

AZB ARIZONA BUSINESS

ARIZONA STATE UNIVERSITY'S MONTHLY NEWSLETTER ON THE ARIZONA ECONOMY

Tourism dropped after attacks, has yet to fully recover

Tourism activity in Arizona plunged after the terrorist attack in September 2001, according to a new Tourism Barometer developed by the Bank One Economic Outlook Center at Arizona State University. Activity reached a low point in November 2001, but remained subdued into fall 2002.

In measuring the effect of tourism in the state of Arizona, more than one indicator must be considered. However, with a volley of available indicators and the heavy seasonality of the tourist industry, it becomes a confusing quagmire and a measure of the health of tourism in the state is lost. Addressing this issue is the new Tourism Barometer, a multi-faceted and comprehensive look at tourism in Arizona.

By providing an aggregate monthly look at the health of the Arizona travel and tourism industry, the Arizona Tourism Barometer is a useful tool for those in industries affected by the number of visitors coming to the state and the amount of money they spend. The barometer makes it obvious that travel and tourism are still suffering in Arizona.

The Arizona Office of Tourism reports that visitors to the state generated \$11.6 billion in direct domestic visitor spending in 2001 and \$12.3 billion in direct domestic visitor spending in 2000. Overseas visitors generated \$521.4 million in direct visitor spending in 2000. Visitors from Canada and Mexico generated \$193 million and \$740.5 million, respectively, in direct visitor spending during 2000. In 2001, 45 percent of visitors headed to the Phoenix metropolitan area and 17 percent headed into the canyon areas. Arizona attracts families and couples for the most part, and the Office of Tourism reports that 29 percent of visitors are from California.

vehicle counts at agricultural inspection stations along the Arizona borders. While person counts at national parks, state parks and international airports are still available, visitor counts and vehicle counts are no longer kept or published for the other parks or agricultural inspection stations.

In 1984, Timothy Hogan and Tom Rex of the BBER developed a county-specific model of tourism based in part on the work of Bond and McDonald, and also in part on a one-time survey that was undertaken during the 1979-80 fiscal year. In that survey, detailed information was collected about mode of travel, length of stay, trip expenditures and destinations of visitors to Arizona.

Currently, the Arizona Hospitality Research and Resource Center at Northern Arizona University produces a document entitled Monthly Tourism Indicators. Included in the monthly publication are data on gross sales from various industries, passenger counts at Phoenix Sky Harbor and Tucson International, visitor counts at national and state parks, and various lodging indicators including occupancy rates and rates per room. A measure of tourism employment based on specific and fixed weights within an assortment of SIC industries is included as well. While the information is detailed, it is not seasonally adjusted; therefore, year-over-year percentage changes are used to make comparisons. Seasonal adjustment allows for a more timely month-to-month analysis. In addition, fundamental changes in the patterns of activity are difficult to ascertain with the data in a disaggregated form.

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REVIEW OF OTHER INDICATORS

In 1978, M.E. Bond and Bill McDonald of the Bureau of Business and Economic Research (BBER) at Arizona State University produced the first Tourism Barometer for Arizona. It was a quarterly measure of activity levels at national parks, state parks, various other parks, some private attractions, enplanement and deplanement passenger counts from Arizona's two international airports, and

CONSTRUCTION OF THE BAROMETER

The Arizona Tourism Barometer is compiled from four indicators that capture different aspects of tourism activity. Each indicator is equally weighted,

Arizona Tourism Barometer

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seasonally adjusted and standardized. The reference point of 100 is set at June 1994 because that is the month showing the least movement during the sample period. The Tourism Barometer begins in March 1990 and is reported on a monthly basis.

Since Arizona ranks 10th in the nation as a destination for overseas visitors, nonresident arrivals to the United States are used as a measure within the barometer. Before the terrorist attacks of Sept. 11, 2001, information from the port-of-entry arrival records (I-94) forms, collected by the Immigration and Naturalization Service was readily available as nonresidents enter the county; these forms include the destination of the entrant. Since the terrorist attacks, release of information has been delayed at the INS. Aggregate figures of nonresident arrivals that come from the same source are still released in a timely fashion. Since the two data sets show close to perfect correlation, the broader series acts as an excellent proxy for the detail of the I-94 forms.

Because of the phenomenal attraction of the Grand Canyon, one of the seven natural wonders of the world, national park visitation also is used as a component in the barometer. This is a measurement of visitors coming to the park on a recreational basis, and is kept by park rangers at the individual parks. Not only Grand Canyon Park visitation is taken into account, but also recreational visitation at the 20 other national parks in Arizona. Tourists from within the state as well as those who arrive from outside Arizona are included in this

count. While a tourist may be counted at more than one park, this component adds a dimension of time spent touring Arizona not fully captured by the others.

