GEORGIA BUSINESS
AND ECONOMIC CONDITIONS

GBEC

VOLUME 65, NUMBER 4 • THE UNIVERSITY OF GEORGIA • FOURTH QUARTER 2005

Georgia's economic outlook for 2006

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Growth in gross state product and employment promise a positive outlook for 2006. Inflation-adjusted GSP will increase by 3.2 percent, which is a bit higher than the 3 percent advance estimated for 2005. The pace of job growth will rise from 0.7 percent in 2005 to 1.3 percent in 2006. This positive forecast reflects the impacts of expansions and relocations announced in late 2004 and in 2005, pent-up demand for hiring in many service industries, and more robust hiring by state and local governments. Businesses' higher spending, a strong demographic push, state and local governments' improving budgetary conditions, and higher exports will boost Georgia's service economy. Finally, after enduring five-straight years of deep job losses, this will be the turnaround year for the state's massive information industry.

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The pace of Georgia's expansion would be higher if not for the lingering effects of Hurricane Katrina on the economy. In Katrina's immediate wake, high energy prices and uncertainties about the availability of refined petroleum products rattled consumers and businesses. In 2006, energy prices will remain relatively high and confidence is unlikely to fully recover to pre-Katrina levels, so spending and hiring will be less vigorous than otherwise would have been the case. Also, the basic costs of operating a household and doing business are higher than they were prior to Katrina's arrival. Nonetheless, the negative economic shocks associated with Katrina gradually will be replaced by the positive impacts of rebuilding and recovery.

Many of the forces underlying the national and Georgia forecasts are the same. Businesses will continue to hire and to make capital investments. The global economy will continue to expand, albeit more slowly than in 2005. Nonresidential construction will escalate, while home price appreciation slows down sharply. The dollar will weaken, and core inflation will rise. Energy markets will remain very tight and energy prices will be high. Interest rates will climb again as the federal fiscal stimulus winds down. Finally, consumer spending will slow down as people realize how much they already owe.

The economic implications of these trends are not the same for Georgia as they are for the nation, however. Georgia's economy is more sensitive to high gasoline and fuel prices than is the overall U.S. economy. In-migration and business relocations from hurricane-stricken areas will continue to boost the state's economy, however. Atlanta undoubtedly will pick up a number of national conventions and trade shows that originally scheduled for New Orleans. Georgia's ports will pick up the slack until the Port of New Orleans reopens.

Hurricane Katrina's immediate impact on fuel prices was especially dramatic because Georgia is a major regional transportation, distribution, and logistics center. Also,

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Georgians' 26-minute drive to work is one of the longest in the nation, and the longest average commute in the Southeast. Exacerbating the situation is that compared to the average American, Georgians are half as likely to use public transportation. Also, since Georgia's median household income is only 95 percent of the national average, high fuel prices probably hit household spending a little harder here. Finally, Georgia has no major oil refineries, so there is no upside to high oil prices.

Another curtailing factor is that several of the state's largest employers are not doing very well, and it will be difficult for small and medium-sized companies to grow fast enough to compensate. Delta's bankruptcy filing in 2005 was not an unexpected, and the hope is that it will emerge much leaner and more efficient. The company still would be a major asset to Georgia's economy, but the loss of high paying corporate jobs would hurt. The worst-case scenario is that Delta simply disappears.

There is another reason to be cautious about Georgia's outlook. Atlanta's economic growth depends heavily on residential construction, and homebuilding is about to downshift, so it could be difficult for the metropolitan Atlanta area—and therefore the state—to outperform the nation in 2006. More building permits are issued here each year than in any of the nation's other major metro areas although Atlanta is not even close to being the nation's most populous metropolitan area. Rising mortgage rates, high prices for building materials, and less home price appreciation will take their toll on the metro Atlanta economy, too.

More positively, there are no home price bubbles in any of Georgia's metropolitan areas. Also, it is reassuring that there are no signs of builder-driven excesses in the Atlanta market. So, when Georgia's housing market begins to slow, it is unlikely that homeowners will get stuck with overpriced homes or that builders will be caught with too many unsold properties. .

Georgia stands to realize a major economic boost from the round of base closing and realignments that was announced in 2005. The net gain to the state will be approximately 4,000 military and civilian jobs. In addition to these direct jobs, there is the induced impact—also known as the multiplier effect—that will add another 2,000 to 4,000 jobs to the off-base economies of the communities that host Georgia's bases. Fort Benning, which is located in Columbus, emerged as the largest winner from the announced base realignments, with a proposed gain of nearly 10,000 civilian and military jobs at the base itself and $1.1 billion in annual payroll. Robins Air Force Base in Warner Robins, Moody Air Force Base in Valdosta, the Marine Corps Logistics Base in Albany, and Dobbins Air Reserve Base in Marietta also stand to gain significant numbers of jobs. Although Georgia was a net overall beneficiary of the latest BRAC, the closing of the Naval Air Station, Fort McPherson, Fort Gillem, and the Navy Supply Corps School will cost the Atlanta-Athens region thousands of military and civilian jobs. Of course, it will take years to fully implement these decisions.

Employment

Hampered by large IT, air transportation, hospitality, and manufacturing clusters, Georgia's labor market was bludgeoned by the recession, and it will take until at least mid-2006 to recoup the jobs that were lost. Of the four business clusters that took direct hits in 2001, air transportation and manufacturing are still in trouble. In contrast, hospitality will be a major source of job creation and IT will be recuperating.

On an annual average basis, the state's nonagricultural employment will increase by 1.3 percent in 2006, which exceeds the 0.7 percent increase estimated for 2005. Total employment will rise by 52,600 jobs, from 3,918,200 jobs in 2005 to 3,970,800 jobs in 2006, while unemployment rate to declines from 5.3 percent to 5.1 percent over the same period. The lower unemployment rate reflects both job creation and an unusually high proportion of discouraged people who have stopped looking for work, and therefore are no longer counted as unemployed.

