“It was the best of times, it was the worst of times.”
Charles Dickens, 1859 (A Tale of Two Cities)

In July 2008, the price of oil per barrel reached an astronomical $147, and the price of gasoline in several states exceeded $5 per gallon; just six months earlier in January 2008, the price per barrel had hovered around $90. Fast forward to the end of 2008, and the price had plunged to under $35 a barrel, when the United States and world economies were in the throes of the Great Recession, the worst economic downturn to sweep over the globe since the Great Depression. Reviewing the price per barrel in the last six months reveals similar trends: in June 2014, oil was around $115 per barrel and six months later, in early January 2015, it had dropped precipitously to below $50 per barrel. Interestingly, the four years with the highest average crude oil prices since the 1860s were 2008, 2011, 2012 and 2013; hence, the steep drop in oil prices is not a “new normal” but a return to more historic price levels. Figure 1 demonstrates the roller-coaster ride taken by the price of oil in the past five years (2009 to 2014) with regard to the two major global benchmarks: Brent and West Texas Intermediate. Along with Figure 1, Figure 2 also demonstrates the sharp drop in the price of a barrel of crude oil over a 10-year period (2005 to 2015) on January 13, 2015.

In fact, the declining price of crude oil has been reflected in gasoline prices at the pump, with prices dropping below $2 a gallon, in many states throughout the United States; by mid-December 2014, gas under $2 was found in 13 states. Two weeks prior, there was only one gas station in the country selling gas at that low price. By mid-December, the nationwide average stood at $2.55 a gallon, the lowest it has been since October 2009. Two weeks later, in the last week of December 2014, the national average had dropped to $2.32 a gallon, down 12 cents in a week, and nearly 50 cents in a month. On January 13, 2015, AAA reported that within the following week, the number of states with gas prices less than $2 would rise from 18 (home to more than one-third of Americans) to 25, a stunning turnaround in gas prices from even a few months prior. Figure 3 provides a graphical representation of the average price of gasoline (per gallon) between April 1993 and February 2015 that reinforces the cyclical nature of the commodity over two decades. Along with these broad, national prices, Figure 4 depicts the price of regular grade gasoline at filling stations in the different regions of the United States.

Why are oil prices falling?
The latest plunge in oil prices has sent seismic waves throughout the globe, prompting disparate consequences in different sectors of the United States and world economies; while some sectors are net beneficiaries of the
THE IMPACT OF SLUMPING OIL PRICES

Figure 1  Brent and West Texas Intermediate Crude Oil Prices 2009 - 2014


Figure 2  Crude Oil Price per Barrel 2005-2015

THE IMPACT OF SLUMPING OIL PRICES

Figure 3  Weekly U.S. All Grades All Formulations Retail Gasoline Prices (Dollars per Gallon)


Figure 4  Average Price of a Gallon of Gasoline (Regular) Across the United States January 26, 2015

decline, other sectors are on the losing end of the falling price of oil. In probing the reasons for this steep decline in prices, experts have honed in on five major factors:

**Factor 1 - Domestic Oil Production**

Oil production in the United States, prompted by advancements in extraction related to shale explorations, has exploded. Production has nearly doubled from 5 million barrels a day to close to 9 million in the space of six years.\(^6\) U.S. domestic crude oil production soared by 1.2 million barrels per day, a 16 percent increase in 2014 over the prior year.\(^7\) North Dakota alone produces 1 million barrels of oil per day.\(^8\) The Energy Information Agency (EIA), a unit within the U.S. Department of Energy, expects U.S. crude oil production to average 9.3 million barrels per day in 2015, an increase of 700,000 from 2014.\(^9\) Thanks to innovative drilling techniques, previously inaccessible oil and natural gas deposits trapped in shale rock formations now are unlocked and available for extraction in the United States. In fact, U.S. production levels now rival oil giants such as Russia and Saudi Arabia, and the increase in domestic production has offset the unreliability associated with other major suppliers such as Ukraine, Nigeria, Venezuela, Syria and other countries in the Middle East. One of the most striking corollaries of the enhanced U.S. production is the fact that U.S. oil imports have steadily declined. Figure 5 elaborates on this trend. While Figure 5 provides information through 2013, the latest information available from EIA, it is very likely that the numbers for 2014 will reflect further reductions in imports.

**Factor 2 - Saudi Arabia**

Saudi Arabia’s impact on global oil markets remains oversized and the nearly 10 million barrel daily contribution from the Kingdom has the potential to move prices. However, Saudi Arabia has made the decision to ride out the current wave of declining prices and not slash production in an effort to stave off further price declines by limiting supplies. The rationale extended for this approach is the Kingdom’s quest to preserve its current customer base and “because it has grown weary of cutting its own oil output in order to prop up prices enjoyed by other countries.”\(^10\) In this vein, Saudi Arabia used its clout at the November 2014 Organization of Petroleum Exporting Countries (OPEC) meeting to insist on the cartel maintaining production of 30 million barrels per day for the foreseeable future.
Factor 3 - Asian Demand

Demand from Asia has declined in the last few months with purchases from China, Japan, India and other Asian countries waning. The economic slowdown in Asia sapped demand from these countries while their governments have been slashing oil subsidies too, further eroding demand. In addition, Europe is in the midst of an economic retraction with increased austerity measures and decreased consumption draining demand for oil in the continent. The International Energy Agency (IEA), the autonomous organization which works to ensure reliable, affordable and clean energy for its 29 member countries (including the United States), also lowered its forecast for global oil demand in 2015. In a report released in December 2014, the IEA estimated that global oil demand in 2015 will expand by 900,000 barrels daily – 230,000 less than previously forecast – to 93.3 million barrels a day.