To provide a measure of the impact of tourism in dollars, hotel and motel revenue is included in the barometer. In addition to recreational tourism, this measure includes business travelers. Conventions, trade shows and other business travel is an important component of visitation to Arizona. The volume of hotel/motel revenue is deflated using the consumer price index for urban areas.

Another component of the barometer is the number of air carrier landings reported by the FAA, which has been shown to correlate highly with the level of economic activity in the local area as well as the passenger volume. In this gauge, data from 14 airports across Arizona are reported. Air carrier landings covers activity from airlines such as America West, Delta and Southwest, but does not include unscheduled, on-call air transportation such as air taxis.

HISTORICAL BEHAVIOR

The Tourism Barometer's recent low point of 87.3 in November 2001 was matched only in October 1990 when the barometer fell to 86.5. A historic high of 120.8 was reached in November 2000.

The Arizona Tourism Barometer did not fall substantially during the 1990-91 recession. During the early part of the recession, the national park visitation and hotel and motel indicators declined, with

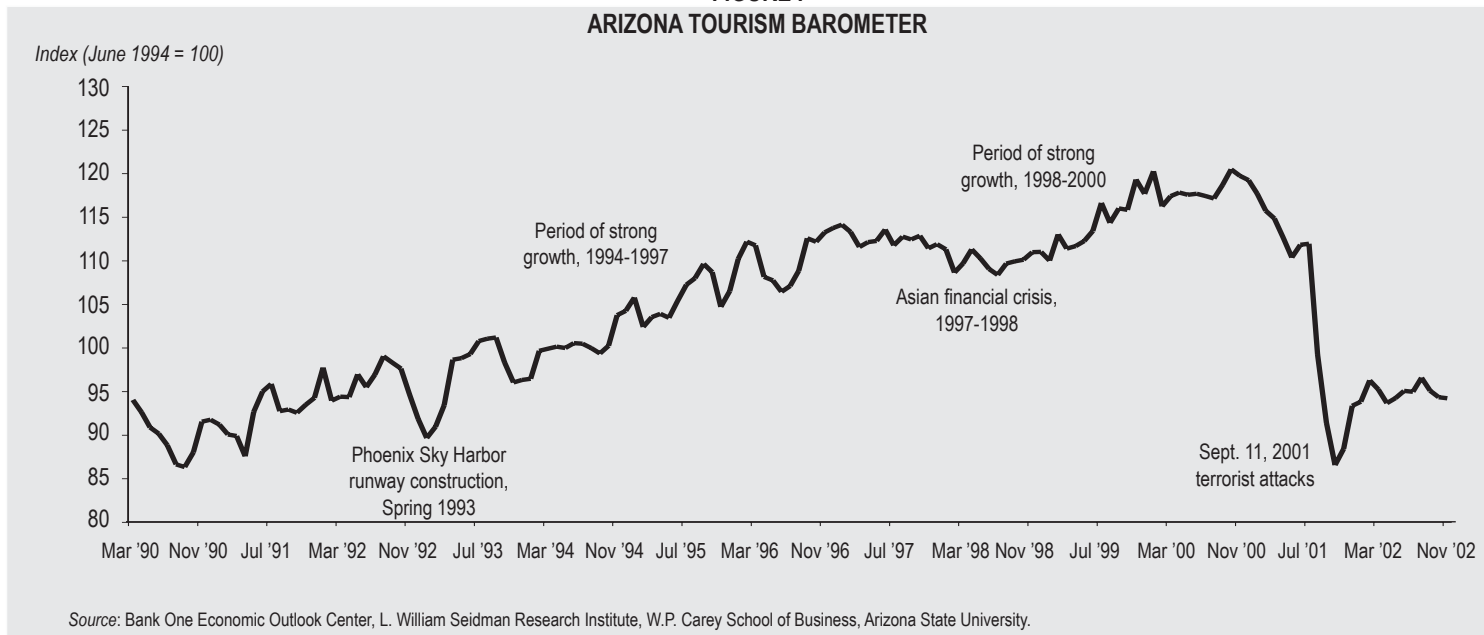
the overall index dropping 8 points between March and October of 1990. Toward the end of the recession in early 1991, reduced overseas visitation caused the barometer to slip. Tourism activity began to improve in summer 1991, as seen in Figure I.

The barometer experienced a sharp drop early in 1993. Phoenix Sky Harbor International Airport, the largest of Arizona's airports, was undergoing construction on one of its two runways during the spring of 1993. This limited air transportation for a time, particularly when it was necessary to close the one remaining runway, causing air traffic to be diverted to other airports. At the same time, financial difficulties at Northwest Airlines reduced its passenger counts; the airline was bailed out by its employees later in the year. This curtailment of air traffic is evident in the barometer, but the effect was short term. The barometer resumed its upward movement from the beginning of 1994, lasting until 1996, with just a few disturbances on the way.