GEORGIA BUSINESS AND ECONOMIC CONDITIONS

Fourth Quarter 2005
Volume 65, number 4

SELIG CENTER FOR ECONOMIC GROWTH

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GEORGIA BUSINESS AND ECONOMIC CONDITIONS (ISSN 0297-3857) is published quarterly by the Simon S. Selig, Jr. Center for Economic Growth, Terry College of Business, The University of Georgia, as a service to the business and academic communities. Signed articles reflect the author's opinion but not necessarily those of the Selig Center for Economic Growth, Terry College of Business , or The University of Georgia. This publication is sent free of charge upon request.

Manuscripts and letters to the Editor should be sent directly to us. **Postmaster** send address changes to: Selig Center for Economic Growth, Terry College of Business, The University of Georgia, Athens, GA 30602-6269.

Periodicals postage paid at Athens, Georgia

Services-Producing Industries

Professional and business services will see the highest rate of growth (3.1 percent) and will create 16,200 jobs—more than any sub-sector. The expansion of corporate profits, rising markets for most goods, the expense of maintaining in-house experts, and the ever-increasing complexity of business operations underpin these projected gains. Georgia's staffing and temp agencies should do very well, benefiting from sustained economic growth as well as their increased focus on professional and technical workers. Private firms that provide education and health care will add 12,000 jobs, prompted by above-average population growth and favorable demographic trends that spur demand for these increasingly essential services.

The leisure and hospitality cluster did very well last year and will do even better in 2006. Employment will grow by 2.8 percent, or 10,200 jobs, and most hotels will see a boost in occupancy rates. The new Georgia Aquarium, fast-paced growth of the African-American travel market, and the upgrade of the CNN Studio Tour will boost travel to Atlanta. Also, as this is written, Atlanta is a site contender for the NASCAR Hall of Fame.

After four extremely difficult years, characterized by relentless layoffs and bankruptcies, information services companies will begin hiring at mid-year. But it may take the rest of the decade to recover the 31,000 jobs lost in the first half of the decade. Moreover, salaries in the newly created jobs are likely to be much smaller than they were before the IT meltdown.

Financial services companies will hire 2,000 additional workers in 2006. Georgia's financial institutions should benefit from rock-solid home values as well as positive demographics, but residential real estate brokers should anticipate some fallout from higher mortgage rates. In the short term, banks that cater to business customers will need more staff to handle the demand for commercial loans, and more active capital markets. In contrast, softer conditions in the housing market, less mortgage refinancing, and slower growth in consumer spending for durables will restrain hiring at community banks.

Transportation and utilities companies will be hiring again, too. Prospects are excellent for the trucking, rail, and port industries, but the airlines will continue to struggle. High demand coupled with the exit of several trucking companies from the industry will allow Georgia's truck

TABLE 1

GEORGIA'S GROSS STATE PRODUCT, 1991-2006, IN CURRENT AND CONSTANT (2000) DOLLARS WITH YEAR-TO-YEAR PERCENTAGE CHANGES (billions of dollars)

			Percentage Change from Previous Year	
Year	Current $	Constant (2000) $	Current $	Constant (2000) $
1991	148.7	167.2	5.2	1.4
1992	160.8	175.6	8.1	5.1
1993	172.2	183.2	7.1	4.3
1994	187.6	195.3	9.0	6.6
1995	203.5	206.4	8.5	5.7
1996	219.5	219.5	7.9	6.3
1997	237.5	250.8	7.4	5.6
1998	255.5	265.9	7.6	6.0
1999	277.3	283.1	8.5	6.5
2000	291.0	291.0	4.9	2.8
2001	299.5	292.9	2.9	0.6
2002	307.4	294.8	2.6	0.6
2003	321.2	303.0	4.5	2.8
2004	340.7	314.3	6.1	3.7
2005	360.4	323.8	5.8	3.0
2006	381.0	334.1	5.7	3.2

Source: Data for 1991-2004 were obtained from the U.S. Department of Commerce. Data for 2005-2006 were obtained from the Selig Center for Economic Growth, Terry College of Business, The University of Georgia (September 15, 2005).

carriers to take advantage of demand growth. The continued success of Georgia's ports will help both the railroads and truck carriers. Eastern railroads and truckers will benefit from changes in international shipping patterns that are bringing more traffic to east coast ports. In contrast, profits will remain elusive for most domestic airlines.

Due to competitive restructuring and technological advances, employment in the utility sector probably will be stable in 2006. Electric and gas utilities will benefit from cyclical increases in commercial and industrial markets as well as Georgia's above-average population growth, but will be challenged by higher interest rates and very high prices for fuel. In Georgia's deregulated natural gas retail market, competition among the marketing companies will be intense.

Over the last five years, the rapid restructuring of retailing resulted in a drastic loss of 30,000 positions. Now, employment and income growth augmented by a steady influx of working-age consumers will ensure that retailers will see both top- and bottom-line growth. Retail sales and profits will expand, but higher financing costs, higher transportation costs, and more intense competition among retailers will squeeze profit margins.

Goods-Producing Industries

The downward trend in employment continues, even though Georgia's manufacturers will see higher demand for their products. Manufacturing employment will decline by 1.5 percent in 2006, which is the same percentage decline estimated for both 2004 and 2005. More open world trade, the migration of labor-intensive work to countries with significant labor cost advantages, and strong gains in productivity largely account for the steady pace of plant closings and layoffs.

On the plus side, the outlook is good for Georgia's large food processing industry as well as for defense contractors. Food processing—the state's largest manufacturing industry—accounts for more than 23 percent of manufacturing gross state product. Marietta's Lockheed plant will be busy increasing its production of F/A-22 Raptor fighter jets.

Construction employment will increase by 0.2 percent for the second-straight year of decelerating growth. There will be less new residential construction, too: 7 percent fewer new homes and 9.6 percent fewer apartments will be authorized in 2006.

