants would enroll at age 3 and would participate for two years. This would provide roughly twice the usual period of intervention in Head Start.

For the program to appeal to working parents, high quality care would be provided during times when the more formal education part of the program was not in session. This would amount to half-day care for nine months and full-time care for the remaining three months. Although this feature adds to costs, it is also likely to allow working parents to progress further in their careers and to generate higher lifetime earnings for them.

Curriculum: The curriculum in the Perry program emphasized the development of both cognitive and social skills in young children. Considerable time was spent helping children

learn how to express their feelings, work in groups and deal with social conflict. It is assumed that the Arizona program would be similarly balanced. One of the principal lessons from long-term studies of early intervention programs is that success later in life is very often more a matter of socialization than intellectual achievement.

Studies of early childhood programs generally find that for a program to be successful, parents should be involved at some level. Teachers learn from parents about a child's particular needs and, in turn, inform parents about the curriculum and the child's development. The Perry program involved weekly 1½-hour home visits between a teacher, the child and the parent. While improved parenting skills would not be a primary focus of the Arizona program, it is recognized that some consultations may be necessary for the program to be effective. Early intervention programs that have been successful in reducing delinquency and crime provided not only classroom instruction but also involved parental consultations to teach basic child care skills and techniques for effective discipline.

Instructional staff: Studies of effective early childhood education programs conclude that the teaching staff should be trained in early childhood development and that class sizes should be kept small. The instructional staff in the Perry program consisted of experienced public school teachers. On average, there were six children for every teacher. Researchers associated with the Perry program feel that program quality can be maintained even if the number of children per teacher is raised to 10.

Program Costs

In estimating the costs of operating an early childhood education program in Arizona, three types of costs were considered: (1) the cost of the instructional staff; (2) the costs of child care; and (3) other costs including overhead and capital costs. Costs relating to instructional staff were calculated assuming there would be 10 children per teacher and that teachers would be paid at the mean rate of Arizona workers trained to teach special education at the level of preschool, kindergarten and elementary school. Costs of the instructional staff were estimated to be \$4,242 per child per year.

To help support working parents, the program would offer child care services to cover any part of an eight-hour day when the education part of the program was not in session.

This amounts to half-day care for nine months and full-day care for three months of the year. Using information from an Arizona survey of child care costs, this implies annual child care costs of \$3,688 per child. The remaining costs of the program were estimated using figures from a cost-benefit study of the Perry program, expressed in current dollars. These costs amount to \$1,754 per child.

The total of all program costs is \$9,684 per child per year. The hypothetical Arizona program is a two-year program offered to children aged 3-4. Using a 3 percent discount rate, the present value at age 3 of the costs of the two-year program is \$19,084 per child.

The benefits of an early childhood program are incremental in nature. They are measured relative to what would have happened had the child had an alternative child care arrangement, presumably one not as enriched as the considered program. Program costs should also be measured incrementally. The costs that should be compared with benefits are the additional costs of the program over and above whatever costs would have been incurred in the most likely alternative.

For the children targeted for inclusion in the hypothetical Arizona program, the most likely alternative is care provided by either the mother herself or a relative of the child. Based on a national survey which reported average child care payments made to relatives, a figure of \$1.34 per hour was used to impute a value to the time and resources no longer required when center-based care is made available. This figure is well below market and probably serves to overstate the incremental costs of the program. Based on this hourly rate, the discounted value of avoided child care costs for the two-year period amounts to \$5,282 per child.

Program Benefits

There were four types of benefits measured: (a) benefits that accrue to the child in the form of higher lifetime earnings; (b) higher earnings received by mothers of participating children; (c) societal benefits associated with reduced crime; and (d) societal benefits that arise because of a reduced need for grade retention and special education.

