

# Financial Review of the Global Oil and Natural Gas Industry: 2018



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*May 2019*

## Key findings for 2018

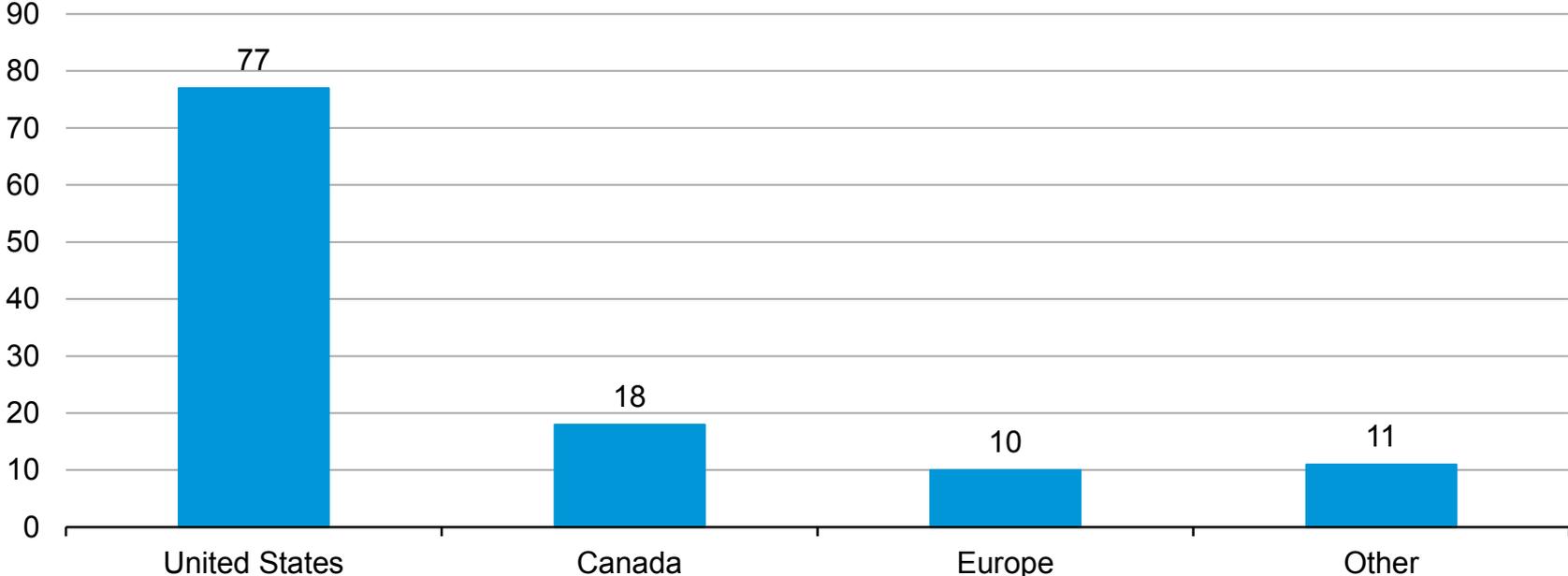
- Brent crude oil daily average prices were \$71.69 per barrel in 2018—35% higher than 2017 levels
- The 116 companies analyzed in this study increased their combined liquids and natural gas production 2% from 2017 to 2018
- Proved reserves additions in 2018 approached their highest levels in the 2009–18 period
- Finding plus lifting costs were essentially flat from 2017 to 2018
- The companies reduced debt in 2018 by more than \$60 billion, the most for any year in the 2009–18 period
- Refiners' earnings per barrel declined slightly from 2017 to 2018

Note: The 116 companies analyzed in this study publish publicly available financial statements. A full list of the companies included and a glossary of terms begin on slide 25.