Private spending for new nonresidential construction will increase, but it should be emphasized that these projected gains are coming off an extremely depressed base. Nonetheless, higher activity in nonresidential markets will provide some stimulus to job creation in the state's overall construction industry. One of the main impediments to faster growth is that Atlanta's office vacancy rate is about 22 percent, which is one of the highest in the nation.

Compounding the challenge for Georgia's nonresidential construction industry is a glut of unoccupied industrial space. Although the forecast calls for demand for most industrial products to expand solidly in 2006, the immediate impetus to new construction will be limited.

TABLE 2

GEORGIA'S ECONOMIC FORECAST, 2005-2006

Georgia	2001	2002	2003	2004	2005	2006
Real Gross State Product, Bil. of 2000$	292.9	294.8	303.0	314.3	323.8	334.1
Percent change	0.6	0.6	2.8	3.7	3.0	3.2
Nonfarm Employment (thousands)	3943.2	3869.5	3844.9	3889.9	3918.2	3970.8
Percent change	-0.2	-1.9	-0.6	1.2	0.7	1.3
Personal Income, Bil. of $	240.6	245.0	251.6	265.3	282.0	299.0
Percent change	4.5	1.8	2.7	5.4	6.3	6.0
Housing Permits, Total	93059	97523	96704	108356	107800	99800
Percent change	1.3	4.8	-0.8	12.0	-0.5	-7.4
Unemployment Rate (percent)	4.0	4.8	4.7	4.6	5.3	5.1

Source: Selig Center for Economic Growth, Terry College of Business, The University of Georgia, September 15, 2005.

TABLE 3

GEORGIA'S EMPLOYMENT FORECAST, 2005-2006

Georgia	2001	2002	2003	2004	2005	2006
Nonfarm Employment[1]	3943.2	3869.5	3844.9	3889.9	3918.2	3970.8
Goods Producing	715.6	674.8	659.3	655.5	650.4	644.1
Natural Resources and Mining	12.9	12.3	12.3	12.2	12.1	12.0
Construction	204.3	195.9	195.0	198.0	199.8	200.2
Manufacturing	498.3	466.7	452.0	445.2	438.5	431.9
Services Providing	3227.6	3194.7	3185.7	3234.4	3267.8	3326.7
Trade, Trans., Utilities	851.7	832.3	824.6	828.0	823.0	826.3
Information	143.8	131.8	123.4	118.5	117.8	117.8
Financial Activities	211.4	212.8	216.4	218.3	221.1	223.1
Professional and Business Services	527.4	515.8	490.3	510.5	522.2	538.4
Education and Health Services	359.3	372.0	395.0	406.6	413.9	425.9
Leisure and Hospitality	334.7	337.3	348.1	358.1	365.3	375.5
Other Services	188.6	167.9	155.5	156.1	155.2	157.3
Government	610.3	624.8	632.4	638.4	649.3	662.2
Percent Change						
Nonfarm Employment	-0.2	-1.9	-0.6	1.2	0.7	1.3
Goods Producing	-4.4	-5.7	-2.3	-0.6	-0.8	-1.0
Natural Resources and Mining	-5.8	-4.7	0.0	-0.8	-0.8	-0.8
Construction	0.0	-4.1	-0.5	1.5	0.9	0.2
Manufacturing	-6.1	-6.3	-3.1	-1.5	-1.5	-1.5
Services Providing	0.8	-1.0	-0.3	1.5	1.0	1.8
Trade, Trans., Utilities	-0.7	-2.3	-0.9	0.4	-0.6	0.4
Information	0.2	-8.3	-6.4	-4.0	-0.6	0.0
Financial Activities	1.0	0.7	1.7	0.9	1.3	0.9
Professional and Business Services	-1.8	-2.2	-4.9	4.1	2.3	3.1
Education and Health Services	3.5	3.5	6.2	2.9	1.8	2.9
Leisure and Hospitality	0.7	0.8	3.2	2.9	2.0	2.8
Other Services	7.6	-11.0	-7.4	0.4	-0.6	1.4
Government	2.2	2.4	1.2	0.9	1.7	2.0

[1]Indicates thousands of workers.

Source: Selig Center for Economic Growth, Terry College of Business, The University of Georgia, September 15, 2005.

Prospects for Selected MSAs

Atlanta On an annual average basis, the 28-county Atlanta MSA will add 41,200 jobs, a year-over-year increase of 1.8 percent that exceeds the 1.3 percent gain predicted for the state as a whole. Atlanta's high concentration of services-producing industries and very low concentration of goods-producing jobs (the lowest in the state) partially explains the above-average growth. Emory University and Georgia Tech in particular also will power the economic development of the region's economy. The opening of Wachovia's Southern headquarters will boost high-quality jobs in the financial services sector. Although a mid-year turnaround the huge information industry will not provide much fuel for growth in 2006, the upturn should gather momentum in 2007, when it will provide substantial economic stimulus. Mayor Shirley Franklin's leadership in addressing some of Atlanta's longstanding infrastructure and budgetary problems also raises the region's long-term growth trajectory.

Factors that will hinder Atlanta's growth include the restructuring of Atlanta's large air transportation industry, limited prospects for employment gains at several major companies, and the early effects of the announced closing of three military bases. Even though Delta Air Lines filed for bankruptcy in 2005, most of the origin and destination passenger traffic will not be affected very much and, over time, connecting traffic will return to pre-bankruptcy levels. The fundamentals are very strong for Hartsfield, and the construction of the fifth runway and new terminal at Hartsfield-Jackson International Airport are favorable portents for the air transportation industry's long-term growth.

Albany After several years of job losses, Albany's labor market will continue the turnaround that started last year. Nonagricultural employment will rise by 1.5 percent. Because Albany is a small MSA, the actions for the better or worse by one major company probably will determine the area's actual economic performance, and so its long-term outlook will be positively impacted by the BRAC.

