Lower supply and higher demand again pushed up oil prices.

- As in the previous week, falling anticipated supply and rising global demand expectations caused oil prices to increase over the week. In 2017:Q3, robust global demand expectations exerted upward pressure on oil prices.
- The 2017:Q3 developments reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.
- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably in 2017:Q3.

Our analysis of oil price movements does not necessarily represent the views of the Federal Reserve Bank of New York, the Federal Reserve System, or the Federal Open Market Committee.
Cumulative Weekly Decomposition, Jul 07-Dec 29, 2017

Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from July 7, 2017.
- The table below presents the most recent cumulative values.

Cumulative Percentage Changes since July 7, 2017

<table>
<thead>
<tr>
<th></th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 15, 2017</td>
<td>18.9</td>
<td>-0.2</td>
<td>11.5</td>
<td>30.3</td>
</tr>
<tr>
<td>Dec 22, 2017</td>
<td>20.5</td>
<td>2.5</td>
<td>10.4</td>
<td>33.4</td>
</tr>
<tr>
<td>Dec 29, 2017</td>
<td>23.1</td>
<td>3.8</td>
<td>9.0</td>
<td>35.9</td>
</tr>
</tbody>
</table>

Sources: Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.

Notes: Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
1. **What is the goal of the oil price decomposition?**
   
   Our aim is to determine how much of the observed oil price change has been driven by demand and supply factors.

2. **What is the modeling strategy?**
   
   Using a statistical model and a large number of financial variables, we decompose weekly oil price changes into demand effects, supply effects, and an unexplained residual.

   Sparse partial least squares regression allows us to construct linear combinations from the variables in our financial market data set—called factors—which have maximum explanatory content for oil price changes. We first use this procedure to generate factors that best capture the patterns in the data, and then examine the estimated factors to determine how they reflect demand or supply dynamics.

   The model is re-estimated every week using weekly data from January 1986 through the close of business on Friday of the most recent week. Over this sample, the model can explain about two-thirds of the weekly oil price dynamics.

3. **How to interpret the results?**
   
   The output of the model is used to decompose weekly changes in an accounting sense. More specifically, the weekly Brent crude price change always equals the change explained by demand factors plus the change explained by supply factors plus a residual (the weekly change unexplained by the sum of the estimated demand and supply factors).

   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

---

**References**


**Authors**

Jan Groen and Max Sterman
Higher demand pushed up oil prices.

- Despite a small increase in anticipated supply, rising global demand expectations caused oil prices to increase over the week. In 2017:Q4, robust global demand expectations continued to exert upward pressure on oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.
Cumulative Weekly Decomposition, Oct 06-Jan 05, 2018

Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from October 6, 2017.
- The table below presents the most recent cumulative values.

Cumulative Percentage Changes since October 6, 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 22, 2017</td>
<td>8.1</td>
<td>-0.0</td>
<td>7.9</td>
<td>16.0</td>
</tr>
<tr>
<td>Dec 29, 2017</td>
<td>10.6</td>
<td>1.3</td>
<td>6.5</td>
<td>18.4</td>
</tr>
<tr>
<td>Jan 05, 2018</td>
<td>12.5</td>
<td>0.6</td>
<td>6.5</td>
<td>19.5</td>
</tr>
</tbody>
</table>

Cumulative Weekly Decomposition, 2010-Present

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
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**References**


**Authors**

Jan Groen and Max Sterman
Both lower supply and higher demand pushed up oil prices.

- A decrease in anticipated supply and rising global demand expectations caused oil prices to increase over the week. In 2017:Q4, robust global demand expectations continued to exert upward pressure on oil prices.
- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.
- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.
**Cumulative Weekly Decomposition, Oct 06-Jan 12, 2018**

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**Recent Decomposition Data**

- The chart at left depicts the cumulative oil price decomposition from October 6, 2017.
- The table below presents the most recent cumulative values.

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 29, 2017</td>
<td>10.6</td>
<td>1.3</td>
<td>6.5</td>
<td>18.4</td>
</tr>
<tr>
<td>Jan 05, 2018</td>
<td>12.5</td>
<td>0.6</td>
<td>6.5</td>
<td>19.5</td>
</tr>
<tr>
<td>Jan 12, 2018</td>
<td>13.8</td>
<td>1.5</td>
<td>7.5</td>
<td>22.8</td>
</tr>
</tbody>
</table>

**Cumulative Percentage Changes since October 6, 2017**

<table>
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<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
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<tr>
<td>$55.62</td>
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<td></td>
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</tr>
</tbody>
</table>

**Sources:** Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.

**Notes:** Residual reflects price movements unexplained by supply and demand factors.
Supply, demand, and residual sum to Brent crude price.

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**Cumulative Weekly Decomposition, 2010-Present**

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**Longer-Term View of Oil Price Movements**

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
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   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

---

**References**


**Authors**

Jan Groen and Max Sterman
Weaker demand expectations decreased oil prices.

- Despite a contraction in anticipated supply, a volatile downward trend in expected demand pushed oil prices down over the past three weeks. In 2017:Q4, robust global demand expectations continued to exert upward pressure on oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.
Cumulative Weekly Decomposition, Oct 06-Feb 02, 2018

Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from October 6, 2017.
- The table below presents the most recent cumulative values.