Lifetime earnings of children: The incremental impact of the program on a child's lifetime earnings was estimated assuming that the Arizona program would have the same effect on a child's educational attainment as did the Perry program. In Perry, the educational success enjoyed by participating children consisted largely of a higher rate of high

school graduation. To calculate the resulting effect on earnings, information from the 2000 Census was used to quantify the relationship between earnings and educational attainment in the Arizona population. The present value of the higher earnings enjoyed by participants over their entire working lives, discounted to age 3, was estimated to be \$43,139 per child. Children who proceed farther in school generate additional schooling costs. When these costs are netted out, the net benefit associated with a child's increased educational attainment is estimated to be \$39,353.

Mother's earnings: There is substantial evidence from national studies of programs that offer early care and education on a full-time basis that mothers of participating children are more likely to be employed and to go further in their education and careers than are mothers who use low-quality care. In the Abecedarian project, for example, the average annual earnings advantage of experimental group mothers at the time their children were 12, 15 and 21 years of age was \$3,750, expressed in current dollars. Since the Arizona program will last only two years rather five as in Abecedarian, it was assumed that the benefits Arizona mothers derive would be only 40 percent as large as those of Abecedarian mothers. Assuming that these additional earnings are received for a period of 40 years, the present value of the additional earnings projected for Arizona mothers of participating children is estimated to be \$30,806, when discounted to the time the child is age 3.

Crime: There is considerable evidence that preschool intervention programs succeed in reducing criminal behavior of participants later in life, especially when the program provides counseling services to parents. In an analysis of the Perry program, reduced crime costs were the most significant benefit associated with the program. The program analyzed for Arizona is modeled after Perry, so it is reasonable to assume that the Arizona program would also provide significant crime-reduction benefits.

There are two steps involved in estimating the crime benefits from an Arizona program: (1) estimating the present value of the lifetime crime costs imposed by a random sample of 1,000 3-year old Arizona children; and (2) estimating the effectiveness of the program in reducing crime in the 3-year old population. Following cost-benefit studies of the Perry program, crime costs that were measured included costs to victims (direct losses, pain and suffering, and risk of death), criminal jus-

tice system costs and costs of incarceration. These cost estimates were combined with estimates of the number of criminal offenses and arrests in the Arizona population by type of offense and age of offender. The calculations suggest that a cohort of 1,000 Arizona 3-year olds over their lifetime will impose crime costs with a present value of \$15.2 million. Forty-four percent of these costs are victim costs; 23 percent are associated with resources used in the criminal justice system; and 33 percent involve corrections costs.

To measure the effectiveness of an Arizona program in reducing crime, a conservative assumption was made that crimes by participants would be reduced by half of the amount realized in the Perry program. Specifically, the Arizona program would reduce by 25 percent the lifetime offenses of participants. A second important assumption involves the potential out-migration of enrolled children. Benefits associated with reduced crime among out migrants accrue to the nation as a whole but are lost to Arizona. Census data suggests that 25 percent of Arizona 3-year olds will end up leaving the state before they reach peak criminal age. To account for this, Arizona is assumed to receive only 75 percent of the crime benefits calculated for the entire group of enrolled children.

A final and extremely important assumption involves the nature of the selection process used to enroll children in the preschool program. Is it a random process, or is it designed to have a maximum effect on crime reduction? If enrollment is random in the population of 3-year olds, the benefits of crime reduction would amount to \$2.85 million per 1,000 children. This represents only 15 percent of gross program costs. At the other extreme, suppose that the program only enrolls children with a high statistical chance of becoming serious offenders. In an often cited study of a cohort of male children born in Philadelphia in 1945, 6 percent of this cohort was responsible for 52 percent of the juvenile crime committed by all males from the cohort. Assuming that these numbers can be applied to Arizona, and that serious future offenders can be targeted perfectly as children, then the benefits of crime reduction would amount to \$39.6 million per 1,000 enrolled children. This is more than twice the cost of implementing the program.

The case used in the cost-benefit analysis is intermediate between the two extremes. It is assumed that one half of the participants enrolled in the program would be serious

future offenders. The other half are assumed to represent no more a threat than the rest of the population. The crime benefits in this case amount to \$13.1 million per 1,000 children. This benefit serves to offset 69 percent of gross program costs.

