# MISSISSIPPI ECONOMIC OUTLOOK

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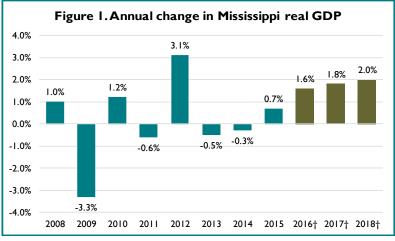
## FORECASTS FOR 2016 MODERATE AGAIN

Real gross domestic product (SDI) .... projected to grow 1.6 percent in 2016 according to the latest URC forecast as seen in Figure 1 below. If realized, 2016 would mark the first time the Mississippi economy has expanded for two consecutive years since 2008. Based on the latest estimates by the U.S. Bureau of Economic Analysis (BEA), Mississippi's economy has contracted in three of the last five years; in 2015 real GDP for the state grew 0.7 percent, the first increase since 2012. The 2016 forecast is lower by 0.1 percentage point than the estimate in the Spring issue of Mississippi Economic Outlook. Growth expectations for the Mississippi economy in 2016 were reduced slightly, primarily because of the decrease in the forecast for the change in U.S. real GDP for 2016. U.S. nonresidential fixed investment has fallen for two consecutive quarters, mostly because of the downturn in the energy industry. The forecast for growth in real GDP in Mississippi for 2017 is an annual rate of 1.8 percent; this forecast is 0.4 percentage point lower than in the previous quarter. This reduction again reflects the decline in the forecast of U.S. real GDP growth for 2017. IHS Economics believes the United Kingdom's decision to withdraw from the European Union will negatively impact the U.S. economy slightly in 2017 and 2018. The forecast for growth in Mississippi's economy in 2018 is 2.0 percent, a reduction of 0.1 percentage point from the previous quarter.

In its final estimate of the change in U.S. real GDP for the first quarter of 2016, BEA raised its previous estimate 0.3 percentage point to 1.1 percent, its second upward revision to first quarter growth. Despite the apparently stronger growth in the first quarter, the forecast of U.S. real GDP growth for 2016 now stands at 1.9 percent, a decrease of 0.2 percentage point from the previous quarter. If realized, this rate of growth would be the smallest annual increase in U.S. real GDP since 2013 when the U.S. economy grew 1.5 percent. As noted above, the decline in U.S. nonresidential fixed investment

To download the current issue of Mississippi Economic Outlook, please visit: www.mississippi.edu/urc/publications.asp is expected to inhibit real GDP growth in 2016. Besides the downturn in the energy industry, a strong dollar and a lack of growth in exports have contributed to the fall in nonresidential fixed investment. Consumer spending, which improved in the second quarter of 2016, continues to drive much of U.S. economic growth. The U.S. manufacturing sector, which was hit hard in 2015 by the fall in oil prices and a stronger U.S. dollar, has shown signs of gradual improvement in recent months. Firms have cleared out inventories and oil prices have experienced moderate increases. Notably, the ISM Manufacturing Index returned to expansion territory in March and has increased in five of the last six months.

The forecast for U.S. real GDP growth in both 2017 and 2018 is 2.4 percent. Compared to the previous quarter, these latest forecasts represent declines of 0.4 and 0.3 percentage point, respectively. The reductions to these forecasts reflect the negative impacts expected from the withdrawal of the United Kingdom from the European Union as previously noted. "Brexit" is anticipated to lead to weaker growth by resulting in a stronger dollar and fewer exports to the United Kingdom and the European Union.



†Projected. Source: U.S. Bureau of Economic Analysis and URC

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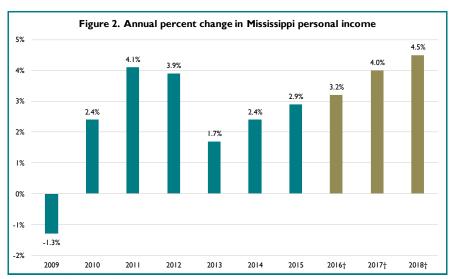
#### SHORT-TERM FORECASTS

he latest URC forecast projects three sectors in Mississippi will contract in 2016: Natural Resources and Mining, Educational Services, and Government. Government is particularly notable as this sector comprises the largest portion of state real GDP. The largest percentage decrease in real output is expected to occur in Natural Resources and Mining as seen in the first section of Table 1 on page 3. The industry is expected to decline 4.5 percent, followed by the 0.4 percent decline in Educational Services and the 0.3 percent decline in Government. Real output in each of the remaining sectors in the state is forecast to increase in 2016. As in the previous quarter, the largest percentage