April to October 1996 was a period of cyclical weakness in the nation's economy. Some economists contend that improvements in inventory control instituted in the early 1990s helped to avoid a recession. This weakness becomes particularly evident in May 1996, when all components of the barometer showed a negative trend. The barometer reading fell to 106.5 in July 1996 from 111.8 in April 1996.

In September 1997, the Asian financial crisis made the news when a wave of currency devaluations made its way through

FIGURE I
ARIZONA TOURISM BAROMETER



Source: Bank One Economic Outlook Center, L. William Seidman Research Institute, W.P. Carey School of Business, Arizona State University.

Thailand, the Philippines, Malaysia and Indonesia, causing consternation about the health of the Asian economies. The overseas visitation, hotel/motel revenue and air carrier landings components of the tourism barometer declined from September 1997 until August 1998, reflecting the economic ills abroad. A period of strong tourism growth followed, and this lasted through 2000.

At the beginning of 2000, a drop in the barometer is evident with the national park visitation and hotel/motel revenue components taking the blame. Soon, air carrier landings declined as well. In June 2001, the barometer reached a low not seen since February 1999 and the nation's

economy would soon be declared by the National Bureau of Economic Research to have been in recession since March.

The slowdown in the economy intensified after the terrorist attacks on Sept. 11, 2001, which had a devastating effect on tourism. The barometer fell to 99.8 in September and to 92.1 in October, the largest decline seen over such a short period of time. In November, the decline continued with the barometer falling to 87.3, a level not seen in more than 10 years. Of more concern is the continuing behavior of the barometer. Since November 2001, some improvement in tourism is seen, but the barometer remains below the June 1994 reference point. Only 8.7 points of the 32.4 points lost between

December 2000 and November 2001 have been regained as of October 2002.

While the Arizona Tourism Barometer is a useful tool for gauging the health of the industry in the state, there is a further benefit to the index. Because of the nature of the data, comparative indices could be created for other states so that the barometer could be used to compare the performance of Arizona's tourist industry with other states. The Bank One Economic Outlook Center hopes to create comparative barometers for other states in the future.

— Dawn McLaren
Research Economist

Bank One Economic Outlook Center

Slower population growth continues in Maricopa County

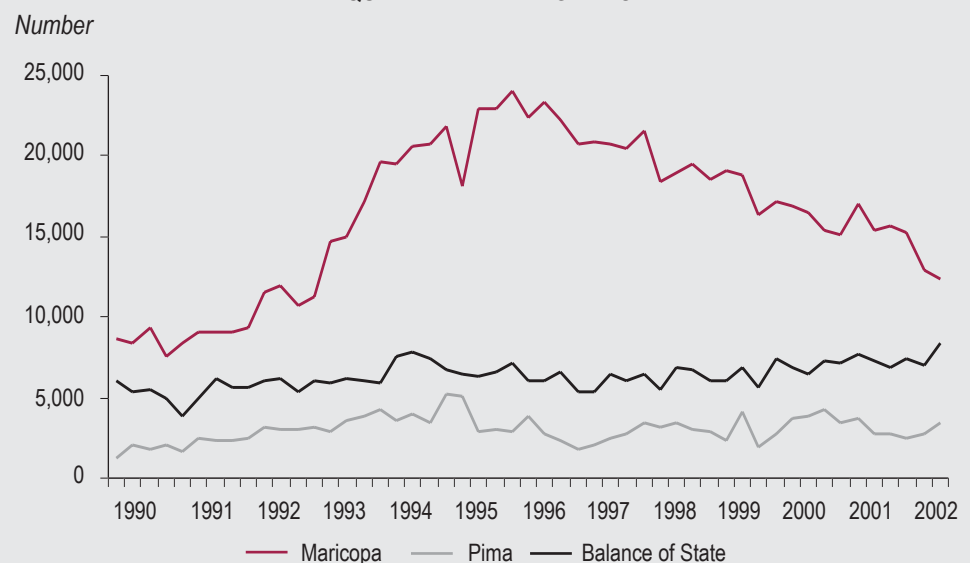
Net migration to Maricopa County slipped a bit more during fourth quarter 2002, to the lowest level in more than nine years. In contrast, net migration to Arizona's 13 least populous counties was the highest since at least 1990.

Net migration normally drops off during an economic slump because of limited job opportunities, with declines lagging behind decreases in job growth by about one year. Thus, the effects of the recession, which began in second quarter 2001, continue to translate to lesser net migration in Maricopa County [see Table 1]. In Pima County, the number of newly completed housing units during fourth quarter 2002 was the third highest figure since 1990, corresponding to an uptick in net migration despite rising vacancy rates. In the balance of the state, the number of new housing units easily was the most since 1990. In this region, the economy slumped much less than in the large urban areas. Moreover, much of the migration is retirement-based, not job-related. Low mortgage interest rates make it easier for these mostly young retirees to migrate.