# Upstream

# Geographic distribution of global oil and natural gas company headquarters, 2018

number of companies



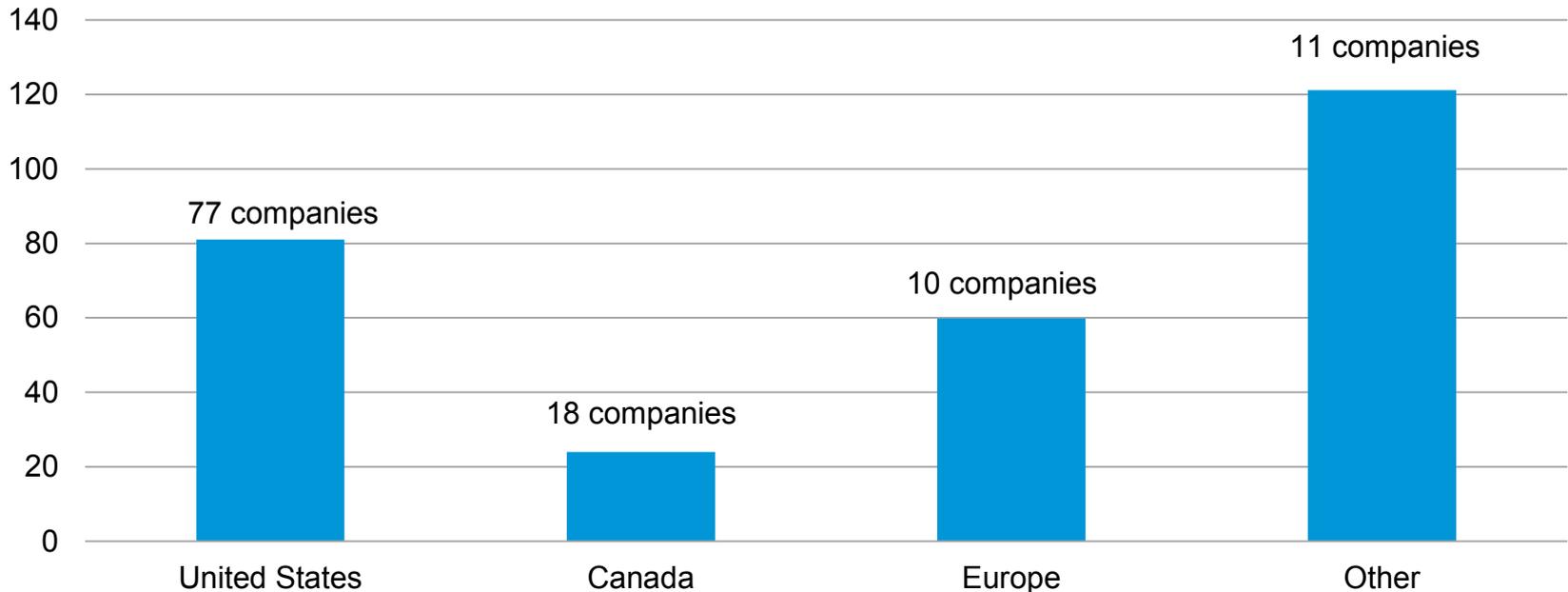
Source: U.S. Energy Information Administration, Evaluate Energy

Note: Other includes Argentina, Brazil, China, Colombia, Mexico, Thailand, and Russia