increase in real GDP is forecast for the Information sector, which is expected to grow 5.6 percent in 2016. The Construction industry is forecast to experience the next largest increase of 4.6 percent. In 2017, the only industry projected to contract is Natural Resources and Mining. In 2018, no industries in Mississippi are forecast to contract. The largest percentage increase in real output forecast for 2017 is in Professional and Business Services, which is expected to grow 3.7 percent, followed by Information, which is forecast to rise by 3.6 percent. Information is projected to grow by the largest percentage among all industries in 2018 at 4.0 percent, closely followed by Professional and Business Services at 3.9 percent.

The second section of Table 1 indicates payroll employment in Mississippi is expected to increase 1.1 percent in 2016. Compared to the forecast of the previous quarter, this estimate represents a reduction of 0.3 percentage point. Similarly, payroll employment in the state is expected to grow 0.9 percent in 2017, a reduction of 0.2 percentage point from the previous forecast. The forecast for employment growth in 2018 remains the same as in the previous quarter, an increase of 0.7 percent.

As in the forecast of last quarter, the industry in the state with the largest projected growth in employment in 2016 is Educational Services. Employment in the industry is expected to grow 4.6 percent, an increase of 0.7 percentage point from the forecast of the previous quarter. However, employment is projected to decline in five industries in Mississippi in 2016; in the previous quarter's forecast only Natural Resources and Mining was expected to lose jobs. This sector is projected to experience the largest percentage decline of 11.6 percent. All other sectors forecast



†Projected. Source: URC

to decrease in employment in 2016 are expected to decline by less than 2.0 percent. In 2017, the largest percentage increases in employment are forecast for Construction and Professional and Business Services, both of which are projected to increase 3.2 percent. The largest percentage decrease in employment expected in 2017 is again in Natural Resources and Mining, but this decline is smaller than in 2016. Four other industries are forecast to experience declines in employment of 1.0 percent or less in 2017. Notably, in 2018 the largest percentage increase in employment in the state is forecast for Natural Resources and Mining, which is expected to increase 3.3 percent. Employment in five industries is anticipated to decline by 1.0 percent or less in 2018.

As seen in the third section of Table 1, total current personal income in Mississippi is expected to grow 3.2 percent in 2016. This estimate represents an increase of 0.2 percentage point from the forecast of the previous quarter. Also of note in 2016 is the forecast of a 22.8 percent decline in Farm Proprietors income. In 2017 personal income in Mississippi is expected to increase by 4.0 percent, a decrease of 0.3 percent from the previous forecast. This estimate reflects the decrease to the forecast for growth in the U.S. economy in 2017. In 2018 personal income in Mississippi is projected to grow 4.5 percent, an increase of 0.1 percent from the previous quarter. If realized this increase would mark the largest growth in personal income in the state since 2011, as Figure 2 above indicates. Farm Proprietors income is expected to decrease 9.6 percent in 2017, but is forecast to return to growth in 2018 when it is expected to increase 3.0 percent.