In the Phoenix area, net migration gradually has decreased since 1996, at the peak of the economic cycle [see Figure I]. Figures also are down in the Tucson area. Net inflows to the large urban areas probably will remain near the level of the last two quarters of 2002, or perhaps lower a little further, during the next few quarters given the continuing sluggishness in the labor markets.

— Tom R. Rex
Research Manager

FIGURE I
QUARTERLY NET MIGRATION



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

TABLE 1
QUARTERLY POPULATION
(In Thousands)

Year and Quarter	Population				Net Migration			
	Arizona	Maricopa	Pima	Balance	Arizona	Maricopa	Pima	Balance
2001 4.....	5,396.2	3,241.7	876.9	1,277.6	25.5	15.4	2.8	7.3
2002 1.....	5,432.3	3,265.6	880.7	1,286.0	25.3	15.7	2.7	6.9
2002 2.....	5,468.2	3,288.9	884.4	1,295.0	25.0	15.2	2.5	7.4
2002 3.....	5,502.2	3,310.1	888.4	1,303.8	22.7	12.9	2.7	7.0
2002 4.....	5,535.6	3,328.7	893.1	1,313.9	24.1	12.3	3.5	8.4

Note: estimates for the second and third quarters of 2002 have been revised

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

New study places Arizona in second tier on high tech

Arizona ranks in the second tier of states on a new state technology and science index produced by the Milken Institute, an economic think tank located in Santa Monica, California. On the overall index, Arizona ranks 18th among the 50 states, and sixth among 10 western states. On most studies of high tech and the new economy, Arizona has been among the second stratum of states.

Milken's overall index consists of five equally weighted composite subindexes, each consisting of multiple indicators. The first four of the subindexes represent inputs, or foundations, found in each state: research and development inputs, risk capital and entrepreneurial infrastructure, human capital investment, and technology and science workforce. The fifth subindex, technology concentration and dynamism, is more of an outcome measure.

Milken has coined a new term, "The Intangible Economy," to replace the non-specific "The New Economy." According to Milken, the economic shift is from a tangible-asset to an intangible-asset economy. "The new economics of place are driven by their ability to attract and expand science and technology assets and leverage them for economic development. State and regional economic performance is determined by how effectively it uses its comparative advantages to create and expand knowledge assets and convert them into economic value." (Page 1 of "State Technology and Science Index," September 2002, Milken Institute, available from its Web site: www.milkeninstitute.org.)

NATIONAL AND REGIONAL RESULTS

The top 20 states on the overall index are listed in Table 1. On each of the indexes and subindexes, Milken places the top 10 states in the first tier, with the remaining states spread across the second, third, and fourth tiers. Beyond the first 13 states, the overall scores are tightly bunched, continuing through rank 25.

Eight Atlantic Coast states extending from Virginia to the north are among the top 13 states. Two Pacific Coast states (California and Washington), two Rocky Mountain states (Colorado and Utah) and only one other non-coastal state (Minnesota) fill the remainder of the top 13 slots. The dominance of the two coasts and the rest of the West continues through rank 21.

Each of the four highest ranked states is in the first tier on each of the five subindexes. Among the top 13 states, none place in the fourth group on any subindex and only two fall into the third tier on one subindex. After the top 13, only a few states rank in the top echelon on any subindex.

Of the 10 western states, four are among the top 10 overall and four more — including Arizona — place in the second tier. The only lower ranked western states are Idaho, which ranks at the top of the third tier, and Nevada, which is in the fourth division. As a whole, the West compared favorably on each of the subindexes, least so on risk capital.

ARIZONA

Arizona ranks in the middle of the second tier in the overall index, behind five of nine other western states, and barely ahead of New Mexico. Its score of 58.6 is not far above the national average of 52.2.

Arizona's position on each of the 56 indicators, distributed over the five subindexes, is shown in Table 2. The state's best performance is in the technology and science work force subindex, where it ranks 10th, due to the state's large number

of engineers given the size of its work force. Among six components of engineers, Arizona ranks in the top 10 on four: electronics, electrical, computer hardware, and "other." In contrast, it ties with many states for last in biomedical engineers. As a share of employment, Arizona is in the second tier on computer and information science experts, with a top 10 ranking for computer support specialists and ranks between 12th and 24th in the five other subcategories. In the life and physical scientists subcategory, Arizona places in the third tier, with the lowest ranking for medical scientists.