In 2006, Albany will capitalize on its many assets, including a low cost of doing business, an excellent telecommunications infrastructure, and a low crime rate. The area has potential as a center for back office operations and telemarketing, but more intense foreign competition for such jobs probably will limit actual gains. Albany also will benefit from its role as a regional retail-wholesale-distribution center and from powerful spillover from Florida's vibrant economy. Redevelopment efforts along the Flint River should add to the area's charm, and add to the area's potential to benefit from tourism and retiree-based development. Its increasing role as a regional center for health care also is a big plus.

Athens This MSA has the largest share of government jobs in the state. Since a large proportion of spending and employment is tied to government appropriations, the local economy is very recession resilient. One negative implication, however, is that government spending tends to lag the overall macroeconomic cycle during recoveries, and thus recent growth is unimpressive.

In 2006, rising state government's revenues collections should indicate that the University of Georgia and other state government operations would receive higher appropriations. Meanwhile, higher enrollment at the University will continue to boost spending by the large student population, which provides critical support to the area's retail and services sectors. Thus, employment growth should remain positive, but the overall rate of growth is expected to be very modest compared to that of the state and the nation. According to the BRAC recommendations, Athens will lose the Navy Supply Corps School, and that will cost about 1,000 jobs or 1.3 percent of the MSA's current employment. The closure diminishes the prospects for growth over the next few years, but the School's campus has excellent potential for redevelopment.

Augusta Now fully recovered from the negative repercussions of the recession, employment is hefty in the services-producing industries, notably health care, private education, hospitality, and financial services. Last year, overall employment stabilized at record levels, but the area continued to lose manufacturing, information, and financial services jobs. The 2006 outlook calls for solid gains overall, with a projected 1.4 percent increase in total employment.

Augusta's hospitality industry should continue to benefit from many recent downtown developments. The adaptive reuse of historic structures makes the city more appealing as a site for regional meetings and conventions. Retirees and those looking for affordable lakefront homes are drawn by the area's affordability, good climate, and medical facilities. Moreover, the presence of the Medical College of Georgia is a major advantage in the plans to establish Augusta as a center for the rapidly growing biotechnology sector.

Columbus The excellent outlook for this MSA is courtesy of the highest projected employment growth rate of all of Georgia's metro areas. One of the primary reasons why is that military base realignment—as well as other military transfers—will provide an economic windfall: the number of military personnel, contractors, and civilian employees associated with Fort Benning is expected to grow by at least 10,000 over the next four years. Columbus also will receive a major economic boost from the restoration and replacement of the existing on-base housing. Another economic booster is that the troops will rotate every seven years instead of every two, which makes it much more likely that military personnel will buy a house or otherwise invest financial resources in Columbus.

Another reason why the expectations for Columbus are high is that the hospitality industry has become both a powerful and dependable driver of growth. Recent above-average growth in hospitality jobs reflects substantial increases in the number of visitors. Extensive redevelopment has increased downtown Columbus' appeal to tourists, conventioneers, and meeting planners. Also, since 9/11, people's

TABLE 4

GEORGIA'S EMPLOYMENT FORECAST FOR METROPOLITAN AREAS, 2005-2006

Metro Area	2001	2002	2003	2004	2005	2006
Nonfarm Employment[1]						
Albany	63.1	62.5	63.8	63.6	64.4	65.3
Athens	74.6	75.4	76.6	76.7	77.3	77.9
Atlanta	2301.4	2258.7	2236.9	2264.5	2287.1	2328.3
Augusta	205.9	207.0	208.8	212.0	212.6	215.6
Brunswick	41.3	41.2	41.4	42.4	42.8	44.1
Columbus	121.6	119.9	120.2	119.8	119.8	123.4
Dalton	76.7	77.3	76.1	76.2	76.0	76.0
Gainesville	65.6	65.2	68.0	68.0	68.7	69.7
Hinesville	15.4	15.5	15.8	16.6	16.7	16.8
Macon	99.3	99.1	100.3	100.9	100.7	101.6
Rome	40.5	41.1	42.8	42.6	43.0	43.5
Savannah	136.7	138.4	138.4	143.7	146.4	150.1
Valdosta	48.4	50.4	51.7	52.4	53.1	54.1
Warner Robins	48.1	49.1	50.2	50.9	51.1	51.9
Percent Change						
Albany	-2.0	-1.0	2.1	-0.3	1.2	1.5
Athens	-0.1	1.1	1.6	0.1	0.8	0.8
Atlanta	0.5	-1.9	-1.0	1.2	1.0	1.8
Augusta	-1.0	0.5	0.9	1.5	0.3	1.4
Brunswick	-0.5	-0.2	0.5	2.4	1.0	2.9
Columbus	-2.5	-1.4	0.3	-0.3	0.0	3.0
Dalton	-2.0	0.8	-1.6	0.1	-0.3	0.0
Gainesville	-0.2	-0.6	4.3	0.0	1.0	1.5
Hinesville	2.0	0.6	1.9	5.1	0.5	1.0
Macon	-2.3	-0.2	1.2	0.6	-0.2	0.9
Rome	-0.2	1.5	4.1	-0.5	1.0	1.0
Savannah	-0.1	1.2	0.0	3.8	1.9	2.5
Valdosta	0.0	4.1	2.6	1.4	1.3	2.0
Warner Robins	2.1	2.1	2.2	1.4	0.3	1.6

[1]Indicates thousands of workers.

Source: Selig Center for Economic Growth, Terry College of Business, The University of Georgia, September 15, 2005.

travel preferences have changed in ways that favor Columbus: a smaller, appealing metro area that is within driving distance.

Macon Despite setbacks in manufacturing, Macon's total employment will rise by 0.9 percent in 2006. Two clusters account for much of the area's growth: transportation, logistics, and warehousing; and financial, business, and professional services. Macon also is important as a remote bedroom community for the southern portion of the Atlanta MSA.

Macon's extensive surface transportation system and its proximity to Atlanta are pluses, as is its strategic location at the intersection of I-75 and I-16. Also, as Atlanta becomes more congested, sites in Macon will become very attractive to both private businesses and state government operations.