Cumulative Percentage Changes since October 6, 2017

<table>
<thead>
<tr>
<th></th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
</tr>
</thead>
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<tr>
<td>Jan 19, 2018</td>
<td>12.7</td>
<td>0.8</td>
<td>7.5</td>
<td>21.0</td>
</tr>
<tr>
<td>Jan 26, 2018</td>
<td>16.1</td>
<td>-0.3</td>
<td>8.0</td>
<td>23.7</td>
</tr>
<tr>
<td>Feb 02, 2018</td>
<td>10.8</td>
<td>0.7</td>
<td>9.4</td>
<td>20.9</td>
</tr>
</tbody>
</table>

Sources: Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.
Notes: Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.

Cumulative Weekly Decomposition, 2010-Present

Longer-Term View of Oil Price Movements

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   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

---

**References**


**Authors**

Jan Groen and Max Sterman
A large drop in demand expectations decreased oil prices significantly.

- Despite a small contraction in anticipated supply, a sharp decline in expected demand pushed oil prices down considerably over the past week. In 2017:Q4, robust global demand expectations continued to exert upward pressure on oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.

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Cumulative Percentage Changes since October 6, 2017

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<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 26, 2018</td>
<td>16.0</td>
<td>-0.3</td>
<td>7.9</td>
<td>23.7</td>
</tr>
<tr>
<td>Feb 02, 2018</td>
<td>10.7</td>
<td>0.8</td>
<td>9.4</td>
<td>20.9</td>
</tr>
<tr>
<td>Feb 09, 2018</td>
<td>0.8</td>
<td>2.8</td>
<td>8.5</td>
<td>12.1</td>
</tr>
</tbody>
</table>

Longer-Term View of Oil Price Movements

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   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

**References**


**Authors**

Jan Groen and Max Sterman
A rebound in demand expectations led oil prices back up this week.

- Despite an expansion in anticipated supply, a substantial rise in expected demand pushed up oil prices noticeably over the past week after a sharp decline the previous week. In 2017:Q4, robust global demand expectations continued to exert upward pressure on oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.
Cumulative Weekly Decomposition, Oct 06-Feb 16, 2018

Recent Decomposition Data
- The chart at left depicts the cumulative oil price decomposition from October 6, 2017.
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Cumulative Percentage Changes since October 6, 2017

<table>
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<tr>
<th></th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
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</thead>
<tbody>
<tr>
<td>Feb 02, 2018</td>
<td>10.7</td>
<td>0.8</td>
<td>9.4</td>
<td>20.9</td>
</tr>
<tr>
<td>Feb 09, 2018</td>
<td>0.8</td>
<td>2.8</td>
<td>8.5</td>
<td>12.1</td>
</tr>
<tr>
<td>Feb 16, 2018</td>
<td>5.7</td>
<td>-0.9</td>
<td>10.5</td>
<td>15.3</td>
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</tbody>
</table>

Cumulative Weekly Decomposition, 2010-Present

Longer-Term View of Oil Price Movements
- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
Oil Price Decomposition Q&A

1. What is the goal of the oil price decomposition?
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References


Authors

Jan Groen and Max Sterman
A rise in demand and a decrease in supply led to an increase in oil prices this week.

- A decline in anticipated supply and an increase in expected demand pushed up oil prices noticeably over the past week. In 2017:Q4, robust global demand expectations continued to exert upward pressure on oil prices.

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Cumulative Weekly Decomposition, Oct 06-Feb 23, 2018

The chart at left depicts the cumulative oil price decomposition from October 6, 2017.

Recent Decomposition Data

- The table below presents the most recent cumulative values.

Cumulative Percentage Changes since October 6, 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
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<tr>
<td>Feb 09, 2018</td>
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<td>2.8</td>
<td>8.5</td>
<td>12.1</td>
</tr>
<tr>
<td>Feb 16, 2018</td>
<td>5.7</td>
<td>-0.9</td>
<td>10.5</td>
<td>15.3</td>
</tr>
<tr>
<td>Feb 23, 2018</td>
<td>6.7</td>
<td>0.4</td>
<td>12.0</td>
<td>19.1</td>
</tr>
</tbody>
</table>

Cumulative Weekly Decomposition, 2010-Present

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.

- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.

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Notes: Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.

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Oil Price Decomposition Q&A

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**References**


**Authors**

Jan Groen and Max Sterman
A sharp drop in demand led to a decrease in oil prices this week.

- Despite a small decline in anticipated supply, a considerable decrease in expected demand pushed down oil prices noticeably over the past week. In 2017:Q4, robust global demand expectations continued to exert upward pressure on oil prices.

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Cumulative Weekly Decomposition, Oct 06-Mar 02, 2018

The chart at left depicts the cumulative oil price decomposition from October 6, 2017.

The table below presents the most recent cumulative values.

