The Oil Market: From Boom to Gloom

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April 8, 2016
Oil and gas prices plunge

NOTE: * = Natural gas price is multiplied by 10. Oil is priced in $/barrel while natural gas is $/MMBtu.  
Federal Reserve Bank of Dallas & 
SOURCES: Energy Information Administration; Wall Street Journal.
Current oil prices not a record low

Real prices of crude oil (January 2016 dollars)

Dollars per barrel

 SOURCES: Bureau of Labor Statistics; Energy Information Administration; FRB Dallas calculations.

Federal Reserve Bank of Dallas
Supply/demand mismatch

Million barrels per day

- Implied change in inventories
- Petroleum consumption
- Petroleum production

Forecasts

SOURCE: Energy Information Administration.
IMPACT ON U.S. ECONOMY
Shale boosts U.S. oil production

Million barrels per day

2015
9.43 mb/d

SOURCE: Energy Information Administration.
U.S. shale oil production

Source: Energy Information Administration.
Rig count plunges, oil production drops

Crude oil production

U.S. oil rig count

Latest estimate 9.02 mb/d (Mar 25)

Million barrels per day

Jan-13  Jun-13  Nov-13  Apr-14  Sep-14  Feb-15  Jul-15  Dec-15

6.9  7.4  7.9  8.4  8.9  9.4  9.9

1,700  1,500  1,300  1,100  900  700  500  300

SOURCES: Baker Hughes; Energy Information Administration.
Drilling investment falls with rig count

Private fixed investment in mining/exploration

SOURCES: Baker Hughes; Bureau of Economic Analysis.
Low oil prices boosted growth in final demand

Components of final demand

- **Personal consumption**: 1.6
- **Residential investment**: 0.1
- **Business fixed investment**: 0.6
- **Government**: -0.3
- **Net exports**: -0.1

NOTE: Components do not sum exactly to final demand due to rounding.
SOURCE: Bureau of Economic Analysis.
Households benefit from low energy prices and a strong dollar

Components of final demand

Final demand  |  Personal consumption  |  Residential investment  |  Business fixed investment  |  Government  |  Net exports

2013:Q1 - 2014:Q2:
- Final demand: 1.9
- Personal consumption: 1.6
- Residential investment: 0.1
- Business fixed investment: 0.3
- Government: 0.6
- Net exports: -0.3

2014:Q3 - 2015:Q4:
- Final demand: 2.3
- Personal consumption: 2.1
- Residential investment: 0.3
- Business fixed investment: -0.1
- Government: -0.1
- Net exports: -2

NOTE: Components do not sum exactly to final demand due to rounding.
SOURCE: Bureau of Economic Analysis.
Mining & manufacturing firms have scaled back cap-ex plans, and investment growth has slowed

Components of final demand

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Final demand</td>
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NOTE: Components do not sum exactly to final demand due to rounding.
SOURCE: Bureau of Economic Analysis.
IMPACT ON STATE ECONOMIES
Low oil prices benefit most states
(Effect of a 50% decline in oil prices on employment)

Energy states did well in 2014

Percent Change (Dec/Dec)

Texas

U.S.

Energy states lose jobs in 2015

Percent Change (Dec/Dec)

Texas rig count and oil production continue to decline

[Sources: Baker Hughes; Energy Information Administration.]
Regional breakeven prices vary
(20% rate of return)

SOURCE: Bloomberg.
Rig counts still falling

NOTE: Last data point is April 1.
SOURCE: Baker Hughes.
Initial jobless claims still high

Index, Jan. 5 '13 = 100, 4 WMA

Some states rely heavily on oil and gas severance taxes
(Share of 2014 state tax revenues)

<table>
<thead>
<tr>
<th>State</th>
<th>Percent</th>
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<tbody>
<tr>
<td>AK</td>
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<tr>
<td>ND</td>
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<td>CO</td>
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</tr>
<tr>
<td>CA</td>
<td>0.0</td>
</tr>
</tbody>
</table>

WHERE DO WE GO FROM HERE?
Much uncertainty in crude price forecasts

SOURCE: Energy Information Administration.
Outlook

• “Lower for longer” outlook for oil prices
• Oil demand growth is expected to rise over time
• Oil price risks:
  – Downside risks: China, Iran, high inventories
  – Upside risks: Geopolitical turmoil, low investment, “Production freeze”
• Energy importers such as the U.S. should continue to benefit from lower oil prices.
• Rough patch for energy-producing countries and states.
• Reform makes Mexican energy sector more open and nimble
• Increased opportunities for energy partnership
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Gas production still robust

Marketed natural gas production

Gas rig count

SOURCEs: Baker Hughes; Energy Information Administration.
Households benefit from low energy prices

Components of final demand

Final demand | Personal consumption | Residential investment | Business fixed investment | Government | Net exports

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2014:Q3 - 2015:Q4
- Final demand: 2.3
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- Business fixed investment: 0.3
- Government: 0.2
- Net exports: -0.1

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SOURCE: Bureau of Economic Analysis.