Savannah The number of jobs in this coastal MSA will grow nearly twice as fast as that of the state, and employment in 2006 will rise by 2.5 percent, which is the third largest percent gain predicted for any of the state's metropolitan areas, behind only Columbus and Brunswick.

Savannah's dual personality—that of a major tourist attraction and a thriving deepwater port—gives it a vibrancy that few other places can match. The state's overall economic performance increasingly will depend on this burgeoning metro area. For example, the presence of the Port of Savannah was critical to Bass Pro Shops recent decision to develop its Southeastern regional distribution center in Macon. The city also is a premier destination for national conventions and trade shows, thus convention business will be one of the area's fastest growing economic sectors. ■

The National Outlook 2006

Jeffrey M. Humphreys
P. George Benson

Although the outlook calls for continued economic expansion, the aftermath of Hurricane Katrina and other factors will cause a moderate slowdown in the pace of growth. U.S. GDP will rise by 3 percent in 2006, which will be lower than both the 3.3 percent increase expected for 2005 and the 4.2 percent rate reported for 2004. The severe economic damage and extensive disruptions associated with Katrina dramatically lowered GDP growth in the final two quarters of 2005, and diminish the prospects for growth in the first part of 2006. Also, Katrina reinforced many pre-existing trends that were expected to slow the pace of U.S. economic growth.

Pre-Katrina factors that will contribute to this slowdown include: a cautious increase in consumers' spending for durable goods; a decline in spending for housing; the finally-realized sting of the Federal Reserve's interest rate hikes; scant demand for big-ticket items; and the unpleasant reality of high levels of consumer debt coupled with virtually no savings. Businesses' spending on inventories and foreign trade will have little effect on GDP growth. Also, energy prices should stabilize at high levels. Limited acceleration in core inflation should reassure the bond markets and the Federal Reserve, however.

In 2006, several factors will help to strengthen GDP growth. Federal, state and local governments will step up spending; nonresidential construction will rebound; additional high-wage jobs will be created; and business spending for equipment and software will accelerate. Also, from the perspective of the national economy, by mid-2006 the beneficial economic impacts of hurricane reconstruction should outweigh the lingering negative impacts of the storm.

The upside and downside risks to the baseline forecast appear to be well balanced. On the positive side, productivity gains could be stronger than expected, which would spur growth while containing both inflation and interest rates. Reconstruction of hurricane-devastated areas also could progress faster than expected. Other potential positive developments include lower than expected oil prices, an even stronger housing market, further acceleration in businesses' spending for investment, and stronger than expected growth in foreign GDP. The major downside risk is that there is less spare capacity than expected, which would push up commodity prices—including oil—and labor costs, thereby generating widespread and accelerating inflation. In response, the Federal Reserve probably would hike interest rates aggressively, which would be a stunning blow to debt-heavy consumers. In this scenario, foreign investors' diversification away from the dollar is likely to reinforce inflationary pressures and the rise in interest rates. The overheated housing market might crash, confidence would falter, and the consequential broad-based slowdown in spending by consumers and businesses would push the U.S. economy into a mild recession.

Another risk to the forecast lies in the oil and/or refined petroleum products markets. Due to tight market conditions, another significant interruption in the supply of crude oil and/or refinery products on the heels of Hurricane Katrina could make prices zoom. A second energy crunch—stemming from supply interruptions rather than robust demand growth—might propel the U.S. and global economies to a free fall. The 2006 outlook assumes that the baseline forecast prevails, however, and that the extreme outcomes on both ends of the scale are avoided.

Consumer Spending

Consumer spending will grow more slowly than it did in 2005, but people will spend more. Job creation and wage and salary growth will help to maintain the status quo, but most consumers will not have the wherewithal to lead the way. It is unrealistic to expect that the extremely depressed 2005 household savings rate of 0.1 percent can be sustained through 2006, and data suggest it will climb to 0.7 percent or higher. At this juncture, job creation is vital to the outlook for both consumer spending and the overall economy. The forecast anticipates that the job machine will operate at a relatively steady pace in 2006, neither accelerating nor decelerating appreciably. This will be enough to support the economic expansion, but not enough to invigorate it.

The slowdown also will reflect the reversal or lessening of several key factors that recently propelled consumer spending. For example, both long- and short-term interest rates will be on the upswing. Wealth effects will become less powerful as the values of stocks, real estate, and most other household financial assets appreciate more gradually. There is also a lack of pent-up demand for durable goods such as new cars. Consumers' inflation-adjusted spending will increase by about 2.5 percent in 2006, which is lower than the 3.1 percent increase expected in 2005. Steady job growth will keep consumers confident, but higher interest rates, less wealth accumulation, a softer housing market, and high gas prices will keep them from becoming more optimistic about the economy.

In 2006, increases in inflation-adjusted disposable personal income will account for most of the projected rise in consumers' spending. The number of jobs is forecast to expand, supporting this income growth. The annual increase in workers' compensation will be larger than in recent years, but fringe benefits will rise faster than wages and salaries.

Households' net worth will rise much more gradually, providing only slight stimulus to spending. Home values rose sharply over the last seven years, but prices of new and existing homes probably will not go much higher. In fact, home prices could decline in a number of large metropolitan markets in the West, Northeast, and Mid-Atlantic regions. Nonetheless, many homeowners have seen their housing investments increase in value.

In 2006, people will be much less likely to use cash-out refinancing and home equity loans to buy consumer goods. This reflects three developments: first, there are few eligible homeowners left who have not refinanced their mortgages; and second, mortgage rates are expected to rise throughout the year. Finally, home prices are likely to rust in 2006. Thus, the push to consumer spending from cash-out mortgage refinancing will be almost entirely absent, but the ongoing benefits from previous refinancing will prevent people from sitting on their wallets.

In the coming year, consumers' spending for services will increase more than three times faster than spending for goods. Among services, spending on medical care, recreation, and personal business services will increase the fastest. Among goods, spending for non-durables will outpace spending for durables. Outlays for drugs, pharmaceuticals, purchased meals, and computers and software will increase briskly.