Cumulative Percentage Changes since October 6, 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 16, 2018</td>
<td>5.7</td>
<td>-0.9</td>
<td>10.5</td>
<td>15.3</td>
</tr>
<tr>
<td>Feb 23, 2018</td>
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<td>0.4</td>
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<td>19.1</td>
</tr>
<tr>
<td>Mar 02, 2018</td>
<td>2.5</td>
<td>0.9</td>
<td>11.2</td>
<td>14.6</td>
</tr>
</tbody>
</table>

Cumulative Weekly Decomposition, 2010-Present

The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.

Cumulative Weekly Decomposition, 2010-Present

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
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---

**References**


**Authors**

Jan Groen and Max Sterman
Higher demand and a decline in supply led to higher oil prices over the past three weeks.

- Oil prices were up over the past three weeks, which initially was due to improving global demand expectations and over the last week because of a decline in anticipated supply. In 2017:Q4, robust global demand expectations continued to exert upward pressure on oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.

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**Cumulative Weekly Decomposition, Oct 06-Mar 23, 2018**

The chart at left depicts the cumulative oil price decomposition from October 6, 2017.

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### Cumulative Percentage Changes since October 6, 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
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<tbody>
<tr>
<td>Mar 09, 2018</td>
<td>5.4</td>
<td>-1.7</td>
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<td>16.3</td>
</tr>
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<td>Mar 16, 2018</td>
<td>5.6</td>
<td>-1.7</td>
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<tr>
<td>Mar 23, 2018</td>
<td>4.5</td>
<td>4.5</td>
<td>14.6</td>
<td>23.6</td>
</tr>
</tbody>
</table>

### Recent Decomposition Data

- Sources: Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.
- Notes: Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.

**Cumulative Weekly Decomposition, 2010-Present**

This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.

The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.

### Recent Decomposition Data

- Sources: Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.
- Notes: Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.
1. **What is the goal of the oil price decomposition?**

   Our aim is to determine how much of the observed oil price change has been driven by demand and supply factors.

2. **What is the modeling strategy?**

   Using a statistical model and a large number of financial variables, we decompose weekly oil price changes into demand effects, supply effects, and an unexplained residual.

   Sparse partial least squares regression allows us to construct linear combinations from the variables in our financial market data set—called factors—which have maximum explanatory content for oil price changes. We first use this procedure to generate factors that best capture the patterns in the data, and then examine the estimated factors to determine how they reflect demand or supply dynamics.

   The model is re-estimated every week using weekly data from January 1986 through the close of business on Friday of the most recent week. Over this sample, the model can explain about two-thirds of the weekly oil price dynamics.

3. **How to interpret the results?**

   The output of the model is used to decompose weekly changes in an accounting sense. More specifically, the weekly Brent crude price change always equals the change explained by demand factors plus the change explained by supply factors plus a residual (the weekly change unexplained by the sum of the estimated demand and supply factors).

   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

---

**References**


**Authors**

Jan Groen and Max Sterman
Higher supply led to lower oil prices over the past week.

- Despite an increase in demand expectations, a rise in supply led to a drop in oil prices during this past week. In 2017:Q4, robust global demand expectations continued to exert upward pressure on oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.

Our analysis of oil price movements does not necessarily represent the views of the Federal Reserve Bank of New York, the Federal Reserve System, or the Federal Open Market Committee.
Cumulative Weekly Decomposition, Oct 06-Mar 30, 2018

Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from October 6, 2017.
- The table below presents the most recent cumulative values.

Cumulative Percentage Changes since October 6, 2017

<table>
<thead>
<tr>
<th></th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
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<tr>
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<td>-1.7</td>
<td>13.5</td>
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</tr>
<tr>
<td>Mar 23, 2018</td>
<td>4.5</td>
<td>4.5</td>
<td>14.6</td>
<td>23.6</td>
</tr>
<tr>
<td>Mar 30, 2018</td>
<td>6.5</td>
<td>1.6</td>
<td>13.9</td>
<td>22.0</td>
</tr>
</tbody>
</table>

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
1. **What is the goal of the oil price decomposition?**
   Our aim is to determine how much of the observed oil price change has been driven by demand and supply factors.

2. **What is the modeling strategy?**
   Using a statistical model and a large number of financial variables, we decompose weekly oil price changes into demand effects, supply effects, and an unexplained residual.
   Sparse partial least squares regression allows us to construct linear combinations from the variables in our financial market data set—called factors—which have maximum explanatory content for oil price changes.
   We first use this procedure to generate factors that best capture the patterns in the data, and then examine the estimated factors to determine how they reflect demand or supply dynamics.
   The model is re-estimated every week using weekly data from January 1986 through the close of business on Friday of the most recent week.
   Over this sample, the model can explain about two-thirds of the weekly oil price dynamics.

3. **How to interpret the results?**
   The output of the model is used to decompose weekly changes in an accounting sense. More specifically, the weekly Brent crude price change always equals the change explained by demand factors plus the change explained by supply factors plus a residual (the weekly change unexplained by the sum of the estimated demand and supply factors).
   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

---

**References**


**Authors**

Jan Groen and Max Sterman
A lower residual led to a decline in oil prices over the past week.