The state compares least favorably (in the third tier with a rank of 29th) in the human capital investment subindex. Of the 18 indicators, Arizona ranks in the third tier on nine and in the last tier (ranked 46th) on one, state spending on student aid. The state's limited support for higher education pulls down its score in this subindex, as both the level and change in state appropriations are in the third bracket. Arizona also compares unfavorably on the number of doctoral scientists. In contrast, the state ranks ninth in the percentage of bachelor's degrees that are

TABLE 1
STATE TECHNOLOGY AND SCIENCE INDEX
Top 20 States

	Overall Index		Tier on Five Composite Indexes				
	Rank	Score	R&D	Risk Capital	Human Capital	Work Force	Concentration
Massachusetts	1	84.9	1	1	1	1	1
Colorado	2	80.6	1	1	1	1	1
California	3	80.4	1	1	1	1	1
Maryland	4	77.9	1	1	1	1	1
Virginia	5	73.3	2	1	2	1	1
Washington	6	71.8	1	1	1	1	1
New Jersey	7	70.0	2	1	2	1	1
Connecticut	8	68.6	2	1	1	1	2
Utah	9	68.3	1	2	1	2	1
Minnesota	10	65.9	2	2	1	2	2
Delaware	11	65.5	1	2	1	3	1
New York	12	64.4	2	1	2	2	2
New Hampshire	13	63.4	1	2	2	3	1
Texas	14	60.4	3	2	3	1	2
Georgia	15	60.2	2	1	4	2	2
Pennsylvania	16	59.8	2	2	2	2	2
North Carolina	17	58.9	2	2	2	2	2
ARIZONA	18	58.6	2	2	3	1	2
Illinois	19	58.4	2	2	2	2	2
New Mexico	20	57.9	1	3	2	2	3

Source: Milken Institute, "State Technology and Science Index," September 2002.

in science and engineering.

With a rank of 16th, Arizona places in the second tier on the research and development (R&D) inputs subindex. Among the 16 indicators, the state places in the top 10 in three: National Science Foundation (NSF) funding per dollar of gross state product, Small Business Innovation Research (SBIR) awards per business in the program's second phase, and R&D expenditures per capita on physical sciences (ranked fourth). It also places high on two other measures of NSF funding and on R&D expenditures on engineering, three of the state's eight second-tier measures. Of five indicators in the third bracket, the lowest ranks are in R&D spending on the life sciences (rank of 36th) and SBIR first-phase awards per business.

The state's second-tier placement (rank of 21st) in the risk capital and entrepreneurial infrastructure subindex may come as a surprise given the amount of attention given to the limited amount of venture capital that is available, but the bulk of the nation's venture capital flows to only a few states. On six capital-related measures, the state's ranks range from 11th (on small business investment company funds disbursed per dollar of gross state product) to 28th (for the percent change in 2000 in total venture capital investment). Among the three indicators not related to capital, Arizona ranks ninth on number of business starts per capita and 17th on patents issued per capita. In contrast, the state ranks only 43rd on the number of business incubators per business — tied for the second lowest rank among any of the 56 indicators.

Arizona also places in the second tier (ranked 16th) on the outcome subindex — technology concentration and dynamism — with second tier ranking on six of 10 indicators. The state's narrow concentration in just one of 14 high-tech industries (semiconductors and related electronics) places it in the last stratum (rank of 43rd) but this is offset by its first tier position (rank of seventh) in the number of high-tech industries growing faster than the national average. Arizona also ranks below the middle on the number of Inc. 500 companies and the annual average percent growth of high-tech employment between 1996 and 2000.