Factor 4 - Value of the American Dollar

Given that oil is purchased in United States dollars, when the dollar’s value increases (as it has in recent months), oil becomes more expensive to buy in countries outside the United States. This acts as another brake on worldwide demand as countries and consumers cut back on oil purchases, a development that further adds downward pressure on oil prices.

Factor 5 - Foreign Oil Production

Alongside the escalating oil production in the United States, a number of oil-producing nations (Libya, Iraq, Nigeria and South Sudan) have continued to supply world oil markets despite the extreme instability and political turbulence in these countries. For instance, in December 2014, even as oil prices plunged, Iraq’s oil production rose about half a million barrels a day, the result of years of investment. In fact, Iraq’s oil minister noted that the country produced nearly 4 million barrels of oil a day in December 2014, an all-time high for the war-torn nation. He also noted that rather than paring back on production, Iraq intends to extract more oil in an effort to offset the lost revenues from sliding prices. Consequently, the steady streams from these producers to global oil markets – at a time when demand in Asia and Europe has been weak – have resulted in further lowering oil prices, a production trend that can be expected to continue in 2015.

Figure 5

Oil Imports (all grades) from World to the United States 2009 to 2013

While experts tracking global oil markets indicate that oil prices will not escalate significantly in 2015 from current levels – expectations are that they will not increase to more than $64 to $70 a barrel, at least in the first six months of 2015. However, some experts do forecast that oil prices will start escalating toward the second half of 2015, and continue rising in 2016, hovering between $92 and $95 a barrel. In fact, Goldman Sachs released an oil report in mid-January 2015 in which the company predicted that a barrel of oil would fall to $41 in three months, $39 in six months before recovering to $65 by the end of the year.

The EIA in its January 2015 gasoline and diesel fuel price report forecasted that “prices probably will remain substantially below 2014 levels for both this year and next.” The EIA noted that while there is “high uncertainty in the price outlook,” it looked for “average U.S. motor fuel prices to edge up marginally in 2015 from current levels before rising further in 2016.” In fact, in a news conference in late January 2015, the EIA administrator cautioned consumers and investors that the “drop in crude prices” is not a “permanent” situation, citing the cyclical nature of the constantly fluctuating commodity.

In the first quarter of 2015, U.S. regular gasoline retail prices are projected to average $2.16 per gallon, with the price expected to crawl up to an average $2.33 per gallon for the rest of 2015, a remarkable drop from the $3.36 per gallon average price in 2014. In 2016, the projected regular gasoline retail price is expected to increase to an average of $2.72 per gallon. Figure 6 provides a graphical representation of gasoline and crude oil prices, actual and forecasted, for the period January 2011 through January 2016.

As indicated at the outset, there are winners and losers associated with plummeting oil prices. In terms of the winners, one of the most important constituencies involves consumers, both inside and outside the United States. The International Monetary Fund forecasts that a price cut of 25 percent for oil, if maintained, should result in a global gross domestic product (GDP) that would be approximately 0.5 percent higher than it would be otherwise. Hence, the drop in the price of oil from $115 in June 2014, to $50 in January 2015, would inject a considerable boost to a global economy that has experienced lackluster growth prospects.

A similar scenario plays out in the United States: high energy prices pose huge burdens for most Americans,
Figure 7  Average Annual Household Expenditures on Gasoline (and Motor Oil) 2000 to 2015


Figure 8  Change in Consumer Spending on Gasoline as a Percent of GDP

Source: BEA, Moody’s Analytics

particularly those who drive great distances each day and those who only can turn the thermostats down so low when the weather turns cold. Hence, increasing energy prices result in consumers cutting back on their discretionary spending, a trend that causes negative consequences on state, regional and national economies. However, when energy prices fall, as oil prices have by nearly 57 percent between June 2014 and January 2015, consumers have considerable leeway in devoting these savings toward other expenditures. For instance, in November 2013, Americans spent $1.2 billion a day on gasoline according to the EIA; as a result of plunging oil prices, in November 2014, Americans spent about $1 billion a day on gas, a reduction of $200 million. Cumulatively, for just the month of November 2014, the $200 million daily savings translated to a $6 billion stimulus to the U.S. economy, a sizable number by any standards. Experts also have documented that every penny decline in gas prices adds about a billion dollars to the pockets of Americans.\(^2\) Comparing gas prices between December 2013 and December 2014 reveals a drop of 62 cents, translating into a $62 billion stimulus injection; or, in terms of households, a savings of about $500 to each household, monies they can allocate toward other expenses. For the rest of 2015, the EIA forecasts that the average American household now is expected to spend about $750 less for gasoline ($200 more than government experts predicted as recently as a month ago\(^2\)) compared with last year because of lower gasoline prices.\(^2\) The EIA also forecasts that U.S. household gasoline expenditures in 2015 are on track to be the lowest in 11 years. Figure 7 reveals average annual household expenditures on gasoline (and motor oil) between 2000 and 2015.

Even in terms of heating oil, the EIA forecasts a drop of 15 percent between this winter and last year’s; experts
calculate that translates to an annual savings of $362 per household.\textsuperscript{23} In a January 2015 webinar on the oil economy, Moody’s Analytics quantified how the drop in oil prices acts as a tax cut for U.S. consumers, and this information is presented in Figure 8.