Avoided K-12 education costs: Virtually all studies of enriched preschool programs find that the programs were effective in promoting educational success in children. One aspect of that success is reduced incidence of grade retention or special education. In a study of the Perry program, a careful accounting of K-12 school costs revealed an average cost-saving for participating children of \$8,866, expressed in current dollars. K-12 cost savings for Head Start children have been estimated to be \$2,489 per child. It is assumed that the hypothetical Arizona program, which has the intensity of Perry but the scale of Head Start, would provide cost savings of \$5,678 per child, a simple average of the Perry and Head Start numbers.

ADDING UP COSTS AND BENEFITS

Table 1 summarizes the estimated costs and lifetime benefits of operating a hypothetical early care and education program in Arizona. The program provides a total of \$6.40 worth of benefits for every \$1 of incremental costs. The benefits received by participants and their families (participant earnings and maternal earnings) amount to \$70,159 per child, or more than five times the incremental costs of the program. Societal benefits from reduced crime and lower K-12 education costs are also significant, amounting to \$17,860 per child. Assuming that participant families pay none of the gross program costs (taxpay-

ers do), the benefits received by the public nonetheless offset 94 percent of public costs. An early care and education program would almost pay for itself on the basis of lower crime rates and taxpayer benefits alone.

THE FUTURE OF ARIZONA

Calculations such as those in Table 1, as well as general findings from numerous experimental early education programs, have caused Nobel prize-winning labor economist James Heckman to conclude that in America and in many European countries, “the returns to investment in the young are quite high” and that “efficiency would be enhanced if human capital investment were reallocated to the young.” Because of its demographics, much is riding on Arizona’s education policy. If recent trends in birth rates continue, the population of children aged 0-5 in Arizona will increase by more than 70 percent over the next two decades, from around 460,000 in 2000 to 790,000 by 2020. The number of young children raised in poverty households — those at high risk of underachievement and most in need of enriched preschool programs — can be expected to rise from 107,000 (or 23 percent of all children 0-5) in 2000 to 211,000 (or 27 percent) in 2020. These numbers alone should be enough to convince concerned citizens that the issue of public involvement in early care and education warrants careful consideration and that a good decision must be made in this area.

— Kent Hill

*Economic Analyst
Center for Business Research*

TABLE 1
PRESENT VALUE OF COSTS AND BENEFITS OF ENROLLING
A CHILD IN AN ARIZONA EARLY CARE AND EDUCATION PROGRAM
(In 2002 Dollars, Discounted to Age 3 at 3 Percent)

Costs:	
Gross program costs	\$19,084
Avoided child care costs	-5,282
Incremental costs	\$13,802
Benefits:	
Participant's earnings	\$39,353
Mother's earnings	30,806
Crime reduction	13,090
Avoided K-12 education costs	4,770
Total benefits	\$88,019
Benefit-Cost Ratio:	\$6.38 of benefits for \$1 of costs

Source: Center for Business Research, L. William Seidman Research Institute, W. P. Carey School of Business, Arizona State University.

Economic growth continues at a faster pace

Following an acceleration in economic growth in mid-2003, the latest economic data nationally and in Arizona indicate that the faster pace continues. Further acceleration has occurred in some measures.

Recently the historical personal income series was revised by the U.S. Bureau of Economic Analysis, but the magnitude of the revision was modest. Relative to the United States average, Arizona's economic performance was subpar during most of the 1980s and into the early 1990s. Since then, Arizona's performance has matched the national average. Thus, Arizona remains below its historical norm on such measures as per capita personal income as a ratio to the national average.

On a real per capita basis, personal income nationally and in Arizona rose over a nine-year period from late 1991 until late 2000. The increase in Arizona was the same as the national average during this period — strong growth of 28 percent (2.8 percent per year). In the more narrow earnings and wages and salaries measures, real per capita advances

were greater than in personal income, especially in Arizona. The state's growth rate in these measures averaged nearly 0.5 percent per year more than the national average.