TABLE I. BASELINE MISSISSIPPI AND U.S. FORECASTS

	2015 Percent		Annual Forecasts			Annualized Quarterly Forecasts							
Variable			2016 2017 2018			201504 2			01702 2	01703			
Mississippi Forecast	value (	Silarige	2010	2017	2010	LUIJQI L	orogr z	ologi i	510Q3 <u>1</u>	JIUQ I I	11212	on QL L	or ego
Gross State Product (projected)													
In current dollars	107,100	2.1	2.9	4.0	4.1	2.8	3.2	4.6	3.8	4.1	3.9	4.2	4.1
In millions of 2009 dollars	95,451	0.7	1.6	1.8	2.0	0.6	1.5	2.1	1.8	2.2	1.9	2.0	2.0
Natural Resources and Mining	3,956 4,098	8.3	-4.5 4.6	-0.2 2.3	0.1	-6.7 -0.3	-1.5	-0.6 2.6	-0.9	1.9 2.3	2.3 3.3	1.1 3.3	-1.6 3.0
Contract Construction  Manufacturing	14,488	-3.8 2.3	2.4	2.1	2.9	-0.3	2.9 0.3	2.5	1.5 2.3	2.3	2.6	2.4	2.6
Durable Goods	8,054	-0.8	1.5	2.2	3.6	-0.1	-1.1	2.2	2.4	3.6	3.7	3.1	3.5
Nondurable Goods	6,396	6.1	3.7	2.2	1.4	3.0	1.8	3.1	1.9	2.3	1.3	1.4	1.6
Transportation and Utilities	6,056	-2.9	0.4	1.9	2.1	0.9	1.8	2.1	1.8	2.3	1.9	2.1	2.4
Wholesale and Retail Trade	12,983	2.5	3.3	2.3	2.2	2.0	2.8	2.5	2.1	2.4	2.2	2.1	2.3
Information	2,412	1.5	5.6	3.6	4.0	5.3	3.1	2.2	6.8	1.8	0.6	4.3	5.7
Finance, Insurance, and Real Estate	13,975	0.1	1.8 2.7	2.1 3.7	1.7 3.9	3.5 2.2	2.4 3.5	2.5 3.8	1.5 3.7	2.0 4.0	1.8 3.9	1.8 4.1	1.9 4.0
Professional and Business Services Health Care and Social Assistance	6,900 7,257	1.6 2.2	2.7	3.7	2.8	2.1	3.5 3.1	3.8	3.7	3.2	2.6	2.5	3.4
Leisure and Hospitality	4,223	-1.7	1.2	1.5	1.7	1.8	0.3	1.8	1.7	2.0	1.0	1.2	1.9
Educational Services	644	-6.8	-0.4	1.3	1.7	-0.1	-0.4	1.7	1.3	2.0	1.7	1.4	2.3
Other Services	2,195	-0.4	1.4	0.1	0.0	0.2	0.5	0.4	-0.2	0.2	0.2	0.0	0.2
Government	16,093	-0.9	-0.3	0.1	0.4	-1.1	-0.5	0.1	0.1	0.7	0.4	0.5	0.5
Payroll Employment (thousands)													
Residents†	1,188	3.3	2.9	0.7	0.7	0.7	2.3	0.0	1.0	0.3	1.0	0.3	1.3
Payroll†	1,134	1.2	1.1	0.9	0.7	0.0	0.7	1.4	1.0	1.0	0.3	0.7	0.7
Natural Resources and Mining	8	-12.3	-11.6	-2.1	3.3	-16.9	-18.8	-5.8	2.3	4.7	4.0	6.9	3.4
Contract Construction	46	-5.8	1.2	3.2	2.9	-4.3	4.1	4.3	3.7	3.4	3.0	2.9	3.3
Manufacturing	142	1.6	1.0	0.5	0.4	-2.2	-1.7	1.7	0.8	0.8	0.8	0.3	0.0
Durable Goods	95	1.2	0.9	0.8	0.9	-2.2	-2.4	2.7	1.0	1.3	1.9	0.7	0.1
Nondurable Goods	47	2.6	1.2	-0.1	-0.2	-1.6	-0.8	0.3	0.4	0.0	-0.5	-0.4	-0.3
Transportation and Utilities	52	3.6	2.8	1.4	1.1	0.6	0.1	2.2	1.7	1.5	1.1	1.1	1.2
Wholesale and Retail Trade	173 13	1.6	1.9	0.1	-0.8	0.7	1.1	0.7	0.2	-0.5	-0.7	-0.7	-1.4
Information		1.8	-0.5 -1.5	-0.4	-0.2	-5.0	2.1	0.0	6.0	-4.1	-8.6	0.0	2.7
Finance, Insurance, and Real Estate	44	0.4		-0.7	-0.7	-6.0	0.8	0.3	-1.1	-0.3	0.0	-2.0	0.1
Professional and Business Services Health Care and Social Assistance	105 126	3.1 1.9	-1.4 2.4	3.2 2.2	3.0	1.2	0.4 2.2	3.9 3.7	4.2 1.8	2.7 2.1	3.8 0.9	3.7 1.5	3.0 0.6