Beyond the specific savings generated from lower gasoline and heating oil prices, consumers also stand to gain from reduced prices for a broad swath of consumer products and services that are petroleum based. Agriculture is incredibly energy-intensive, with petroleum products essential for a range of related activities such as manufacturing fertilizers, running agricultural equipment and pumping water from underground aquifers. Similarly, petroleum-based products are vital in the production and transportation of an array of food items that are essential to our survival.\textsuperscript{24} Oil plays an extraordinary role in transporting raw products, which later become food, at multiple stages: in the trucks with synthetic rubber tires that burn diesel fuel and travel along asphalt roads (all three materials originate in oil) to bring food to the grocery store; in the combines on farms that run on a form of crude oil that harvest the wheat that forms the dough for bread; and, in the low-grade fuel oil that powers the container ships that move food items such as fruits, meat, fish, vegetables and dairy products across continents. As expected, the price of oil factors into the eventual price of these items and, consequently, a drop in oil prices will, in turn, result in reduced prices for these commodity items.

Other sectors that will be impacted by the drop in oil prices include the airline industry. Given that fuel costs can account for approximately 30 percent of the operating costs of airlines, it seems reasonable to expect that the appreciable drop in oil prices should result in reduced airfares. In 2012, airlines spent an estimated $208 billion on jet fuel, nearly five times as much as the industry spent in 2003; the drop in oil costs is expected to generate some $5 billion in savings for the industry in 2015.\textsuperscript{25} Delta Air Lines alone expects a $2 billion windfall in 2015 from the lower cost of aviation fuel, even though past hedging on fuel costs will erode profits in the short run.\textsuperscript{26} Retailers also expect a boost in sales as a result of the greater disposable income available to consumers. For instance, the National Retail Federation announced in December 2014 that retailers expected “a strong holiday season” given “increasing wages combined with lower gas prices.”\textsuperscript{27}

Another area that saw strong sales, propelled in part by lower gas prices, was the automobile sector. In fact, auto sales in December 2014 crowned a boom year for the sector that finished the year with an increase of nearly 6 percent (5.9 percent to be precise) compared to 2013; according to Autodata, a publisher and supplier of technical information to the automotive aftermarket, in 2014, the industry sold 16.52 million vehicles, the sector’s best year since 2006 and the fifth consecutive year of growth.\textsuperscript{28} While automakers reported strong December U.S. sales, boosted by falling gasoline prices, analysts noted that this also may have encouraged them to be less concerned about fuel economy.

These are a fraction of the areas where consumers will see immediate benefits as a result of falling oil prices, a development that also will act as a check on already low inflation and minimize pressure on the Federal Reserve to start raising interest rates in the very near future. Furthermore, given the fact that wages across many sectors in the U.S. economy have remained relatively stagnant since the end of the Great Recession, this unexpected financial boost to consumers from lower fuel costs (resulting in declining food costs and the price of other goods and services) has acted as a major enhancement to the U.S. economy. In fact, the strength of American consumer spending already is reflected in the turbo-charged U.S. economy. Specifically, real GDP (the value of the production of goods and services in the United States, adjusted for price changes) expanded at an annual rate of 5.0 percent in the third quarter of 2014, the quickest in 11 years, exceeding growth expectations of 4.3 percent. For the second quarter of 2014, real GDP growth was revised to reflect an increase of 4.6 percent. Importantly, real personal consumption expenditures increased 3.2 percent in the third quarter of 2014, compared with an increase of 2.5 percent in the second.\textsuperscript{29}

Forecasts for 2015 and 2016 also remain very positive. Following the December 2014 meeting of the Federal Reserve Board’s Federal Open Market Committee, the Board noted “that real GDP would expand at a faster pace in 2015 and 2016 than it had in 2014 and that it would rise more quickly than potential output, supported by increases in consumer and business confidence and a pickup in foreign economic growth.”\textsuperscript{30} As evident, the mention of increasing consumer confidence refers to the improving financial position of Americans, propelled by
the recovering labor market and reductions in oil prices resulting in greater disposable income. In a similar vein, the highly respected Survey of Consumers from the University of Michigan indicated that “consumer confidence reached its most favorable level in the December 2014 survey since the last cyclical peak was set in January 2007.” This survey report noted that the gains over the past several months have been primarily due to “improving job and wage prospects and, more recently, to falling gasoline prices.” In fact, the University of Michigan survey maintains that “consumers held the most favorable long-term prospects for the national economy in the past decade,” an advancement likely bolstered by falling oil prices. Further bolstering prospects for 2015 was the U.S. GDP numbers for 2014; for all of 2014, the U.S. Department of Commerce reported that the economy grew at a rate of 2.4 percent, the best showing since 2010. Given that nearly 70 percent of U.S. GDP flows from consumer spending, the steepening drop in energy prices already is demonstrating more optimism among consumers, a trend that is expected to continue, and even accelerate, in 2015.

Tumbling oil prices lead to adverse consequences at several points in the economy with repercussions at both the state and national levels. As expected, the declines have particularly deleterious impacts on the nation’s major oil-producing states, states that generally enjoyed impressive revenue gains during the years when oil prices hovered above $100 a barrel. In fact, these states led the U.S. economic recovery out of the Great Recession and enjoyed several years of impressive revenue inflows and, in some cases, some of the lowest unemployment rates in the country. Figure 9 reiterates the impressive production increases in the United States between 2008 and 2013.