— Tom R. Rex
Research Manager

TABLE 2
SUBINDEXES AND INDICATORS
Arizona

<i>Indicator</i>	<i>Measurement</i>	<i>Tier</i>
TECHNOLOGY AND SCIENCE WORK FORCE		
		1
Intensity of Engineers	Share of Employment.....	1
Intensity of Computer and Information Science Experts	Share of Employment.....	2
Intensity of Life and Physical Scientists.....	Share of Employment.....	3
HUMAN CAPITAL INVESTMENT		
		3
Bachelor's Degrees in Science and Engineering (Sci&Eng)	Percent of Total	1
Population 25 or Older With Bachelor's Degree	Percent of Total	2
Population 25 or Older With Advanced Degree	Percent of Total	2
American College Testing (ACT) Assessment Scores	Average	2
Doctoral Engineers	Per Capita	2
Sci&Eng Post-Doctorates Awarded (Those 25-34 Years Old)	Per Capita	2
Households With Computers	Percent of Total	2
Households With Internet Access	Percent of Total	2
Population 25 or Older With PhD Degree.....	Percent of Total	3
Graduate Students in Sci&Eng (Those 25-34 Years Old).....	Per Capita	3
Scholastic Aptitude Test (SAT) Verbal Scores	Average	3
SAT Math Scores	Average	3
State Appropriations for Higher Education	Per Capita	3
State Appropriations for Higher Education	Percent Change, 2001	3
Doctoral Scientists.....	Per Capita	3
Sci&Eng PhDs Awarded (Those 25-34 Years Old).....	Per Capita	3
Recent Degrees In Science and Engineering Awarded.....	Percent of Workforce	3
State Spending on Student Aid.....	Per Capita	4
RESEARCH AND DEVELOPMENT (R&D) INPUTS		
		2
R&D Expenditures on Physical Science	Per Capita	1
National Science Foundation (NSF) Research Funding.....	Per \$ of GSP	1
Small Business Innovation Research (SBIR) Phase II Awards	Per Business	1
Federal R&D	Per Capita	2
NSF Funding	Per \$ of GSP	2
R&D Expenditures on Engineering.....	Per Capita	2
R&D Expenditures on Environmental Sciences	Per Capita	2
Small Business Technology Transfer (STTR) Awards	Per Business	2
STTR Awards	Per \$ of GSP	2
SBIR Awards	Per Capita	2
Competitive NSF Proposal Funding	Rate.....	2
Industry R&D	Per Capita	3
Academic R&D	Per Capita	3
R&D Expenditures on Math & Computer Science	Per Capita	3
R&D Expenditures on Life Sciences.....	Per Capita	3
SBIR Phase I Awards	Per Business	3
RISK CAPITAL AND INFRASTRUCTURE		
		2
Business Starts.....	Per Capita	1
Number of Companies Receiving Venture Capital Investment	Per Business	2
Number of Companies Receiving Venture Capital Investment.....	Percent Change, 2000	2
Venture Capital Investment	Percent of GSP	2
Small Business Investment Company Funds Disbursed.....	Per \$ of GSP	2
Patents Issued.....	Per Capita	2
Initial Public Offering Proceeds	Percent of GSP	2
Total Venture Capital Investment.....	Percent Change, 2000	3
Business Incubators	Per Business	4
TECHNOLOGY CONCENTRATION AND DYNAMISM		
		2
Number of High-Tech Industries Growing Faster Than U.S.	Employment	1
Businesses in High-Tech SIC Codes	Percent.....	2
Employment in High-Tech SIC Codes	Percent.....	2
Payroll in High-Tech SIC Codes	Percent.....	2
Establishment Births in High-Tech SIC Codes	Percent.....	2
Net Formation of High-Tech Establishments	Per Business	2
Number of Technology Fast 500 Companies	Per Business	2
Average Annual Growth of High-Tech Employment	Percent, 1996-2000.....	3
Number of Inc. 500 Companies.....	Per Business	3
Number of High-Tech Industries With Location Quotient >1.....	Employment	4

Source: Milken Institute, "State Technology and Science Index," September 2002.

Economic recovery proceeding slowly

The recession appears to have ended in spring 2002, but hardly any employment growth has occurred since then. Gains in personal income have been stronger, but the latest data are for the third quarter. Other measures indicate the economy weakened late in the year.

This recovery is proceeding similarly to the recovery after the end of the last recession in spring 1991. For almost a year, hardly any employment growth was measured, though moderate gains were recorded in personal income. For an additional several months, both personal income and job growth was moderate. It was not until 1993 that a strong economic expansion began.

If the current recovery were to continue to follow the pattern of the prior recovery, some improvement in the job market should be seen early in 2003, with strong growth returning around the beginning of 2004. The current recovery, however, is different from the prior one in two aspects: economic uncertainty is greater due to the possibility of a war, and the stock market continues to

slump not just from this uncertainty but also from the scandals of 2002.

The timing of the economic cycle based on personal income growth is about a quarter earlier than based on the employment market. During each quarter of 2001, real per capita income declined both nationally and in Arizona, with the cumulative decrease in Arizona the same as nationally. In 2002, consecutive increases were measured in the first three quarters, but the gains in Arizona were less than the national average.

Employment losses began in spring 2001 and ended in spring 2002 both nationally and in Arizona. Nationally, the number of jobs lost in the recession was nearly identical to that during the 1990-91 slump. From spring through the end of 2002, net job growth was virtually nil, the same as in the first nine months of the prior recovery. Similarly, unemployment rates nationally and in Arizona were essentially flat from spring through the end of 2002.

Small monthly increases in employment were measured from May through August

2002, but losses occurred in three of the last four months of the year. At the end of the year, employment still was marginally lower than at the end of 2001. In Arizona, preliminary data indicate employment levels in December 2002 were slightly higher than a year earlier.

Like employment growth, the slight improvement in retail sales growth in Arizona during summer 2002 stalled later in the year. The change in real per capita retail sales shifted from positive in 2000 to slightly negative in 2001, becoming more negative in 2002 (through November, the latest data). Both the Phoenix and Tucson areas followed this pattern; the Phoenix area registered no growth through the first 11 months of 2002 even on a nominal basis. In contrast, retail sales growth rates outside the two populous urban counties hardly slumped in 2001 and in 2002 were back to the rate of 2000.

— Tom R. Rex
Research Manager

Business Conditions Index continues climb in January

The seasonally adjusted Arizona Business Conditions Index rose to 51.5 in January from 50.9 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

January marks the index's second month above the critical 50-point mark. Most of the upward movement is due to a remarkable 6.5-point rise in the production component, which reached 57.9 in January. The employment subindex also rose, but has yet to break the 50-point mark. The employment subindex climbed by 2.1 points, from 40.9 in December to 43.0 in January.