- Despite relatively unchanged anticipated supply and demand expectations, a decrease in the residual led to a drop in oil prices during this past week. In 2018:Q1, offsetting impacts of declining demand expectations and an increasing residual combined with a relatively stable expected supply led to relatively flat prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.

Our analysis of oil price movements does not necessarily represent the views of the Federal Reserve Bank of New York, the Federal Reserve System, or the Federal Open Market Committee.
Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from January 5, 2018.
- The table below presents the most recent cumulative values.

### Cumulative Percentage Changes since January 5, 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
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<th>Brent</th>
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<tbody>
<tr>
<td>Mar 23, 2018</td>
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</tr>
<tr>
<td>Mar 30, 2018</td>
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<td>-0.6</td>
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</tr>
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</table>

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
1. **What is the goal of the oil price decomposition?**

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   Using a statistical model and a large number of financial variables, we decompose weekly oil price changes into demand effects, supply effects, and an unexplained residual.

   Sparse partial least squares regression allows us to construct linear combinations from the variables in our financial market data set—called factors—which have maximum explanatory content for oil price changes. We first use this procedure to generate factors that best capture the patterns in the data, and then examine the estimated factors to determine how they reflect demand or supply dynamics.

   The model is re-estimated every week using weekly data from January 1986 through the close of business on Friday of the most recent week. Over this sample, the model can explain about two-thirds of the weekly oil price dynamics.

3. **How to interpret the results?**

   The output of the model is used to decompose weekly changes in an accounting sense. More specifically, the weekly Brent crude price change always equals the change explained by demand factors plus the change explained by supply factors plus a residual (the weekly change unexplained by the sum of the estimated demand and supply factors).

   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

---

**References**


**Authors**

Jan Groen and Max Sterman
Lower supply and higher demand led to an uptick in oil prices over the past week.

- A decrease in anticipated supply and an increase in demand expectations led to a rise in oil prices during this past week. In 2018:Q1, offsetting impacts of declining demand expectations and an increasing residual combined with a comparatively stable expected supply led to relatively flat prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.
Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from January 5, 2018.
- The table below presents the most recent cumulative values.

Cumulative Percentage Changes since January 5, 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
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</thead>
<tbody>
<tr>
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<td>7.2</td>
<td>2.0</td>
</tr>
<tr>
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<td>5.0</td>
<td>-0.8</td>
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<tr>
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<td>1.7</td>
<td>6.3</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
1. **What is the goal of the oil price decomposition?**
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   Using a statistical model and a large number of financial variables, we decompose weekly oil price changes into demand effects, supply effects, and an unexplained residual. Sparse partial least squares regression allows us to construct linear combinations from the variables in our financial market data set—called factors—which have maximum explanatory content for oil price changes. We first use this procedure to generate factors that best capture the patterns in the data, and then examine the estimated factors to determine how they reflect demand or supply dynamics.
   
   The model is re-estimated every week using weekly data from January 1986 through the close of business on Friday of the most recent week. Over this sample, the model can explain about two-thirds of the weekly oil price dynamics.

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   The output of the model is used to decompose weekly changes in an accounting sense. More specifically, the weekly Brent crude price change always equals the change explained by demand factors plus the change explained by supply factors plus a residual (the weekly change unexplained by the sum of the estimated demand and supply factors).
   
   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

---

**References**


**Authors**

Jan Groen and Max Sterman
A decrease in supply has led an increase in oil prices over the past three weeks.

- A decrease in an anticipated supply, coupled with broadly unchanged demand expectations, led to an increase in oil prices over the past three weeks. In 2018:Q1, offsetting impacts of declining demand expectations and an increasing residual combined with a comparatively stable expected supply led to relatively flat prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.
Cumulative Weekly Decomposition, Jan 05-May 04, 2018

Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from January 5, 2018.
- The table below presents the most recent cumulative values.

<table>
<thead>
<tr>
<th></th>
<th>Demand</th>
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</tr>
<tr>
<td>May 04, 2018</td>
<td>-0.5</td>
<td>4.6</td>
<td>6.1</td>
<td>10.2</td>
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</table>

Cumulative Percentage Changes since January 5, 2018

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
1. What is the goal of the oil price decomposition?
   Our aim is to determine how much of the observed oil price change has been driven by demand and supply factors.

2. What is the modeling strategy?
   Using a statistical model and a large number of financial variables, we decompose weekly oil price changes into demand effects, supply effects, and an unexplained residual.
   Sparse partial least squares regression allows us to construct linear combinations from the variables in our financial market data set—called factors—which have maximum explanatory content for oil price changes. We first use this procedure to generate factors that best capture the patterns in the data, and then examine the estimated factors to determine how they reflect demand or supply dynamics.
   The model is re-estimated every week using weekly data from January 1986 through the close of business on Friday of the most recent week. Over this sample, the model can explain about two-thirds of the weekly oil price dynamics.

3. How to interpret the results?
   The output of the model is used to decompose weekly changes in an accounting sense. More specifically, the weekly Brent crude price change always equals the change explained by demand factors plus the change explained by supply factors plus a residual (the weekly change unexplained by the sum of the estimated demand and supply factors).
   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

References

Authors
Jan Groen and Max Sterman
An increase in demand led to a surge in oil prices over the past week.