# Global oil and natural gas company proved reserves by region of headquarters, 2018

proved reserves by region of headquarters

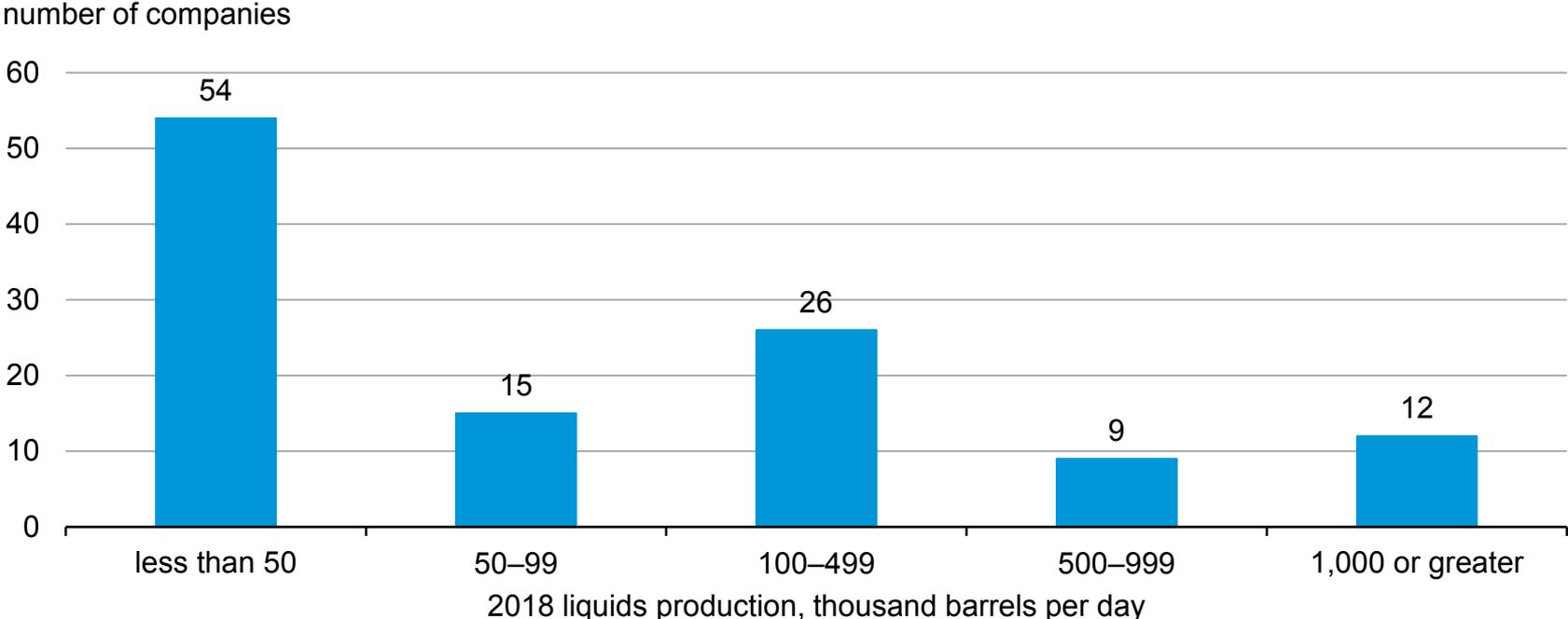
billion barrels of oil equivalent



Source: U.S. Energy Information Administration, Evaluate Energy

Note: Other includes Argentina, Brazil, China, Colombia, Mexico, Thailand, and Russia