Even though the information presented in Figure 9 reflects data for 2013, the steady production increases are apparent between 2008 and 2013. In fact, five states (Texas, North Dakota, California, Alaska and Oklahoma) and the Gulf of Mexico supplied more than 80 percent, or 6 million barrels per day, of the crude oil produced in the United States in 2013.

For instance, North Dakota’s economy has been catapulted forward by the exploitation of the Bakken shale formation and the state’s subsequent boom in the past five years or so. According to the latest U.S. Department of Commerce annual data (June 2014) on Gross State

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**Figure 9** Annual U.S. Crude Oil Production by State or Region (2008 to 2013)

In the context of dipping oil prices, negative impacts are surfacing in these states that enjoyed the advantages of oil at more than $100 a barrel. Experts report that “the pain limit for U.S. shale drillers was reached when U.S. oil prices dropped below $50 a barrel.”\(^{39}\) Alarmingly, Fitch, the credit rating agency, in a December 15, 2014 news release, forecasted that “Alaska, Louisiana, New Mexico and

\(^{1}\)Chained dollars refers to a method of adjusting real dollar amounts for inflation over a number of years, permitting the comparison of figures from different years.
North Dakota and other major resource states will see declines in oil-related revenues with the steep reduction in oil prices. Although the impact varies widely, budgets for all the major oil-producing states could become less predictable in the near term if volatility in the oil markets continues. This forecast is reflected in the actions of a number of these states that are bracing themselves for the contraction in economic activity as a result of the once-booming energy sectors tussling with the steep reduction in oil prices. Beyond the immediate contraction in the energy sector, officials in these states also are concerned about the adverse consequences and ripple effects that likely will spread to other key areas of these state economies, particularly the housing and construction sectors. Nevertheless, it is important to note that experts are not forecasting the kind of economic catastrophe that swept over many of these same energy-producing states in the 1980s, when a similar downward spiral in oil prices caused economic havoc. In fact, experts indicate that an extended downturn is unlikely, mainly because the economies in many of these states are far more diversified – and less reliant on energy – than they were some three decades ago. Alaska remains the exception here, with the state continuing to rely on the energy sector for approximately 90 percent of state government operations.

Specific State Challenges

The following subsections highlight the specific challenges faced by a sampling of the states most affected by the plunge in oil prices:

Alaska

Given that the state’s tax revenues have the highest level of volatility among all 50 states, varying by as much as 34.4 percent beyond its overall growth trend, the current plunge in oil prices has socked Alaska most severely. Compounding Alaska’s woes is the fact that an overwhelming portion of state government operations is funded by oil revenues (90 percent, as noted earlier), a fact that allows Alaska residents to pay neither income nor sales taxes. Hence, the steep drop in global oil prices has destabilized the state’s budget to the extent that the credit rating agency Moody’s lowered Alaska’s credit outlook from stable to negative. Specifically, in mid-December 2014, Alaska’s 2015 fiscal year (current) budget forecast was lowered by almost $2 billion, as a result of the drop in oil revenues, and the state’s budget deficit was forecasted to reach nearly $3.5 billion. (While the state’s current budget amounts to $6.1 billion, revenues flowing mostly from the energy sector are expected to contribute only $2.6 billion). Alaska Governor Bill Walker has indicated that the state will be unable to balance its budget without tapping its rainy day fund, a fund that contains an imposing $12 billion in savings. The new governor’s capital budget included significant reductions from the one submitted by the former governor, with a number of major infrastructure projects struck to reflect the harsh revenue picture. In late January 2015, the governor proposed a 5 percent to 8 percent reduction in spending at all state agencies, and a possible 25 percent reduction over four years, if low energy prices persist; he also hinted at the possibility of enacting new taxes, possibly sales or income taxes.

Louisiana

In the SLC, Louisiana appears to be the state most impacted by the falling price of oil. In fact, the state’s projected budget shortfall for the current fiscal year (2015) is estimated to be $104 million, a number quickly dwarfed by the shortfall forecasted for the next fiscal year (2016) that begins on July 1: $1.6 billion, an amount approximately 15 percent of the $10.3 billion in taxes, licenses and fees that the state expects to collect. In fact, the $1.6 billion shortfall forecasted in January 2015 for fiscal year 2016 is a little more than the $200 million shortfall forecasted a month earlier, in December 2014. In fiscal year 2016, the state had originally forecasted that it would recoup $1.3 billion in revenues from the oil and gas sector; with the downward revision, the state now expects to secure approximately $1 billion.

However, budget experts do not attribute this shortfall entirely to the drop in oil prices; as Representative Brett Geymann, House of Representatives stated, “[O]il prices are bad no doubt. But we had a billion-dollar budget problem before oil prices collapsed.” According to Louisiana officials, the state loses $12 million every time the annual average price of a barrel of oil declines by $1. Reflecting enormous efforts by successive Louisiana policymakers to diversify the state’s economy away from over-reliance on the energy sector, the portion of the state’s budget linked to oil and gas revenues currently amounts to about 14 percent, a sharp and appreciable drop from more than 40 percent in the 1980s. In response to the budget
shortfall, policymakers already have initiated measures to freeze vacant state government positions, halt travel and supplies at state agencies and reduce contracts across state government, a strategy that will be re-enacted in the coming months.