Leisure and Hospitality	120	2.3	2.6	1.1	1.0	3.4	0.6	0.9	0.6	1.5	1.2	0.9	0.6
Educational Services	12	4.4	4.3	-0.9	-1.0	2.2	-0.6	-0.6	-1.6	-1.0	-1.6	-0.3	-1.3
Other Services	40	2.0	-1.1	-1.0	-0.7	0.4	-0.5	-1.5	-0.8	-1.4	-0.8	-0.7	-1.0
Government	244	0.0	0.7	0.4	0.4	0.5	0.3	0.3	0.2	0.5	0.6	0.3	0.2
Unemployment Rate (%)†‡	6.5	-0.9	6.2	6.3	6.3	6.0	6.1	6.2	6.2	6.3	6.3	6.3	6.3
Personal Income (millions of current \$)													
Wages and Salaries	46,366	2.0	4.1	4.1	4.2	1.9	3.9	4.2	4.3	4.5	3.9	4.2	4.1
Other Labor Income	11,127	1.7	3.1	3.5	3.4	3.0	3.1	3.2	4.2	3.2	3.6	3.1	3.9
Proprietors' Income	10,155	0.7	0.1	3.9	4.8	-11.6	3.6	5.5	5.7	3.5	5.2	5.5	4.5
Farm Proprietors Non-farm Proprietors	1,568 8,587	-10.2 3.0	-22.8 4.0	-9.6 5.6	3.0 5.3	-106.0 4.2	-12.8 5.0	5.5 5.5	19.6 5.8	-36.3 5.8	12.9 5.4	-0.4 5.3	21.8 4.9
Property Income	15,736	3.4	2.2	2.2	4.4	3.6	0.5	1.0	2.6	2.3	2.8	3.7	5.9
Transfer Payments	27,571	4.6	3.5	4.4	5.0	4.1	3.7	4.0	4.7	4.9	4.2	4.1	6.4
Less: Social Security Payments	7,854	1.3	3.8	4.1	4.3	3.2	3.6	3.5	5.4	3.3	4.8	2.6	6.8
Plus: Residence Adjustment	2,963	6.0	5.2	5.7	5.3	4.7	5.6	5.4	6.3	5.6	5.0	5.2	5.4
Equals: Total Personal Income	106,063	2.9	3.2	4.0	4.5	1.4	3.5	4.0	4.2	4.2	4.1	4.2	5.4
Less: Individual IRS Collections	6,944	7.9	3.3	5.0	3.8	0.6	4.7	5.3	6.6	4.5	4.4	3.8	3.8
Less: Individual State and Local Taxes	2,158	4.7	2.3	4.7	4.5	1.3	1.5	6.5	4.8	6.0	4.0	4.3	4.3
Equals: Disposable Personal Income	96,961	2.5	3.2	3.9	4.6	1.5	3.4	3.8	4.1	4.1	4.1	4.3	5.6
Per Capita Personal Income (thousands of \$) Population (thousands)	35.440 2,992	2.9 0.0	3.1 0.1	3.7 0.2	4.2 0.3	1.3 0.1	3.3 0.1	3.9 0.1	3.9 0.3	3.9 0.3	3.8 0.3	3.9 0.3	5.1 0.3
U.S. Forecast	2,772	0.0	0.1	0.2	0.3	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3
Gross Domestic Product (billions of current \$)	17,947	3.5	3.3	4.6	4.5	4.5	4.1	5.1	4.5	4.4	4.3	4.5	4.9
Gross Domestic Product (billions of 2009 \$)	16,349	2.4	1.9	2.4	2.4	2.2	2.4	2.4	2.5	2.4	2.3	2.5	2.7
GDP Deflator (Nominal GDP ÷ Real GDP × 100)	110	1.0	1.4	2.1	2.1	2.2	1.8	2.5	2.1	1.8	2.1	2.1	2.1
Total Employment, Residents (millions)†	149	1.7	1.8	1.3	1.1	0.3	1.6	1.6	1.3	1.3	1.3	1.0	1.3
Total Payroll Employment (millions)†	142	2.1	1.7	1.2	0.8	1.1	1.1	1.9	1.4	1.1	0.5	1.1	0.8
	5.3	-14.4	4.8	4.7	4.7	4.8	4.8	4.7 4.2	4.7	4.7 4.6	4.7	4.7 4.7	4.7 5.6
Unemployment Rate (%)†‡	15 251												70
Personal Income (billions of current \$)	15,351 48	4.5 3.7	4.1 3.4	4.5 3.4	4.9 4.1	4.1 3.3	3.8 2.4		4.8		4.3 3.9		
	15,351 48 237.0	4.5 3.7 0.0	3.4 1.3	3.4 2.5	4.9 4.1 2.0	3.3 1.7	2.4 1.7	3.2 3.3	4.8 4.0 1.7	4.0	3.9 1.6	3.9 3.3	4.6 1.6