# Distribution of companies by volume of petroleum liquids produced, 2018

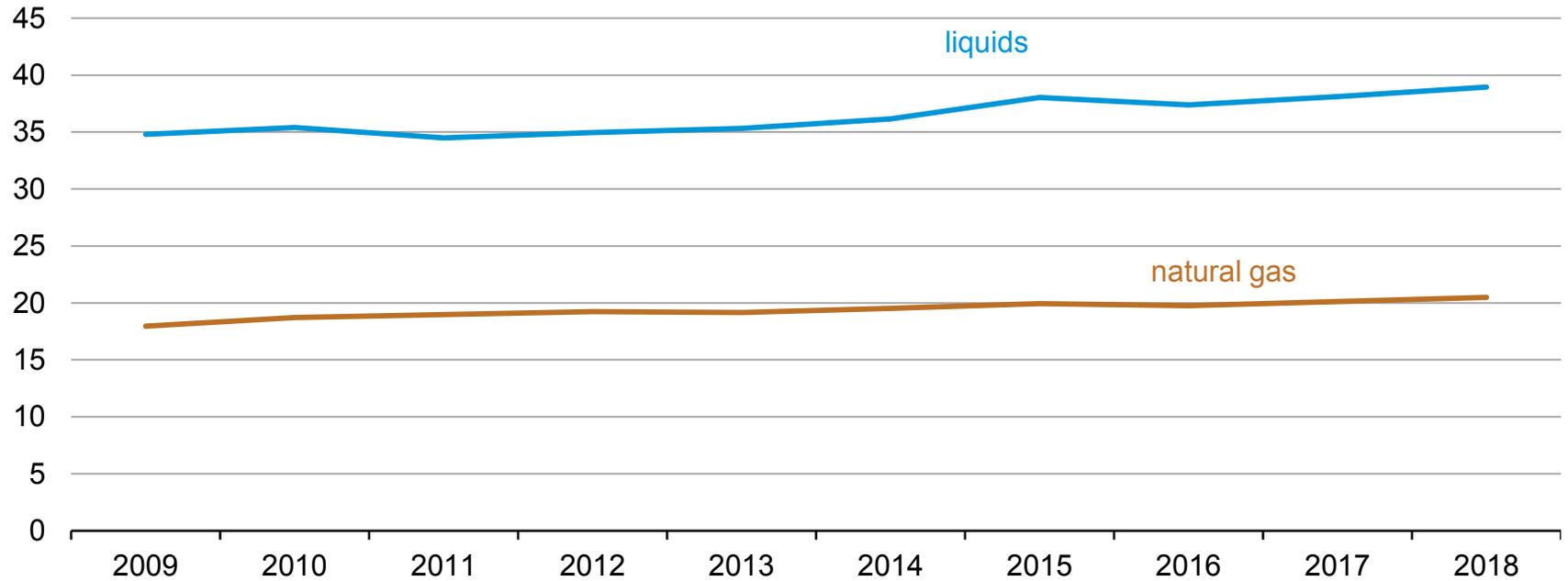


Source: U.S. Energy Information Administration, Evaluate Energy

# Production from the oil and natural gas companies

oil and natural gas production

million barrels of oil equivalent per day

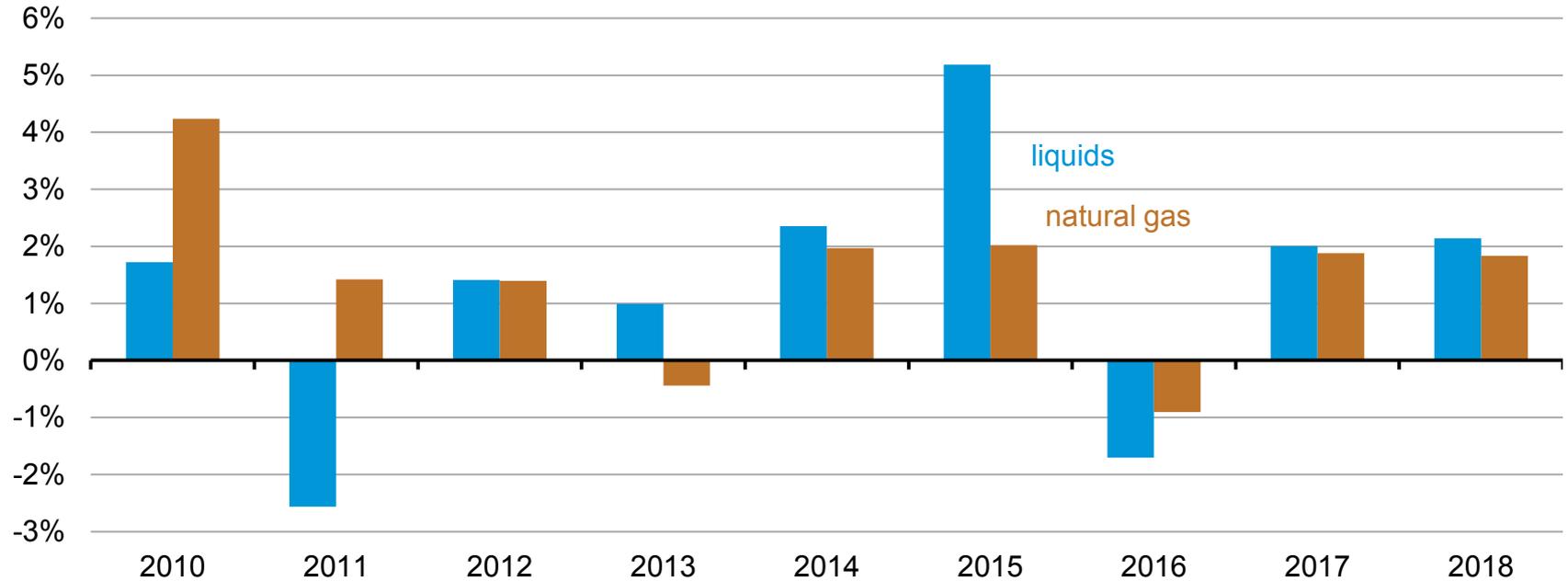


Source: U.S. Energy Information Administration, Evaluate Energy