The high level of productivity in recent months is not a sustainable situation in the long run. Either production would have to slow or employment would have to rise. The movement of these two subindices over the next months will be telling as to how the situation will resolve.

On the downside, the new orders subindex fell by 2.3 points, from 55.7 in December to 53.4 in January. This compo-

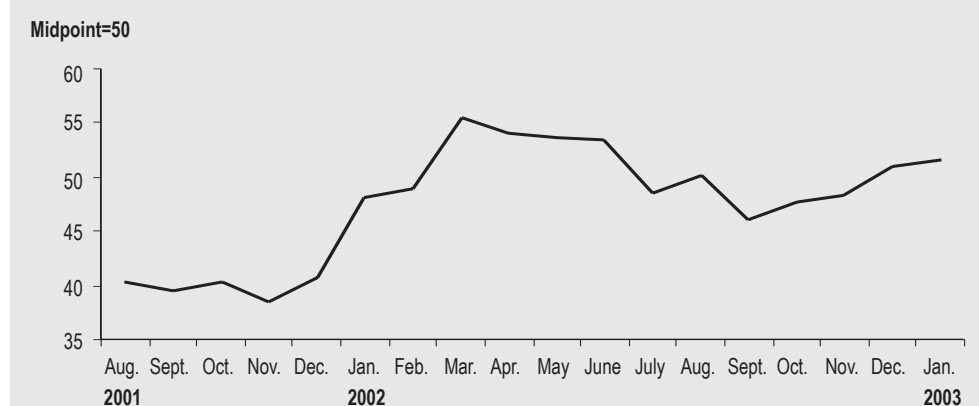
nent is one of the most forward-looking in the overall index. This marks the third consecutive month that the new orders subindex has recorded a level over 50 points.

The Price Index rose slightly from 55.1 in December to 56.5 in January. This indicates that some upward pressure on prices paid for major commodities used in production

is evident. The highest level reached by the Price Index was 95.5 in December 1973, during an oil crisis.

— Dawn McLaren
Research Economist
Bank One Economic Outlook Center

FIGURE I
ARIZONA BUSINESS CONDITIONS INDEX*



*Excludes Price Index

Source: Bank One Economic Outlook Center, L. William Seidman Research Institute, W.P. Carey School of Business, Arizona State University.

Arizona Leading Index inches upward in January

The Bank One Arizona Index of Leading Economic Indicators rose in January to 118.0. The reading was marginally above a revised 117.9 for the previous month, and 3.4 percent above the January 2001 number of 114.1 (1987 = 100).

Positive components of the index were the inflation-adjusted value of the M2 money supply, production and employment from the Business Conditions Survey. Negative components were the inflation-adjusted value of Maricopa County residential building permits, delivery times, materials inventories and new orders.

The basic message from the Leading Index is that underlying trends for the economy are positive, but noneconomic factors have the potential to derail the train.

The negative impacts from the anxiety over a possible war with Iraq are an increasingly significant drag on the economy. Rising gas prices and general uncertainty caused auto sales to decline in January despite continued discounting by automakers. Gas prices have increased enough to cause problem for many consumers and businesses, particularly given the increase in ownership of less fuel-efficient sport utility vehicles. However, prices are not as high in real terms as in 1981, and prices could decline fairly rapidly once war with Iraq is no longer an issue. Gas prices also are being boosted by continued supply problems in Venezuela. Despite the resolution of the strikes, oil production remains below pre-strike levels.

Uncertainty is postponing the recovery in business spending, which is starting to have a negative impact on consumer confidence and consumer spending. The impact on consumer spending is due to the continued weakness in the labor markets and workers' perceptions of the job market.

Arizona is likely to suffer reduced tourism activity if international tensions remain high. Tourism is also likely to suffer if gas prices remain very high for an extended period of time.

The state budget crisis, while not as bad as that facing California, will be a drag on the local economy. Unfortunately, all of the potential solutions for the crisis are a negative for the economy to one degree or another. In the short run, spending is spending, whether it is done by governments, businesses or individual consumers

— and all of the likely budget solutions will include significant spending decreases by both state and local government. Increased taxation, which would maintain state spending, would reduce private spending, although by a smaller amount in the short run. Borrowing is not a significant option for the state. However, if the federal government increased transfers to the states using borrowed money, this would be the least disruptive to the economy. Borrowing is currently a good option because corporate borrowing is at very low levels and the upward pressure on interest rates would be minimal.

The best-case scenario for the economy is either no war with Iraq or a very quick

conflict — and in either case, the sooner a resolution occurs, the better. Regarding the state budget crisis, the least disruptive solution to the crisis would be an infusion of cash from the federal government and a quick resolution to the Iraq situation that would allow the economy to recover.