Notwithstanding the jolts dealt to the Louisiana budget by flagging oil and gas prices, experts on the state’s economy are quick to point out that the state’s reliance on revenues from the energy sector have diminished considerably since the 1980s, when the state economy experienced similar challenges from declining oil prices. In fact, the president of the Louisiana Oil and Gas Association noted that “I don’t think we will feel it as badly here in Louisiana as other parts of the country may feel it,” and the chief economist of the Louisiana Legislative Fiscal Office commented on oil and gas revenues: “[I]t’s a much lower share, but it’s still a pretty big number.”

North Dakota

The state that saw the most resounding recovery from the Great Recession, triggered by the massive expansion in shale exploration and hydraulic fracking, North Dakota “could lose billions in revenue if oil prices continue to slip,” according to Lieutenant Governor Drew Wrigley. As elaborated earlier, North Dakota’s ability to tap into its abundant natural resources of oil and gas through the technological advancements in shale exploitation enabled the state to achieve the lowest unemployment rate in the nation and generate billions of dollars in state revenue. However, as outlined by the lieutenant governor, collapsing oil prices pose huge challenges to the state, not only in terms of diminishing revenues but also because of an automatic trigger that is activated. Specifically, under state law, if prices drop below a certain threshold (currently $52.06 per barrel of West Texas Intermediate) for five consecutive months, North Dakota’s oil extraction tax disappears entirely for up to two years. This scenario, considered “unlikely” by state oil experts, could result in a “dramatic change in state revenue” and potentially lead to the closing of oil rigs, a serious slowdown in economic activity, and the loss of jobs. Notwithstanding the possibility for dire economic consequences, policymakers are confident that the state’s economy is built on a very sound base and that the state budget would balance. Lieutenant Governor Wrigley emphasized that North Dakota has to move to a more diversified economy and one that is not as reliant on the price of commodities and oil; he highlighted the technology start-ups in Fargo, and manufacturers like the Bobcat Company, as prime examples of this diversified economy.

Oklahoma

Another SLC state wrestling with the downside of falling oil prices, given the state’s increasing reliance on the oil and gas sectors, particularly in the recent prosperous years, is Oklahoma. In his Economic Report at the end of 2014, Oklahoma State Treasurer Ken Miller confirmed that lawmakers will have $300 million (or 4.1 percent) less to spend in the fiscal year 2016 budget and identified

![Figure 10: Impact of Low Oil Prices on Fiscal Year 2016 Revenues in Oklahoma](http://www.ok.gov/treasurer/documents/OER_12-29-14.pdf)
low crude oil prices as a major factor for this reduction. Specifically, Treasurer Miller noted the “recent drop in crude oil prices is expected to deeply impact revenue collections during the next fiscal year” and forecasted a total negative impact of more than $230 million on total state revenues, with $180 million of that lost to the General Revenue Fund.” Figure 10 provides a graphical representation of this impact.

Experts cited three major reasons for this reduction: the dramatic drop in oil prices; unavailability of nonrecurring funds used in the last budget cycle; and the 0.25 percent income tax reduction that goes into effect in the middle of fiscal year 2016. However, the income tax reduction might not occur because the law enacting the reduction contained a provision that required a certain level of growth in state revenue; given the fall in oil prices depressing state revenues, it is possible that the income tax cut will be delayed.

Texas

Texas remains a state that has demonstrated impressive economic growth in a number of criteria since the end of the Great Recession, a phenomenon driven partially by the state’s oil and gas sectors. In light of falling oil prices, there has been a great deal of scrutiny on how Texas will be impacted and whether the Texas economy can continue to thrive. The drop in oil prices will adversely affect the Texas economy, and experts note that declining prices in the last six months have resulted in a loss of $83 million per day in potential revenue for the energy sector in the state.

The decline in oil prices also has rekindled memories of the collapse of the Texas economy in the 1980s, when the oil sector experienced severe setbacks and Texas suffered one of its worse recessions. Yet, there is an important distinction between the Texas economy from 30 years ago and the one today: diversification. In fact, oil and gas jobs make up approximately 3 percent of non-agricultural jobs, a significantly lower number than government (16 percent) and education and health (13 percent). Even in terms of businesses, oil and gas extraction operations as a share of total establishments have declined compared to the 1980s, with the state’s 11 major industries — as identified by the Texas Comptroller of Public Accounts — including manufacturing (aviation, automotive); mining and logging; construction; professional and business services; education and health services; financial activities; trade, transportation, and utilities; information technology (computer system designers); leisure and hospitality; other services; and government, all gaining prominence in recent years. In fact, research indicates that employment in the Texas oil and gas extraction sector stood at 1.5 percent of total private sector employment in 1990, declined to 0.8 percent of total in 2000, and climbed upward to 1.1 percent in 2013. Along with diversification, the contemporary Texas economy is undergirded by increased trading in goods and services, both within and outside the United States; greater levels of regional and national banking involvement, accompanied by additional financing and oversight; and a real estate market that is realistically priced, i.e., not overvalued, as it was in the 1980s.

In probing the potential impact of plunging oil prices on the Texas economy, BBVA Research, a global financial services group, devised three potential scenarios of increasing severity: standard, supply-side and demand-side scenarios. Under the standard scenario (3-month decline in oil prices), BBVA Research forecasts the Texas economy could lose 1.3 percentage points in GDP growth relative to the baseline. In the supply-side scenario (supply-side shocks similar to those experienced in the 1970s and 1980s that stemmed from geopolitical instability and supply side corrections), BBVA Research estimates that Texas would lose 3.4 percentage points in GDP growth relative to the baseline growth estimate. In the demand-side scenario (shocks brought on by a demand-driven decline, similar to the setbacks and price shocks of 2008), BBVA forecasts that GDP would be 4.3 percentage points below the baseline.