Following this economic expansion, the real per capita measures declined nationally and in Arizona over a 10-quarter period from fourth quarter 2000 through first quarter 2003, though the average quarterly decrease over this period was small. Arizona's total decline in real per capita personal income was 2.6 percent over this two-and-one-half-year period, worse than the national average loss of 1.2 percent. Declines in the per capita earnings and wages and salaries measures were more sizable than in the broader personal income measure. Arizona also had larger losses than the U.S. average in these measures.

Over the last three quarters of 2003, gains in the real per capita measures resumed, though not at the pace experienced during the last expansion. The average quarterly increase in the per capita personal income and earnings measures were about 0.5 percent nationally

and in Arizona. The average increase in the wages and salaries measure was less.

Following a three-year period of monthly job losses or modest gains, national employment surged in March. However, the 300,000 monthly increase was not exceptional, equaling the average monthly advance in the early phases of prior economic expansions. The year-over-year percent change was only 0.5 percent and the number employed was still 2 million less than at the peak three years earlier. Thus, another seven months of similar gains are needed just to get back to the employment level that preceded the recession.

Arizona's employment growth since the end of the recession has been stronger than the national average. However, Arizona did not experience a strong employment gain in March. Instead, the increase was somewhat less than during the prior several months, dropping the year-over-year rise back a bit to 2.0 percent.

— Tom R. Rex
Research Manager

Population growth rate rises in Arizona

Net migration continued to accelerate across Arizona during first quarter 2004, at least partially in response to increasing job opportunities. Though job creation remains far below the levels of much of the last decade, the number of net migrants to Maricopa and Pima counties already is close to the peak figures reached during the 1990s. In the balance of the state, net migration set a record for the third consecutive quarter, mostly a result of the housing boom occurring in northern Pinal County, close to Maricopa County.

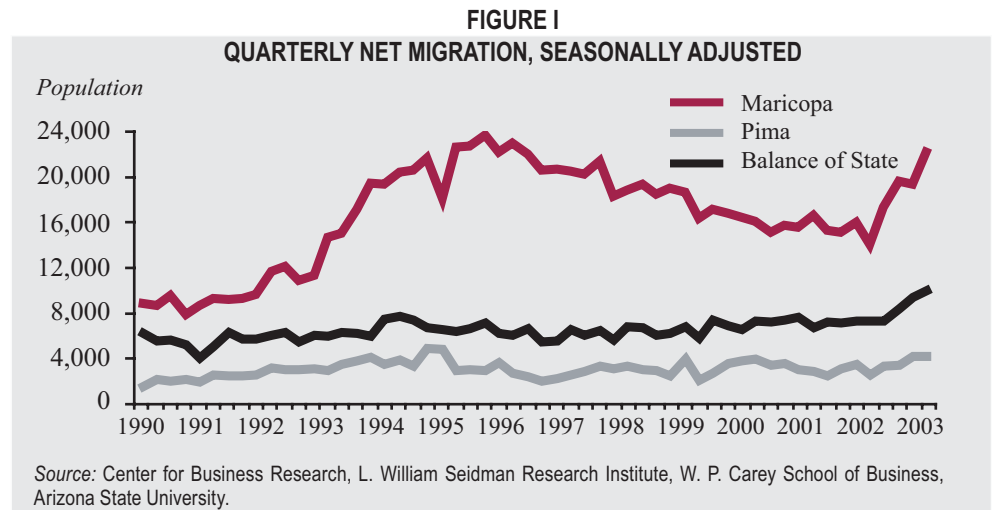
The population of Maricopa County at the end of the first quarter of 2004 is estimated at 3,475,500, up 31,300 during the first quarter and 114,400 over the year ending at the end of March. (Small upward revisions were made to the estimates for the last three quarters of 2003.) Net migration accounted for more than two-thirds of the increase, with a net inflow of 22,400 during the first quarter and 79,100 during the year. The first quarter's figure was the highest since fourth quarter 1996 (see Figure I). Net natural increase (the difference between births and deaths) has held relatively steady over the last several quarters at just less than 9,000 per quarter, the highest figures on record.