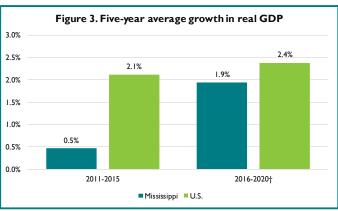
†Seasonally-adjusted. ‡Projected rates. Sources: U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis (levels), and URC (forecasts).

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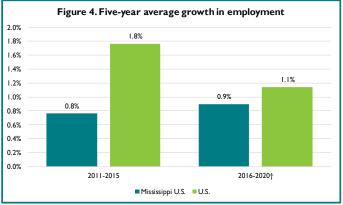
### FIVE-YEAR FORECASTS

The five-year forecasts for growth in U.S. and Mississippi real GDP and employment, like the short-term forecasts, are slightly lower than in the second quarter. Figure 3 indicates the average five-year growth in real GDP in Mississippi is forecast at 1.9 percent, a decrease of 0.2 percentage point from the previous quarter. Similarly, U.S. real GDP is forecast to grow an average of 2.4 percent annually over the next five years, a decrease of 0.2 percentage point from the forecast of the previous quarter. Despite the reductions to these long-term forecasts, if realized the increase in average annual real GDP from 2016 to 2020 represents a considerable improvement over 2011 to 2015 for the Mississippi economy, while it reflects slightly higher growth for the U.S.

The forecasts for average five-year growth in employment in both the U.S. and Mississippi changed slightly from the previous quarter. As Figure 4 indicates average five-year growth in U.S. employment is projected at 1.1 percent, 0.1 percentage point lower than in the forecast of the previous quarter. The forecast for average annual employment growth in Mississippi from 2016 to 2020 is 0.9 percent, also 0.1 percent lower than in the forecast of the previous quarter. If realized this forecast would essentially equal the growth from 2011 to 2015 of 0.8 percent. The U.S. forecast would represent a 0.7 percentage point decline from the 2011 to 2015 period.



†Projected. Sources: Bureau of Economic Analysis; URC



†Projected. Sources: Bureau of Labor Statistics; URC

## ALTERNATIVE FORECASTS

Based on scenarios outlined by IHS Economics, the alternatives to the baseline forecasts in terms of real GDP are similar to the previous quarter. The probability of recession under the pessimistic scenario remains at 20 percent. Such a recession would last six months beginning sometime in mid-2017. This situation would result from a weaker global economy caused by uncertainty surrounding the United Kingdom's withdrawal from the European Union as well as a decline in U.S. financial markets. Mississippi's economy bears the brunt of this pessimistic scenario in 2017 and 2018, as the rate of real GDP growth falls to 1.4 percent in both years. Nevertheless, average annual growth in real GDP in Mississippi under the pessimistic scenario is 1.7 percent, only 0.2 percentage point lower than in the baseline scenario. In contrast, under the pessimistic scenario U.S. real GDP contracts 0.1 percent in 2017 and grows only 1.0 percent in 2018. Average annual U.S. real GDP growth from 2016 to 2020 under this scenario falls to 1.6 percent, 0.8 percentage point below the baseline forecast. Under the pessimistic scenario employment in Mississippi contracts 0.2 percent in 2018 and increases an average of 0.6 percent per year from 2016 to 2020. U.S. employment contracts 0.6 percent in 2018 under the pessimistic scenario and on average grows 0.7 percent annually from 2016 to 2020.

IHS Economics assigns a 15 percent probability to the optimistic scenario, under which U.S. productivity growth improves as technological breakthroughs lead to more investment and the negative impacts of Brexit are minimized. Under the optimistic scenario real GDP in Mississippi changes little compared to the baseline. The average annual growth in real GDP reaches 2.0 percent, only 0.1 percentage point greater than under the baseline scenario. Similarly, the U.S. economy performs only slightly better under the optimistic scenario compared to the baseline forecast. The average annual growth in U.S. real GDP equals 2.6 percent, which is 0.2 percentage point higher than under the baseline forecast. Employment growth in Mississippi changes little under the optimistic scenario, averaging 1.0 percent per year from 2016 to 2020 compared to 0.9 percent annually under the baseline forecast for the same period. Under the optimistic scenario average annual U.S. employment growth from 2016 to 2020 equals 1.3 percent, which is 0.2 percentage point more than in the baseline forecast.