- A rise in demand expectations, coupled with a slight decline in anticipated supply, led to an escalation in oil prices over the past week. In 2018:Q1, offsetting impacts of declining demand expectations and an increasing residual combined with a comparatively stable expected supply led to relatively flat prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.

Our analysis of oil price movements does not necessarily represent the views of the Federal Reserve Bank of New York, the Federal Reserve System, or the Federal Open Market Committee.
### Cumulative Weekly Decomposition, Jan 05-May 11, 2018

The chart at left depicts the cumulative oil price decomposition from January 5, 2018.

- The table below presents the most recent cumulative values.

### Cumulative Percentage Changes since January 5, 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
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</thead>
<tbody>
<tr>
<td>Apr 27, 2018</td>
<td>0.6</td>
<td>3.0</td>
<td>6.3</td>
<td>9.9</td>
</tr>
<tr>
<td>May 04, 2018</td>
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<td>6.1</td>
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<tr>
<td>May 11, 2018</td>
<td>2.3</td>
<td>5.0</td>
<td>5.9</td>
<td>13.1</td>
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</tbody>
</table>

### Cumulative Weekly Decomposition, 2010-Present

The final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.

- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
Oil Price Decomposition Q&A

1. **What is the goal of the oil price decomposition?**
   Our aim is to determine how much of the observed oil price change has been driven by demand and supply factors.

2. **What is the modeling strategy?**
   Using a statistical model and a large number of financial variables, we decompose weekly oil price changes into demand effects, supply effects, and an unexplained residual.

   Sparse partial least squares regression allows us to construct linear combinations from the variables in our financial market data set—called factors—which have maximum explanatory content for oil price changes. We first use this procedure to generate factors that best capture the patterns in the data, and then examine the estimated factors to determine how they reflect demand or supply dynamics.

   The model is re-estimated every week using weekly data from January 1986 through the close of business on Friday of the most recent week. Over this sample, the model can explain about two-thirds of the weekly oil price dynamics.

3. **How to interpret the results?**
   The output of the model is used to decompose weekly changes in an accounting sense. More specifically, the weekly Brent crude price change always equals the change explained by demand factors plus the change explained by supply factors plus a residual (the weekly change unexplained by the sum of the estimated demand and supply factors).

   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

**References**


**Authors**

Jan Groen and Max Sterman
Decreased supply and higher demand led to an uptick in oil prices over the past week.

- A decline in anticipated supply and a rise in demand expectations led to higher oil prices over the past week. In 2018:Q1, offsetting impacts of declining demand expectations and an increasing residual combined with a comparatively stable expected supply led to relatively flat prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.
Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from January 5, 2018.
- The table below presents the most recent cumulative values.

### Cumulative Percentage Changes since January 5, 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
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</thead>
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<tr>
<td>May 18, 2018</td>
<td>3.3</td>
<td>6.2</td>
<td>5.5</td>
<td>14.9</td>
</tr>
</tbody>
</table>

Sources: Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.
Notes: Residual reflects price movements unexplained by supply and demand factors.
Supply, demand, and residual sum to Brent crude price.

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
1. **What is the goal of the oil price decomposition?**
   Our aim is to determine how much of the observed oil price change has been driven by demand and supply factors.

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   Using a statistical model and a large number of financial variables, we decompose weekly oil price changes into demand effects, supply effects, and an unexplained residual.

   Sparse partial least squares regression allows us to construct linear combinations from the variables in our financial market data set—called factors—which have maximum explanatory content for oil price changes. We first use this procedure to generate factors that best capture the patterns in the data, and then examine the estimated factors to determine how they reflect demand or supply dynamics.

   The model is re-estimated every week using weekly data from January 1986 through the close of business on Friday of the most recent week. Over this sample, the model can explain about two-thirds of the weekly oil price dynamics.

3. **How to interpret the results?**
   The output of the model is used to decompose weekly changes in an accounting sense. More specifically, the weekly Brent crude price change always equals the change explained by demand factors plus the change explained by supply factors plus a residual (the weekly change unexplained by the sum of the estimated demand and supply factors).

   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

---

**References**

**Authors**
Jan Groen and Max Sterman
Increased supply and lower demand led to an oil price drop over the past week.

- A rise in anticipated supply and a fall in demand expectations led to lower oil prices over the past week. In 2018:Q1, offsetting impacts of declining demand expectations and an increasing residual combined with a comparatively stable expected supply led to relatively flat prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.
Cumulative Weekly Decomposition, Jan 05-May 25, 2018

Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from January 5, 2018.
- The table below presents the most recent cumulative values.

Cumulative Percentage Changes since January 5, 2018

<table>
<thead>
<tr>
<th></th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 11, 2018</td>
<td>2.2</td>
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<td>5.9</td>
<td>13.1</td>
</tr>
<tr>
<td>May 18, 2018</td>
<td>3.2</td>
<td>6.2</td>
<td>5.5</td>
<td>14.9</td>
</tr>
<tr>
<td>May 25, 2018</td>
<td>1.0</td>
<td>3.8</td>
<td>7.4</td>
<td>12.3</td>
</tr>
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</table>

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
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   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

**References**

**Authors**
Jan Groen and Max Sterman
A supply increase and falling demand led to a decline in oil prices over the past three weeks.