— Tracy Clark

Associate Director

Bank One Economic Outlook Center

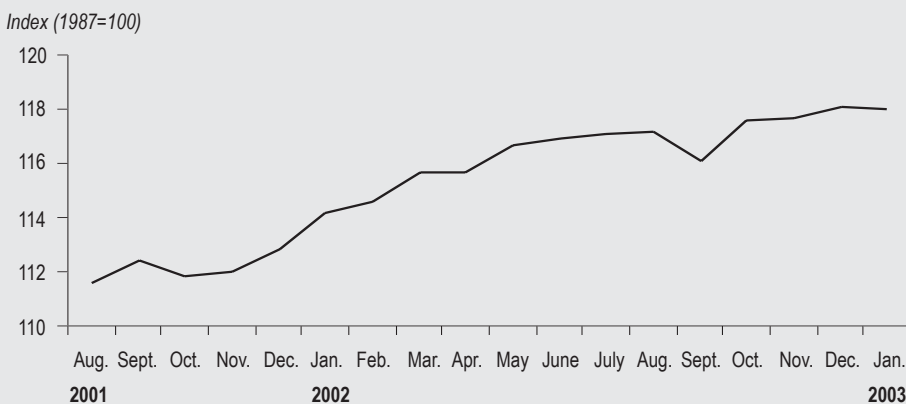
TABLE 1
NET CONTRIBUTION OF INDIVIDUAL COMPONENTS TO THE ARIZONA INDEX OF LEADING ECONOMIC INDICATORS*

	October	November	December	January
Delivery Time*	0.06	-0.16	0.17	-0.07
Inventory Levels*	0.30	-0.03	0.07	-0.07
New Orders*	0.04	0.04	0.11	-0.04
Production*	0.07	0.05	-0.06	0.14
Employment*	-0.04	-0.02	0.11	0.09
Residential Building Permits	0.63	-0.28	-0.11	-0.19
Average Workweek, Manufacturing	-0.14	0.07	0.00	0.00
Money Supply	0.27	0.29	0.08	0.17
Change in Sensitive Materials Prices	0.01	0.03	0.01	0.00
OVERALL INDEX	1.20	-0.01	0.38	0.08

* The net contribution of each component is calculated by multiplying the monthly percent change in its index by its relative importance.

* Based on indicators from the Purchasing Management Association of Arizona, Purchasing Management Association of Southern Arizona and the Northern Arizona Group.

FIGURE I
ARIZONA INDEX OF LEADING ECONOMIC INDICATORS



Source (Table 1 and Figure I): Bank One Economic Outlook Center, L. William Seidman Research Institute, W.P. Carey School of Business, Arizona State University.



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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	January	118.0	117.9 r	0.1	3.4	NA	NA
BUSINESS CONDITIONS INDEX							
Arizona	January	51.5	50.9	1.2	7.2	NA	NA
BUILDING PERMITS (Thousands of \$)							
Maricopa County	December	671,925	602,273	11.6	19.9	8,688,619	-6.9
Pima County	December	124,150	98,671 r	25.8	46.4	1,509,538	12.2
Balance of State	December	187,376	168,955	10.9	37.1	2,331,558	24.7
Arizona	December	983,451	869,899 r	13.1	25.7	12,529,715	-0.1
TOTAL HOUSING UNITS AUTHORIZED							
Maricopa County	December	3,377	2,911	16.0	12.1	43,826	0.2
Pima County	December	874	632 r	38.3	4.0	8,915	2.1
Balance of State	December	1,229	1,366	-10.0	-0.6	18,326	16.0
Arizona	December	5,480	4,909 r	11.6	7.7	71,067	4.1
HOME SALES							
Maricopa County - Number	December	11,240	7,520	49.5	23.1	106,550	3.3
Maricopa County - Median Price(\$)	December	149,900	147,000	2.0	6.4	144,500	5.1
HOUSING AFFORDABILITY INDEXES							
Metropolitan Phoenix - New Homes	3rd Quarter	115	114	0.9	5.5	NA	NA
Metropolitan Phoenix - Resale Homes	3rd Quarter	126	122	3.3	2.4	NA	NA
MORTGAGE RATES (30-year Fixed)							
Maricopa County	January	5.6	5.7	-1.8	-16.4	NA	NA
POPULATION ESTIMATES (Thousands)							
Maricopa County	4th Quarter	3,329	3,310	0.6	2.7	NA	NA
Pima County	4th Quarter	893	888	0.5	1.8	NA	NA
Balance of State	4th Quarter	1,314	1,304	0.8	2.8	NA	NA
Arizona	4th Quarter	5,536	5,502	0.6	2.6	NA	NA
RETAIL SALES (Millions of \$)							
Maricopa County	December	3,284	2,547	29.0	3.8	30,690	0.3
Arizona	December	4,813	3,758	28.1	4.1	45,427	1.3

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.