BBVA Research identifies the metropolitan areas of Houston, Midland, Odessa and, lately, San Antonio (located near the Eagle Ford Shale formation) as susceptible to facing economic headwinds as a result of oil price shocks. In this analysis, Houston not only is the epicenter of the oil and gas sector in Texas, but the city’s prowess in the sector has vaulted it to compete with many major oil producing nations (such as the United Arab Emirates or UAE). Nearly half of Houston’s jobs are linked to the oil and gas sectors, either directly or indirectly, an outcome that contains dangers related to
falling price levels. One scenario maintains that Houston only would lose 76,000 jobs and, with oil prices falling further, only would add 50,000 jobs in 2015; in contrast, in 2014, Houston generated 120,000 jobs.\textsuperscript{57}

In a city like Midland, BBVA Research maintains that the economic losses could be as much as one-fourth of economic activity; in Dallas, there potentially could be little or no impact from the decline.\textsuperscript{58} BBVA Research’s conclusions in this regard were reconfirmed by a report released by the ratings agency Fitch in January 2015, which concluded that even though the state’s “larger cities are well equipped to withstand lost oil revenues,” some local governments could be hit “hard” by the months-long decline in oil prices.\textsuperscript{59} The “declines in taxable values and weaker economic activity” in these smaller Texas communities, which have grown increasingly reliant on revenues from the booming oil and gas sectors, “could force [these] cities and counties to raise taxes and make it difficult for some local school districts to take on new debt.”\textsuperscript{60}

More recent estimates from the Texas Comptroller of Public Accounts, contained in the January 2015 official revenue estimate for the remainder of fiscal year 2015 and the upcoming fiscal year 2016-17 biennium, reinforce that Texas has cut back on its expected revenue inflows from oil production and regulation taxes.\textsuperscript{61} Specifically, in the upcoming fiscal years 2016-17 biennium, oil production and regulation taxes are expected to generate $5,689 million, compared to $6,637 million in the 2014-15 biennium, a 14.3 percent decrease. Nevertheless, the Texas comptroller maintains that despite the adverse conditions presented by falling oil prices and international economic, political and military challenges, the Texas economy, as measured by real GSP, is expected to grow by 3 percent in fiscal 2015, followed by growth of 3.2 percent in 2016, and 4.1 percent in 2017. The fact that the Texas economy will continue to expand in the next three years, despite a drop of nearly 15 percent in revenues from the oil and gas sectors, confirms the point made earlier regarding the diversification of the Texas economy compared to the 1980s.

The Federal Reserve Bank of Dallas also confirmed these adverse implications sweeping over the Texas economy and forecasted that falling oil prices and other factors would lower job growth in Texas from 3.6 percent in 2014, to as low as 2 percent in 2015, a potential reduction of 149,000 total jobs in the state.\textsuperscript{62}

Another setback related to falling oil and gas revenues with statewide implications deals with Proposition 1, or the Texas Transportation Funding Amendment. In November 2014, voters overwhelmingly approved Proposition 1, which authorized the diversion of half of the general revenue derived from oil and gas taxes away from the economic stabilization fund (ESF), also known as the rainy day fund, to the state highway fund for the purpose of providing transportation funding for repairs and maintenance of public roads. Given that the state highway fund had a $5 billion annual shortfall, the injection of funds from oil and gas revenues was expected to provide the state’s transportation department about $1.7 billion in new funds every year, beginning in 2015.\textsuperscript{63} Given that production taxes are based on the cost of oil, falling values lead to falling tax revenues and, consequently, reduced revenues for the state’s inadequately funded transportation programs. The transportation department did see “an almost immediate deposit of $1.6 billion for 2014,” shortly after the landslide passage of the referendum in November, given that oil prices were higher for most of 2014 than they were at the end of the year.\textsuperscript{64}

**West Virginia**

Another state facing some economic headwinds related to the plummeting oil and gas prices is West Virginia. While severance taxes amounted to 13 percent of the state’s total revenues in December 2014 ($47.8 million of a total of $373.1 million), they plunged nearly $18 million short of estimates in the month.\textsuperscript{65} According to Deputy Revenue Secretary Mark Muchow, “[W]hat we’re seeing is the weakness of the severance tax over time because of weakening energy prices.” In fact, Mr. Muchow noted that the “downturn” [in revenues] “is entirely price-driven, with natural gas and coal production both up statewide compared to 2013. All energy-producing states are suffering.”\textsuperscript{66}

**Industry Challenges**

The following subsections highlight the challenges faced by several industries that are integrally involved in the activities of the oil and gas sectors in the states. The decline in oil prices has adversely affected economic ac-
tivity in these industries, a development that could act as a crimp on their economic performance.

**Oil Rigs**

The number of oil rigs springing up in states across the country has been most impressive in the last half a dozen years or so. Rigs have been sprouting in very unlikely places, from farmlands to the backyards of homes. Figure 11 provides a graphical representation of the U.S. rig count over the past 25 years, and the sharp swing upward in the past five years or so is clear. However, the slight cutback in the number of operational rigs already is apparent with the drop-off in late 2014/early 2015.