- Growth in anticipated supply and a drop in demand expectations led to a substantial drop in oil prices over the past three weeks. In 2018:Q1, offsetting impacts of declining demand expectations and an increasing residual combined with a comparatively stable expected supply led to relatively flat prices.

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Cumulative Weekly Decomposition, Jan 05-Jun 15, 2018

The chart at left depicts the cumulative oil price decomposition from January 5, 2018. The table below presents the most recent cumulative values.

Cumulative Percentage Changes since January 5, 2018

<table>
<thead>
<tr>
<th></th>
<th>Demand</th>
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<th>Rest</th>
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<td>7.3</td>
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Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from January 5, 2018.
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<table>
<thead>
<tr>
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<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
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<td>1.0</td>
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</table>

Sources: Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.
Notes: Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.

Cumulative Weekly Decomposition, 2010-Present

This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.

Sources: Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.
Notes: Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.
1. **What is the goal of the oil price decomposition?**
   
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---

**References**


**Authors**

Jan Groen and Max Sterman
A supply decrease led to an uptick in oil prices from Friday, June 15, to Friday, June 22.

- A fall in anticipated supply, coupled with broadly unchanged demand expectations, led to a rise in oil prices from June 15 to June 22. In 2018:Q1, offsetting impacts of declining demand expectations and an increasing residual combined with a comparatively stable expected supply led to relatively flat prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.
**Recent Decomposition Data**

- The chart at left depicts the cumulative oil price decomposition from January 5, 2018.
- The table below presents the most recent cumulative values.

### Cumulative Percentage Changes since January 5, 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
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<tr>
<td>Jun 08, 2018</td>
<td>1.5</td>
<td>3.8</td>
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<tr>
<td>Jun 15, 2018</td>
<td>-0.0</td>
<td>1.0</td>
<td>7.3</td>
<td>8.3</td>
</tr>
<tr>
<td>Jun 22, 2018</td>
<td>0.5</td>
<td>2.6</td>
<td>8.0</td>
<td>11.1</td>
</tr>
</tbody>
</table>

**Sources:** Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.

**Notes:** Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.

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**Authors**

Jan Groen and Max Sterman
A supply decrease and a demand increase led to a surge in oil prices over the past week.

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Cumulative Weekly Decomposition, Jan 05-Jun 29, 2018

The chart at left depicts the cumulative oil price decomposition from January 5, 2018.

The table below presents the most recent cumulative values.

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<table>
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<tr>
<th>Date</th>
<th>Demand</th>
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<th>Rest</th>
<th>Brent</th>
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<tr>
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<td>8.3</td>
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<td>Jun 22, 2018</td>
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<tr>
<td>Jun 29, 2018</td>
<td>1.7</td>
<td>4.4</td>
<td>10.0</td>
<td>16.1</td>
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Cumulative Weekly Decomposition, 2010-Present

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References


Authors

Jan Groen and Max Sterman
A supply increase led to a decrease in oil prices over the past week.

- Despite a slight rise in demand expectations, an escalation in anticipated supply resulted in a drop in oil prices over the past week. In 2018:Q2, increasing demand expectations and decreasing anticipated supply led to rising oil prices.

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**Cumulative Weekly Decomposition, Apr 06-Jul 06, 2018**

The chart at left depicts the cumulative oil price decomposition from April 6, 2018.

The table below presents the most recent cumulative values.

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<table>
<thead>
<tr>
<th>Date</th>
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<th>Rest</th>
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</thead>
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<td>2.7</td>
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<td>13.9</td>
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**References**

**Authors**
Jan Groen and Max Sterman
A supply increase led to a decrease in oil prices for the second consecutive week.

- Despite broadly unchanged demand expectations, an escalation in anticipated supply resulted in a decline in oil prices over the past week, similarly to the previous week. In 2018:Q2, increasing demand expectations and decreasing anticipated supply led to rising oil prices.

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Cumulative Weekly Decomposition, 2010-Present

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**References**


**Authors**

Jan Groen and Max Sterman
Increased supply pushed oil prices down over the past three weeks.

- Despite somewhat stronger global demand expectations, a perceived loosening in supply led to a fall in oil prices over the past three weeks. In 2018:Q2, increasing demand expectations and decreasing anticipated supply led to rising oil prices.

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Cumulative Weekly Decomposition, Apr 06-Aug 03, 2018

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<table>
<thead>
<tr>
<th>Date</th>
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<th>Rest</th>
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<td>Aug 03, 2018</td>
<td>8.1</td>
<td>-0.6</td>
<td>1.2</td>
<td>8.7</td>
</tr>
</tbody>
</table>

Sources: Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.
Notes: Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.

Cumulative Weekly Decomposition, 2010-Present

This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward. The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.

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<th>Demand</th>
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<tr>
<td>Jul 20, 2018</td>
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References

Authors
Jan Groen and Max Sterman
A decrease in demand slightly pushed oil prices down over the past week.