In Pima County, the first quarter population is estimated at 918,200. The increase was 5,700 during the first quarter and 20,700 over the year. Net migration during the first quarter was estimated at 4,400, the same as in the prior quarter. Over the year, net migration totaled 15,700, accounting for three-fourths of the population gain. Net natural increase continues at close to 1,300 per quarter — less than the level of a decade earlier.

Population growth in the balance of the

state continues to set records. An increase of 12,100 during the first quarter put the population at 1,365,100. The gain over the last four quarters was 42,800, of which net migration of 35,700 accounted for more than 80 percent. Like Pima County, net natural increase remained steady at lower levels (about 1,800 per quarter) than in the past.

— Tom R. Rex
Research Manager



Bank One Arizona Leading Index on the rise in April

The Bank One Arizona Index of Leading Economic Indicators rose 0.7 percent in April to reach 124.9 — up from 124.0 the previous month and 4.2 percent above the April 2003 number of 119.9 (1987 = 100).

Positive influences on the Leading Index were the inflation-adjusted value of the M2 money supply, delivery times, hours worked in manufacturing, employment from the Business Conditions Survey, production and new orders. The inflation-adjusted value of Maricopa County residential building permits and materials inventories were negative. Sensitive materials prices were neutral.

Residential building permits continued their normal pattern of a few months up and a few months down. It is reasonable to assume that rising interest rates will stop the record levels of activity, but the anticipated population growth should ensure that the activity level is healthy. There has been no evidence of a major slowdown.

Materials inventories have been on a downward trend for four months, probably in response to the drop in new orders. The bad streak for new orders was snapped in April, and if the increases continue inventories should recover as well. Hours worked in

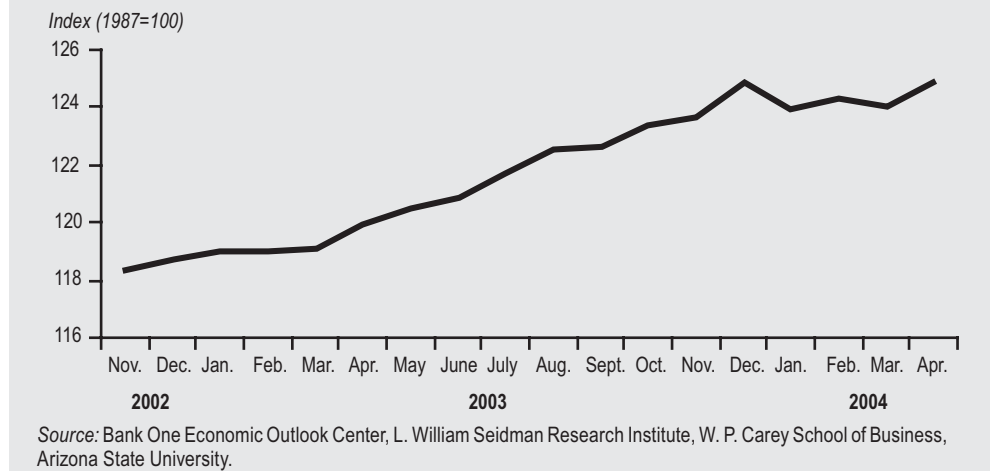
manufacturing jumped, which bodes well for the goods production side of the economy.

The money supply advanced strongly for the third month in a row, which increases the likelihood that the Federal Reserve will start raising the federal funds rate before the end of the year. The primary job of the Fed is to maintain an orderly and safe banking system, and the second is to moderate inflation. The Fed is currently more concerned about

the accelerating economy and the impact on prices than about the recent increase in energy prices. Gasoline prices have staged an impressive run-up this year. The price of gas should moderate in the fall, after the peak demand of the summer driving season.

— Tracy Clark
Associate Director
Bank One Economic Outlook Center

FIGURE I
ARIZONA INDEX OF LEADING ECONOMIC INDICATORS



Arizona Business Conditions Index jumps in April

The seasonally adjusted Arizona Business Conditions Index rose 5.1 percent in April, reaching 66.0 from 62.8 the previous month. An index reading over 50 indicates that the local economy is growing; below 50 suggests a slowdown in the overall level of economic activity in the near term.