Labor Markets

In 2006, total nonfarm employment will expand by 1.5 percent, and this will be enough to bring down the unemployment rate slightly and to ensure that wage growth accelerates. This will be about the pace of net hiring that the economy experienced in 2005. There are several factors that will prevent job growth from accelerating. First, the anticipated slowdown in GDP growth will restrain hiring. Second, productivity will continue to rise, and GDP will grow only slightly faster than productivity. Third, the outsourcing of U.S. jobs to developing countries will continue to spread from blue-collar occupations in manufacturing to white-collar occupations in high tech and service industries, which historically have been relatively immune to such practices. Fourth, high and rapidly rising benefit costs make it much more expensive for U.S. companies to hire workers.

In the coming year, employment will rise fastest in the nation's professional and business services. Hospitality, transportation and warehousing, and health services also will

UNITED STATES ECONOMIC FORECAST 2005-2006

United States	2001	2002	2003	2004	2005	2006
Gross Domestic Product, Bil. of 2000$	9890.7	10048.8	10320.6	10755.7	11110.6	11444.0
Percent change	0.8	1.6	2.7	4.2	3.3	3.0
Nonfarm Employment (millions)	131.8	130.3	130.0	131.5	133.6	135.6
Percent change	0.0	-1.1	-0.3	1.1	1.6	1.5
Civilian Unemployment Rate (percent)	4.7	5.8	6.0	5.5	5.1	4.9
CPI-U, Annual Percent Change	2.8	1.6	2.3	2.7	3.5	2.7

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia September 15, 2005.

see substantially above-average employment gains. Below average growth is expected in wholesale and retail trade, construction, and government. Manufacturing employment will continue its prolonged decline; however, the manufacturing subsectors with the best immediate prospects for job stability include machinery, fabricated metal products, nonmetallic mineral products, and petroleum and coal products. Sub-sectors that will continue to shed jobs include apparel, textiles, wood products, computer and electronic products, transportation equipment, chemicals, and plastics. Utilities and logging also will lose jobs.

Corporate Profits

Improving conditions of supply and demand will drive corporate profits in 2006. Capacity utilization in many industries will rise, and companies will be able to raise the prices of their products. Even slight moderation of oil prices in 2006 could provide an additional tailwind to profits. Finally, the lower value of the dollar will help bolster sales of many export-oriented companies and will help companies producing for the domestic market to compete with foreign rivals.

There are some unfavorable trends to consider, however. One is that unit labor costs are on the rise. The share of national income devoted to profits has been unusually high, and it is expected to diminish as the share devoted to labor income increases. Productivity growth is expected to slow somewhat; and higher interest expenses will restrain bottom-line growth.

Due to strong growth in profits, American companies are expected to increase both spending and hiring. The business sector therefore will be a substantial contributor to economic growth in 2006. Unfortunately, net hiring will not increase enough to prevent a moderate slowdown in consumer spending.

Industries expected to see the fastest growth in profits in 2006 include health care, information technology, telecommunications, and financial services companies. Average growth is expected from manufacturers of consumer goods and materials. If energy prices drop slightly, energy companies will see below average growth.

Business Spending

The upturn in business spending will continue, too. Overall spending on non-defense capital equipment and software will rise sharply, but the percentage gain will be smaller than it was in 2005. All subsectors will see growth. Spending for computers, software, communications equipment, and other information-processing equipment will jump the fastest. Strong growth in spending for industrial equipment also is expected, while spending for transportation equipment will increase moderately.

The after-tax cost of corporate debt will rise in 2006, but because the modest increase springs from a very low base, it should have little on impact investment in equipment and software. Also, for many companies hefty cash flows will lessen the impact of higher interest rates on investment spending.

Businesses' spending on buildings will rise significantly from very depressed levels. Demand will grow fast enough to absorb new space in the development pipeline, and thus high vacancy rates will drop slightly. Businesses have kept a tight rein on inventories, however, maintaining low inventory to sales ratios. So spending on inventories will support rather than reinforce GDP growth.

Federal Budget Deficit

Hurricane Katrina reversed favorable trends in the federal deficit, so now it is forecast to be about $350 billion, or 2.7 percent of GDP. This represents a slight change for the worse over the 2005 deficit of approximately $340 billion. As a percentage of GDP, the 2006 deficit will be much lower than the 5.5 percent deficit recorded in 1983. Nonetheless, it is increasingly apparent that without changes in tax laws, the budget deficit is structural rather than simply cyclical. This implies that the U.S. can not count on economic growth alone to completely eliminate the deficit. The federal tax burden therefore gradually will rise as a percentage of GDP, which will restrain long-term economic growth.

Housing Markets

As mortgage rates drift upward, sales of new and existing homes are expected to drop. Also, after several years of hefty gains in home prices, the average sales price of existing homes will not rise significantly in 2006, and prices may well decline in the nation's frothiest markets.

The other fundamental determinants of demand for homes—growth in employment, population, personal income, relocation activity, and consumer confidence—are positive, and should help to prevent a sharp drop in demand for homes in the coming year. It should be noted that as the housing bubble spreads to more metro areas, so do the prospects for its painful bursting.

International Trade

Real exports will increase more rapidly than imports, but not fast enough for net exports to make a major contribution to GDP. A weaker U.S. dollar will help exports and deter imports, but trade will not add too much to growth as long as foreign GDP grows more slowly than U.S. GDP. Also, the decline in the dollar's value is most pronounced with respect to the currencies of industrialized countries rather than those of developing countries. Lower oil prices and increases in domestic production would significantly improve this outlook, however.

The massive size of the current account deficit—$910 billion or about 7 percent of GDP in 2006—will continue to weaken the value of the U.S. dollar, but the loss will be gradual, thanks to the dollar's role as a de facto reserve currency and to faster growth in the U.S. than in the rest of the developed world. Nonetheless, the deficit increases the risk that a serious problem for the dollar—and financial markets in general—could develop and spill over into the overall economy.