Given the fact that each rig represents about 100 jobs, from the “roughneck” field hands to maintenance workers, cutbacks in the number of operational rigs translate into diminished economic activity. According to Baker Hughes, the Houston-based oilfield services company, the average U.S. rig count for December 2014 was 1,882, down 43 from the 1,925 counted in November 2014, and up 111 from the 1,771 counted in December 2013. In terms of everyday signs that the oil and gas industry gradually is scaling back its hectic drilling and fracking activity of the last six years or so, the declining rig count looms large. In fact, as far back as November 2014, the Houston-based oil driller Hercules Offshore announced plans to cut back 324 rig workers, while Shell’s Houston-based exploration and production unit announced plans to slash 400 positions. In January 2015, the giant contract rig company, Helmerich & Payne, announced that it would be phasing out up to 50 rigs over the next month, in addition to the 11 rigs already decommissioned by the company; based on these idling rigs, Helmerich & Payne had slashed 20 percent of its shale drilling activity. In sum, experts forecast that as many as 550 drilling rigs might have to cease operations as a result of falling oil prices negatively impacting the once flourishing U.S. oil patch, a development with adverse implications for the state economies involved. In the highly lucrative Permian Basin in Texas, a shale field considered the most prolific of American fields, the rig count peaked at around 570 in September 2014 and in January 2015 stood at 490; local oil executives forecast

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**Figure 11** U.S. Rig Count: 1990 to 2015

Source: [http://fuelfix.com/blog/2015/01/05/texas-u-s-rig-count-declines/](http://fuelfix.com/blog/2015/01/05/texas-u-s-rig-count-declines/)
that the rig count will decline further to 300 by April 2015, unless prices rebound.\textsuperscript{72}

In related news, U.S. Steel announced in January 2015 that it would temporarily idle its pipe manufacturing facility in Lorain, Ohio, and lay off 614 workers, largely due to weak demand from the oil industry,\textsuperscript{73} a decision prompted by the erosion in the number of operating rigs.

**Energy Services Companies**

As expected, energy and gas services companies also are reacting to the drop in energy prices by shedding employees at their locations in the United States and worldwide.\textsuperscript{74} Baker Hughes announced the layoff of 7,000 workers (representing 11 percent of the company’s 62,000-plus employee global workforce) as it prepares for a downturn in orders related to the dive in energy prices. Similarly, Schlumberger, Ltd., the world’s largest oil services provider, announced in January 2015 that it would be reducing its workforce by 9,000 employees, globally. Also, the other Houston-based oil services giant, Halliburton, announced in late 2014 that it intended to cut about 1,000 employees from its workforce worldwide due to the declining demand for energy.

**Financial Companies**

Banks and other financial companies have aggressively pursued business opportunities in the oil and gas sectors across the United States (and in Canada and other nations).\textsuperscript{75} These operations include providing financing through loans, underwriting bonds, advising on mergers and acquisitions and financing homes for oil workers. Consequently, revenues that banks and other financial entities generated from the nation’s energy sector have been stellar in the past dozen or so years. The collapse in the price of oil poses a number of short- and medium-term risks for these financial operations, particularly entities that relied on the sector for a steady source of revenue. For instance, large banks like Wells Fargo (derived about 15 percent of its investment banking fee revenue from the oil and gas industry) and Citigroup (derived about 12 percent of its investment banking fee revenue from the oil and gas industry) will face a decline in revenues with diminished activity in the industry. MidSouth Bank, for example, based in Lafayette, Louisiana, has approximately 20 percent of its loan portfolio with oil and gas companies; even though MidSouth Bank officials indicate that they factored the volatility of the industry in the provision of these loans, there is concern that the challenges faced by the energy sector will impact the profitability of the bank.

Junk bonds issued by energy companies could be another area ripe for defaults in light of growing weaknesses in the oil and gas sectors. In fact, while junk bonds did finance the U.S. shale boom to an extent, experts forecast that 6 percent of the bonds will default in 2015 with more expected in 2016;\textsuperscript{76} with some estimates (J.P. Morgan Chase) indicating that up to 40 percent of all energy junk bonds could default over the next several years.\textsuperscript{77} The same J.P. Morgan Chase report notes that energy companies were not only the fastest growing segment of the high-yield, “junk” bond market in recent years, they account for nearly 18 percent of all outstanding high-yield, “junk bonds, up from 9 percent in 2009.\textsuperscript{78}

**Conclusion**

As the effects of dipping oil prices ricochet through the United States and the world, it is increasingly becoming clear that there are winners and losers. Triggered by an explosion in American oil and gas production levels; sputtering economic trends in Europe, China, Japan, Russia and emerging markets leading to declining demand; increasing production from producers like Iraq and Libya; countries like Saudi Arabia, a producer with an oversized impact on global oil supplies, maintaining supplies at current output levels and resisting production cuts; and the strengthening of the U.S. dollar have acted in concert to substantially push oil prices downward: from $115 a barrel in June 2014 to less than $50 a barrel in January 2015. Experts forecast that prices will remain at these low levels at least through the first half of 2015 before beginning a slow ascent in the second half of the year.

In the positive column, the American consumer looms large. As a result of the falling price of oil, the average American household is expected to spend about $750 less for gasoline in 2015, an amount that will constitute a significant fiscal injection into the U.S. economy. The drop in oil prices also will assist American consumers in the form of reduced prices in a number of categories, including food, given that oil-based products play a significant role
in the production and transportation of food items. Similarly, price reductions in a number of other categories are expected to further depress the already low inflationary rates in the United States. Given that consumer spending fuels some 70 percent of the U.S. economy, the cost savings from gasoline expenses are expected to translate into more robust economic growth in 2015.