- Despite an anticipated tightening in supply, a fall in demand expectations led to a minor slip in oil prices over the past week. In 2018:Q2, increasing demand expectations and decreasing anticipated supply led to rising oil prices.

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Jan Groen and Max Sterman
A decrease in demand and an increase in supply pushed oil prices down over the past week.

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   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

---

**References**


**Authors**

Jan Groen and Max Sterman
Increased demand and lower supply caused a sharp rise in oil prices over the past week.

- An anticipated tightening in supply and a rise in demand expectations drove oil prices up significantly over the past week. In 2018:Q2, increasing demand expectations and decreasing anticipated supply led to rising oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.

Our analysis of oil price movements does not necessarily represent the views of the Federal Reserve Bank of New York, the Federal Reserve System, or the Federal Open Market Committee.
Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from April 6, 2018.
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Cumulative Percentage Changes since April 6, 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
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<th>Brent</th>
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<tr>
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<td>-1.7</td>
<td>2.3</td>
<td>6.8</td>
</tr>
<tr>
<td>Aug 24, 2018</td>
<td>9.5</td>
<td>-0.3</td>
<td>3.1</td>
<td>12.2</td>
</tr>
</tbody>
</table>

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
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**References**


**Authors**

Jan Groen and Max Sterman
The increase in residual caused a rise in oil prices over the past week.

- While a slight loosening in supply offset higher demand, the increase in residual ultimately caused oil prices to go up this past week. In 2018:Q2, increasing demand expectations and decreasing anticipated supply led to rising oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.

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Cumulative Weekly Decomposition, Apr 06-Aug 31, 2018

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- The chart at left depicts the cumulative oil price decomposition from April 6, 2018.
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**Cumulative Percentage Changes since April 6, 2018**

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
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<tr>
<td>Aug 17, 2018</td>
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</tr>
<tr>
<td>Aug 31, 2018</td>
<td>10.1</td>
<td>-0.9</td>
<td>5.1</td>
<td>14.3</td>
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</table>

Cumulative Weekly Decomposition, 2010-Present

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<td>5.1</td>
<td>14.3</td>
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Cumulative Weekly Decomposition, 2010-Present

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Cumulative Percentage Changes since April 6, 2018

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<td>5.1</td>
<td>14.3</td>
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Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
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   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

---

**References**


**Authors**

Jan Groen, Casey McQuillan and Max Sterman
Oil prices declined slightly this past week due to lower demand.

- Oil prices fell marginally this week, as a drop in demand expectations was partially offset by increases in anticipated supply and the residual. In 2018:Q2, increasing demand expectations and decreasing anticipated supply led to rising oil prices. In 2018:Q2, increasing demand expectations and decreasing anticipated supply led to rising oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

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Cumulative Weekly Decomposition, Apr 06-Sep 07, 2018

Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from April 6, 2018.
- The table below presents the most recent cumulative values.

Cumulative Percentage Changes since April 6, 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
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</tr>
<tr>
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Cumulative Weekly Decomposition, 2010-Present

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
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Oil Price Decomposition Q&A

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**References**


**Authors**

Jan Groen, Casey McQuillan, and Max Sterman
Oil prices rose sharply this past week owing to greater demand and decreased supply.

- The combination of stronger expected demand and a perceived tightening in supply led to a significant increase in oil prices last week. In 2018:Q2, increasing demand expectations and decreasing anticipated supply led to rising oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.

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Recent Decomposition Data

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**Cumulative Percentage Changes since April 6, 2018**

<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
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<td>13.3</td>
<td>0.5</td>
<td>7.1</td>
<td>20.9</td>
</tr>
</tbody>
</table>

Cumulative Weekly Decomposition, 2010-Present

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
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**References**


**Authors**

Jan Groen, Casey McQuillan, and Max Sterman
Oil prices rose this past week as a result of decreased supply.

- The continued tightening of anticipated supply drove oil prices up over the past week despite a slight deterioration of demand expectations. In 2018:Q2, increasing demand expectations and decreasing anticipated supply led to rising oil prices.

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Cumulative Weekly Decomposition, Apr 06-Oct 05, 2018

Recent Decomposition Data

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Cumulative Percentage Changes since April 6, 2018

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<th>Date</th>
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<th>Brent</th>
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<td>16.1</td>
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<tr>
<td>Oct 05, 2018</td>
<td>12.3</td>
<td>3.5</td>
<td>6.8</td>
<td>22.6</td>
</tr>
</tbody>
</table>

Sources: Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.
Notes: Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.

Cumulative Weekly Decomposition, 2010-Present

Longer-Term View of Oil Price Movements

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**References**


**Authors**

Jan Groen and Casey McQuillan
Oil prices fell owing to a decrease in demand.

- A drop in global demand expectations drove the decline in oil prices this past week despite the continued tightening of anticipated supply. In 2018:Q2, increasing demand expectations and decreasing anticipated supply led to rising oil prices.

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<td>Oct 12, 2018</td>
<td>7.0</td>
<td>6.7</td>
<td>4.4</td>
<td>18.1</td>
</tr>
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**References**


**Authors**

Jan Groen and Casey McQuillan
Oil prices fell slightly due to an increase in anticipated supply.