Inflation

The signs of reaccelerating inflation are obvious: skyrocketing oil prices, the falling dollar, accommodative monetary policy, and higher commodity prices are major worries. Core inflation (which excludes food and energy) is gaining momentum, rising from 1.8 percent in 2004 to 2.5 percent in 2005. If oil prices stabilize or decline slightly, core inflation will increase by 2.7 percent in 2006. Of course, top-line inflation will recede briefly if energy prices tumble, but the overall trend suggests that the rate of core inflation will continue to rise gradually, which strongly implies that long-term interest rates will do the same.

The trade-weighted value of the dollar is forecast to decline in 2006, and it will continue to deteriorate for the next several years, which provides a tailwind to prices. The anticipated slowdown in productivity growth also will lead to higher inflation, but current slack capacity will prevent a big push.

The forecast assumes that the Federal Reserve's funds rate will be raised to 4.5 percent in 2006. This move was expected early in the year, but now—after Katrina—it probably will be delayed until mid-year or later.

Crude Oil Markets

As Hurricane Katrina revealed, energy markets are so tight that even modest interruptions in the global supply of crude oil and/or refinery products result in substantial price increases, which are fully capable of slowing or derailing the overall economy. If we can avoid additional interruptions, however, oil prices probably will not climb higher in 2006. Prices will range between $50 and $60 per barrel.

This forecast is predicated upon a modest slowdown in the pace of global economic growth, no major disruptions in the supply of crude, and restoring much of the energy infrastructure that was damaged by Katrina. High prices also will gradually lead to improvements in energy efficiency, especially in the developing world.

Nonetheless, further oil price shocks are one of the major threats to national and global economic growth. Energy markets are likely to remain tight for the foreseeable future. OPEC's production is already at or near full capacity, while the growing economies of the U.S., China, and the rest of the world continue to stimulate demand. The bottom line is that a major crude oil supply disruption could send crude oil prices to $100 per barrel or higher, which, if sustained, would precipitate an oil-shock recession. ■

After several years of continual progress in research and product development, biotechnology watchers believe that the industry as a whole is poised to become profitable by 2010.

Biotech Outlook

Beata D. Kochut

Developments such as the perpetual threat of the use of bioweapons, emerging infectious diseases, growing challenges of environmental cleanup, and the expanding market for biotech varieties of crops give an impetus to the biotech industry's growth. The pressure to limit health care costs also will eventually work to the advantage of the biomedical firms, since much of biotech research focuses on targeted medicine, which will save money by matching individual patients with the most suitable treatments.

Biotechnology medical applications garner most of the attention and are the primary source of optimism for the industry's future. Moreover, the number of biotech remedies on the market has increased consistently over the years. Biotech drugs and vaccine approvals, which began with a mere trickle in the early 1980s (not more than 6 approvals a year until 1990), allowed 75 new biotech products to be introduced between 2000 and 2004. An additional 250 biotechnology products are in late stage clinical trials. In fact, most of the drugs currently under clinical trials are biotech drugs.

The vitality of the biopharmaceutical sector stands in stark contrast with the rest of the pharmaceutical industry, which is troubled by the lack of innovation, empty product pipelines, and bad publicity following the withdrawals and recalls of the most popular blockbuster drugs. Industry experts expect a brisk 15 percent annual revenue growth for biotechnology firms in the next decade, while the pharmaceutical firms will generate about 10 percent. The two will become evermore dependent on each other, however, and become less distinguishable in the future.

Biotech firms will see some renewed interest from major drug manufacturers in search of fresh talent and innovation, but, at the same time, will continue to depend on big pharmaceutical firms and larger biotech companies to bring their products to market. The push toward consolidation will result in more mergers, acquisitions and partnering agreements between smaller players and their larger partners, which will provide smaller firms with an improved access to capital.

Agricultural biotechnology firms have produced a steadily increasing number of biotech varieties of field crops, fruit, and vegetables, but the industry is vulnerable to continued consumer resistance and a variety of regulatory restrictions. Despite public uncertainty, however, the share of biotech varieties of crops planted in the United States showed uninterrupted growth since 1998, and the trend is expected to continue. The biotech varieties of corn, for example, account for 52 percent of total corn acreage in 2005 (up from 47 percent in 2004), 87 percent of soybeans acreage (up from 85 percent in 2004), and 79 percent of the upland cotton acreage (up from 76 percent in 2004). In 2005, for example, 95 percent of the cotton planted in Georgia was genetically modified (up from 94 percent in 2004).

The uncertain business climate is another harsh reality for industrial biotechnology. Although rising oil prices stimulate interest in renewable energy sources and bio fuels, a massive financial commitment is needed from major oil and energy companies in order for bio fuels and renewable energy technologies to make a difference. The recent hurricane damage in the Gulf is also certain to provoke interest in innovative environmental cleanup techniques, and thus environmental biotech products may become available much more quickly.

The majority of biotech companies are still not profitable today, however, and access to capital is a major problem. But the momentum is evident: biotech sales zoomed from $7.7 billion in 1994 to $28.4 billion in 2003, and revenues mushroomed from $11.2 billion to $39.2 billion over the same period. Biotech financing increased from $5.6 billion in 1997 to over $20 billion in 2004. Industry experts believe that the increasing number of successful products, together with rising sales and revenues, will translate into more funding, and will make the biotechnology industry—as a whole—profitable by 2010.

How Georgia Stacks Up

Georgia ranks eighth among the select group of 12 states that have the highest number of biotech firms in the nation, and barely trails behind New York and Texas. The news is not that good in other measures relevant to the strength of the bioscience industry, such as university R&D expenditures in life sciences, National Institutes of Health support for universities, and the number of degrees awarded in biological sciences, where Georgia ranks 12, 18, and 18, respectively. On the positive side, the sharp percentage increases in life sciences R&D expenditures and in NIH support show that Georgia's biotech industry continues to gain in strength and depth.