ANALYSIS

After a dip in March, the index rose in April by 3.2 points. Almost all of the components were positive. The component measuring delivery times from suppliers jumped by 8.9 points to reach 70.3. A longer delivery time means that suppliers are having difficulty meeting their demand. This is taken as a good sign for the economy in the near term.

The employment component rose by 3.7 points to reach 65.5. This is pleasant news after a long period of job losses, followed by only sluggish improvement. In January, the outlook became much brighter for jobs in Arizona.

The purchased material inventory level and the production components declined in April. While the former moved by less than a half a point, the later fell by 3 points to 64.1. This is

still well above the critical 50-point mark, so appears to be of little concern at the present.

Of some concern is the Price Index, which rose by 4.5 points to reach 72.8. This is the highest level seen since April 1995. The drivers of the increase in prices are petroleum

products and metals — continuing the trend that began a few months ago.

— Dawn McLaren
Research Economist
Bank One Economic Outlook Center

FIGURE I
ARIZONA BUSINESS CONDITIONS INDEX*





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ARIZONA ECONOMIC INDICATORS

	Month or Quarter	Current Value	Previous Value	Percent Change Previous Period	Percent Change from Year Ago	Year-to-Date	
						Value	Percent Change from Year Ago
LEADING ECONOMIC INDEX (1987 = 100)							
Arizona	April	124.9	124.0	0.7	4.2	NA	NA
BUSINESS CONDITIONS INDEX							
Arizona	April	66.0	62.8	5.1	32.6	NA	NA
BUILDING PERMITS (Thousands of \$)							
Maricopa County	March	1,153,398	823,562	40.0	55.8	2,735,355	29.2
Pima County	March	191,473	142,389	34.5	21.2	459,750	17.5
Balance of State	March	338,703	258,494 r	31.0	27.6	841,973	23.9
Arizona	March	1,683,574	1,224,445 r	37.5	44.7	4,037,078	26.7
TOTAL HOUSING UNITS AUTHORIZED							
Maricopa County	March	5,440	3,657	48.8	58.1	12,356	29.9
Pima County	March	1,021	719	42.0	28.1	2,550	20.6
Balance of State	March	2,548	1,858 r	37.1	43.5	6,239	25.5
Arizona	March	9,009	6,234 r	44.5	49.9	21,145	27.4
HOME SALES							
Maricopa County – Number.....	March	14,090	9,240	52.5	28.1	31,940	24.1
Maricopa County – Median Price(\$).....	March	162,000	160,000	1.2	8.8	160,000	7.8
HOUSING AFFORDABILITY INDEXES							
Metropolitan Phoenix – New Homes	1st Quarter	113	111	1.8	-5.0	NA	NA
Metropolitan Phoenix – Resale Homes	1st Quarter	127	126	0.8	-3.1	NA	NA
MORTGAGE RATES (30-year Fixed)							
Maricopa County	April	5.6	5.1	9.8	1.8	NA	NA
POPULATION ESTIMATES (Thousands)							
Maricopa County	1st Quarter	3,476	3,444	0.9	3.4	NA	NA
Pima County	1st Quarter	918	913	0.6	2.3	NA	NA
Balance of State	1st Quarter	1,365	1,353	0.9	3.2	NA	NA
Arizona	1st Quarter	5,759	5,710	0.9	3.2	NA	NA
RETAIL SALES (Millions of \$)							
Maricopa County	February	2,717	2,664 r	2.0	9.6	5,380	9.7
Arizona	February	3,998	3,920 r	2.0	9.5	7,918	9.5

Note: The above figures reflect the latest data available as of date of publication and are subject to revision.

NA = Not Applicable r = Revised

Source: Center for Business Research, Arizona Real Estate Center, and Bank One Economic Outlook Center, affiliates of the L. William Seidman Research Institute, W. P. Carey School of Business, Arizona State University. Retail sales data are from the Arizona Department of Revenue.