- The perceived loosening in supply more than offset the improvement in global demand expectations, causing oil prices to decline this past week. In 2018:Q3, increasing demand expectations and broadly unchanged supply led to rising oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

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Cumulative Weekly Decomposition, Jul 06-Oct 19, 2018

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The table below presents the most recent cumulative values.

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<tr>
<th>Date</th>
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<td>8.7</td>
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<td>1.4</td>
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Recent Decomposition Data

Sources: Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.

Notes: Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.

Cumulative Weekly Decomposition, 2010-Present

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**References**

**Authors**
Jan Groen and Casey McQuillan
Oil prices fell over the past three weeks due to increased supply.

- A loosening in anticipated supply over the past three weeks more than offset the recent strengthening in global demand expectations, driving oil prices down over the period. In 2018:Q3, increasing demand expectations and broadly unchanged supply led to rising oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

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<td>Nov 09, 2018</td>
<td>-2.5</td>
<td>-2.9</td>
<td>-4.1</td>
<td>-9.4</td>
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Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.
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   Using a statistical model and a large number of financial variables, we decompose weekly oil price changes into demand effects, supply effects, and an unexplained residual.

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   The model is re-estimated every week using weekly data from January 1986 through the close of business on Friday of the most recent week. Over this sample, the model can explain about two-thirds of the weekly oil price dynamics.

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   Given the noise in weekly price changes, we choose to show the results as a cumulation from a certain starting point (usually the start of the previous quarter).

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**References**


**Authors**

Jan Groen and Casey McQuillan
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- Oil prices fell sharply as a result of weaker demand expectations and a slight loosening in anticipated supply. In 2018:Q3, increasing demand expectations and broadly unchanged supply led to rising oil prices.

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- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.

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Cumulative Weekly Decomposition, Jul 06-Nov 16, 2018

Recent Decomposition Data

- The chart at left depicts the cumulative oil price decomposition from July 6, 2018.
- The table below presents the most recent cumulative values.

Cumulative Percentage Changes since July 6, 2018

<table>
<thead>
<tr>
<th></th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
</tr>
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<tbody>
<tr>
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<td>Nov 16, 2018</td>
<td>-5.2</td>
<td>-3.4</td>
<td>-5.9</td>
<td>-14.4</td>
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</tbody>
</table>

Cumulative Weekly Decomposition, 2010-Present

Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.

Sources: Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.
Notes: Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.
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**References**


**Authors**

Jan Groen and Casey McQuillan
Oil prices dropped sharply owing to both lower demand and increased supply.

- Oil prices fell significantly as a result of weaker global demand expectations and a loosening in anticipated supply. In 2018:Q3, increasing demand expectations and broadly unchanged supply led to rising oil prices.

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- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.
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- The chart at left depicts the cumulative oil price decomposition from July 6, 2018.
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<table>
<thead>
<tr>
<th>Date</th>
<th>Demand</th>
<th>Supply</th>
<th>Rest</th>
<th>Brent</th>
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</thead>
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<tr>
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<td>-7.6</td>
<td>-12.5</td>
<td>-7.0</td>
<td>-27.1</td>
</tr>
</tbody>
</table>

**Sources:** Authors’ calculations; Haver Analytics; Thomson Reuters; Bloomberg L.P.

**Notes:** Residual reflects price movements unexplained by supply and demand factors. Supply, demand, and residual sum to Brent crude price.

### Longer-Term View of Oil Price Movements

- This final chart provides a somewhat longer-term perspective by means of a cumulative decomposition from 2010 onward.
- The analysis shows that excess supply became a significant driver of oil prices in mid-2012 and generally dominated price dynamics after mid-2014.

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### References


### Authors

Jan Groen and Casey McQuillan
Oil prices were broadly unchanged this past week.

- Strengthening demand expectations offset a perceived loosening in anticipated supply, leaving oil prices relatively unaffected over this past week. In 2018:Q3, increasing demand expectations and broadly unchanged supply led to rising oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.

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Cumulative Weekly Decomposition, Jul 06-Nov 30, 2018

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**References**


**Authors**

Jan Groen and Casey McQuillan
In recent weeks, oil prices have fallen due to decreasing demand.

- Over the past two weeks, oil prices continued to decline owing to weakening demand expectations despite a slight tightening in anticipated supply. In 2018:Q3, increasing demand and broadly unchanged supply led to rising oil prices.

- Developments in global demand expectations since 2017:Q3 have reversed the largely supply-induced weakness in oil prices throughout the first half of 2017.

- Overall, since the end of 2014:Q2, both lower global demand expectations and looser supply have held oil prices down, though this trend seems to have reversed in 2016:Q2 and 2016:Q4, and notably since 2017:Q3.

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<td>-11.4</td>
<td>-9.0</td>
<td>-36.0</td>
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**References**


**Authors**

Jan Groen and Casey McQuillan
Oil prices fell again this week due to an increase in supply.

- The loosening in anticipated supply drove oil prices down this week despite a strengthening of demand expectations. In 2018:Q3, increasing demand and broadly unchanged supply led to rising oil prices.

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