The 2002 Economic Census counted 110 research and development firms in Georgia's life science industry, 45 of which are in biotechnology. The number of firms with paid employees in this area nearly doubled from the 1997 census count of 62. The industry's revenues more than tripled (from $90 million to $363.2 million), and the number of employees increased from 832 to 2,334. Average annual salaries also increased from $48,830 in 1997 to $86,961 in 2002.

Census data for biopharmaceutical and medical device manufacturing is not yet available, but the Bureau of Labor Statistics data captured total, non-government bioscience employment at 8,570 in 2004. Interestingly, manufacturing employment (biopharmaceutical and device manufacturing) comprised 80 percent of this number (3,415 in medical device manufacturing and 3,395 in pharmaceutical and medicine manufacturing), with research and development firms contributing the remaining 20 percent of jobs (an estimated 1,760 jobs). Life science and biotechnology R&D, and biopharmaceutical and other drug manufacturing—which are the industry's core—together contributed 5,155 jobs, or 60 percent of the total.

The bioscience industry, comprised of companies in biotechnology research and development, pharmaceutical and medicine manufacturing, and—under a broader definition—medical device manufacturing, grew resiliently despite the general economic slowdown, and the growth is likely to continue. Employment in the biosciences overall increased by 5.2 percent between 2001 and 2004. But the steepest employment increase occurred in the industry's core sectors: the combined areas of biotech and life science R&D and pharmaceutical manufacturing grew by 14.6 percent, or 655 jobs between 2001 and 2004. The news was markedly worse for medical device manufacturing, which lost 229 jobs (6.3 percent) during the same period. Overall, this employment growth in a turbulent economy stands out against the state's total employment loss of 0.8 percent, and especially when compared to the1.8 percent job loss in the private sector, 0.2 percent loss in service-oriented industries, and a bruising loss of 7.4 percent of jobs in manufacturing.

Biotechnology salaries are higher than the state's average and increase at a faster rate, too. An average bioscience job (R&D and bio and drug manufacturing) paid an annual salary of $69,601 in 2004 (up 12.9 percent from 2001), while an average salary in medical device manufacturing was $54,539 (a 14.1 percent increase from 2001). In comparison, an average job covered by unemployment insurance in Georgia paid $37,857 in 2004 (up 7.7 percent from 2001). The relatively high bioscience wages, paired with Georgia's relatively low cost of living, definitely gives the state a competitive advantage in recruiting this specialized workforce.

Not surprisingly, the well-paid bioscience jobs are highly concentrated, and depend on a tight network of suppliers and business services. Each job in biotechnology R&D or in biopharmaceutical manufacturing creates another 4.4 jobs in other sectors. Therefore, 5,155 jobs in these sectors create an additional 22,683 jobs in other industries across the state, and many of these also are highly specialized and well paid. The impact of bioscience jobs is likely to be even greater in metro Atlanta, where most of the industry's firms are located.

Atlanta undoubtedly is the hub of Georgia's bioscience and device manufacturing industries, but Athens and Augusta also figure prominently with a mix of pharmaceutical, biotechnology, and device manufacturing firms. Medical device manufacturers and pharmaceutical firms are scattered along I-20 between Atlanta and Augusta, too. A group of biotechnology, pharmaceutical, and agricultural biotech firms are located northeast of Atlanta, in Gainesville, and along the Atlanta-Rome-Chattanooga line in the northwestern part of the state.

In the southern part of the state, a sprinkling of device and medical equipment manufacturers is located along I-85 and I-185, toward Columbus, and others are headquartered in Macon, Warner Robins, and Savannah. Medical equipment and supplies manufacturers also are located along I-95 between Savannah and Brunswick. Albany houses a Merck pharmaceutical manufacturing plant and Thomasville is becoming known for its biomedical establishments.

Anchored by major research universities, hospitals, medical schools, and the Centers for Disease Control and Prevention, the Atlanta-Athens-Augusta triangle has become the natural center of Georgia's biopharmaceutical industry. While this geographic area is likely to see the most growth in biotechnology R&D, the southern half of the state may benefit from the increased demand for specialized equipment and medical supplies.

The sector's sustained growth amid other industries' dramatic economic losses proves that the small but resilient bioscience sector is well positioned for future growth. While it is not likely to become a silver bullet, it is an essential and indispensable element for states that stake their futures on innovation as the engine of economic growth. Today, 40 states target biotechnology as a growth industry, and 13 of them offer direct state investments in biotech venture capital funds. Eighteen states offer tax credit for investment in venture capital funds, and another 33 provide funding for bioscience R&D facilities.

The competition among the states is stiff, and bioscience recruiters race to woo successful companies away with offers of office and lab space, tax incentives, and capital. As a result of this competition, Georgia lost one of its most successful companies when Pharmasset announced its move to New Jersey.The trend towards consolidation within the pharmaceutical and biotechnology industries therefore is likely to increase the pressure on young companies to relocate closer to their partners and investors.

The pressure will be especially strong in Georgia, where a relatively large number of young companies are looking for suitable space and capital, both of which are scarce right now. A network of in-state investment funds capable of funding biotech firms in Georgia, together with an increased supply of specialized office and laboratory space, are vital countermeasures necessary to reverse this trend.

A handful of local venture capital firms, including the most recent effort to establish one in Gwinnett County, responded to this need, but much more is required. The lack of appropriate office and lab space continues to plague biotechnology firms graduating from incubators in Georgia, although initiatives such as the North Point Research Park in Alpharetta, the Technology Enterprise Park at Georgia Tech, the Georgia State University Science Park, and a new incubator space managed by Emory University at Crawford Long Hospital are positive steps.

Unfortunately, biotechnology also is not immune to foreign competition. For example, less stringent regulations have allowed Great Britain and South Korea to advance in the field of stem cell research. Cheaper labor and low operating costs are attracting pharmaceutical manufacturers to China and India, which are becoming major pharmaceutical goods markets. International competition is likely to create pressure on the whole industry, but pharmaceutical manufacturing will feel it the most. For now, however, small R&D oriented biotech firms have been able to resist.■