In the negative column, several states in the United States that enjoyed the tremendous economic boom impelled by the energy sector will face setbacks as a result of declining oil revenues. In fact, several of these states (Oklahoma and Louisiana) already are. As expected, some states will be hit harder than others but, on a positive note, some of these adversely-impacted states (Alaska and North Dakota) did establish rainy day funds to prepare for downturns of this nature. These rainy day funds now contain billions of dollars and will be tapped to offset the loss in revenues currently plaguing these states. Some of these states also are considering alternate revenue sources, including taxes, in an effort to generate revenues. On a positive note, Texas, a state that was very hard hit by the crash in the energy sector in the 1980s, implemented a concerted effort to diversify its economy and diminish its reliance on the energy sector. Consequently, Texas does not anticipate a reduction in economic growth in 2015 and expects to expand its economy by 3 percent this year, despite the sharp drop in energy prices.

Also in the negative column, a number of American companies active in the energy sector will see eroding economic activity and diminished profit levels in 2015. A number of these companies, such as Baker Hughes and Schlumberger, already have started remedial action by laying-off workers. Companies like Caterpillar that service the energy sector selling equipment for energy exploration also will see declines in the light of the drop in oil prices. In fact, Caterpillar’s 2015 sales forecast signaled a drop from $55.2 billion in 2014, to $50 billion in 2015, a decline attributed to falling oil prices and their negative impacts on the energy and transportation sectors, the company’s major lines of business. Oil companies like ExxonMobil and Chevron have seen their stock prices decline, a development with negative implications for Americans with stock exposure to these companies. It should be noted that these companies fared extremely well during the boom years and led the charge of companies emerging from the torpor of the Great Recession. For instance, in the fourth quarter of 2014, Baker Hughes exceeded analysts’ estimates with a record $663 million; similarly, Halliburton indicated that its 2014 fourth quarter net income rose to $901 million from $793 million a year earlier. These examples demonstrate that these oil service and energy companies enjoyed extremely advantageous profit margins when energy prices were soaring.

Cities like Houston and Midland in Texas, and Williston and Tioga in North Dakota, continue to experience the adverse impacts of the softening energy market. On a positive note, mirroring states like Alaska that stashed funds in their rainy day accounts, the city of Midland also set aside monies in a rainy day account (nearly $40 million) to offset declining revenues related to a weakening energy sector. In addition, countries like Russia and Venezuela face enormous economic challenges in light of the oil price declines. These economies were struggling even before the plunge in oil prices, and the precipitous descent has served only to aggravate their economic woes with more intensity. In fact, Russia, the world’s largest energy exporter, is on the brink of a recession with falling oil prices compounding its economic ills, and Standard & Poor’s lowering its currency credit rating to “junk” bond status, the first time in a decade.

While the nose-diving price of oil has rippled across the American and global economies creating both winners and losers, experts generally are in agreement that, on balance, the availability of less expensive energy is a net positive for the U.S. economy and, by extension, the American consumer. The drop in oil prices also has burnished the image of states that made a determined effort to diversify their economies and avoid too much reliance on a single commodity, such as oil and natural gas. Texas remains a leader in this regard. Finally, the fact that escalating domestic energy production has helped diminish U.S. reliance on energy from overseas sources, particularly energy from often unstable and unreliable sources, bolsters the ability of American policymakers to act independently on a number of different levels.
Endnotes

1. On January 5, 2015, a barrel of West Texas Intermediate Crude dipped below $50 for the first time in five years, and a barrel of Brent Crude fell more than 6 percent to $53, again a five-year low. See “Oil’s Fall Continues Into 2015, and Stock Markets Shudder,” The New York Times, January 6, 2015. (West Texas Intermediate Crude, also known as Texas light sweet, is a grade of crude oil used as a benchmark in oil pricing. It is the underlying commodity of Chicago Mercantile Exchange’s oil futures contracts. The other widely used oil marker is the Brent Crude, again a classification of sweet light crude oil that serves as a major, global benchmark price for purchases of oil worldwide. The Brent Crude oil marker also is known as Brent Blend, London Brent and Brent petroleum.)


10. Ibid.


22. “Short-Term Energy Outlook (STEO) . . .


24. Ibid.

25. Ibid.


27. “Retail Sales Increase 0.6 Percent in November; In line with NRF Holiday Forecast,” News Release, National Retail Federation, December 11, 2014.


39. “Oil Prices Fall to Lowest . . .
40. Ibid.
43. Unless specified, information included in the bullet points are extracted from this article.
45. “Some States See Budgets at Risk . . .
48. “Some States See Budgets at Risk . . .
54. “Rekindling Old Ties . . .
55. Ibid.
58. “State Tax Collections Down in December . . .
61. “Oil Prices Mean Big Break for Most Americans . . .
66. “State Tax Collections Down in December . . .
68. “Information related to planned layoffs in the energy services sector is based on “Baker Hughes to Lay Off 7,000 Workers Amid Low Oil Prices,” The Christian Science Monitor, January 20, 2015.
This report was prepared by Fiscal Policy Manager Sujit Canagaretta for the Fiscal Affairs & Government Operations Committee of the Southern Legislative Conference (SLC) of The Council of State Governments (CSG), under the chairmanship of Senator Roman Prezioso of West Virginia. This report reflects the body of policy research made available to appointed and elected officials by the Southern Office.

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