# Liquids and natural gas production increased from 2017 to 2018

oil and natural gas production

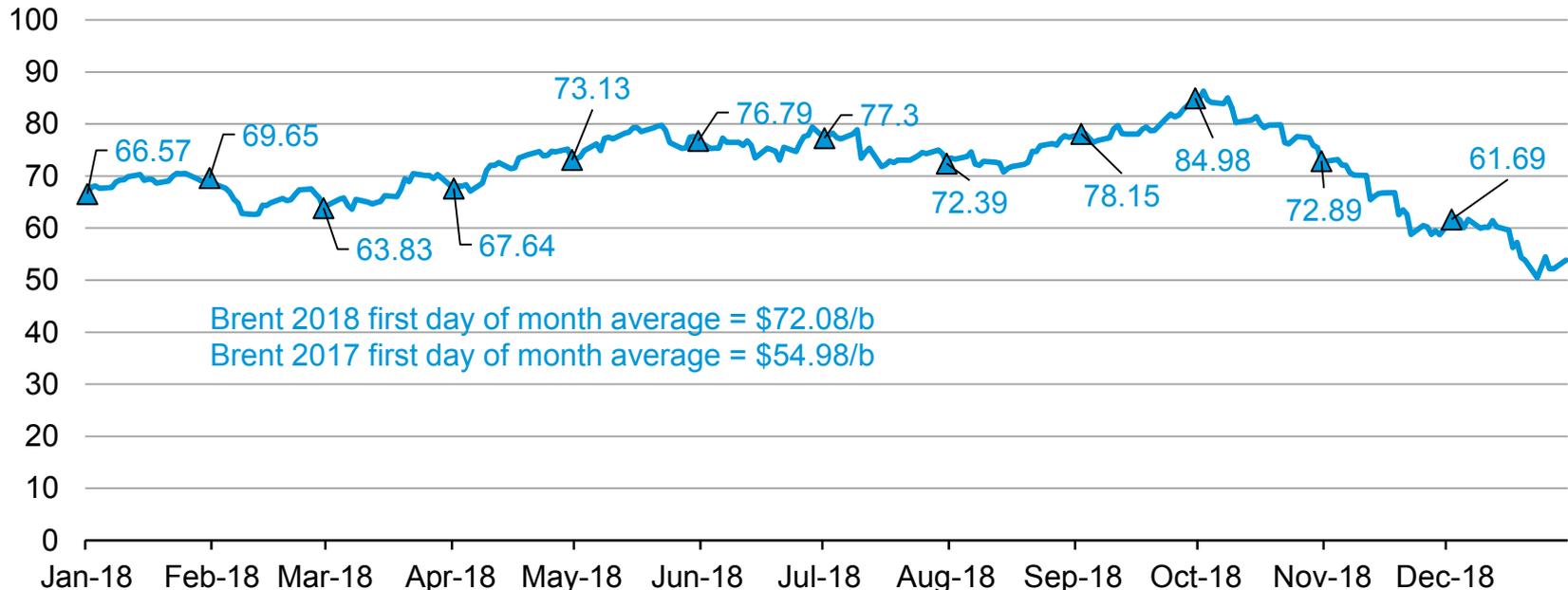
year-over-year change



Source: U.S. Energy Information Administration, Evaluate Energy

# The SEC requires companies to value proved reserves based on an average of the prices on the first day of each month

Brent crude oil front-month futures price  
dollars per barrel

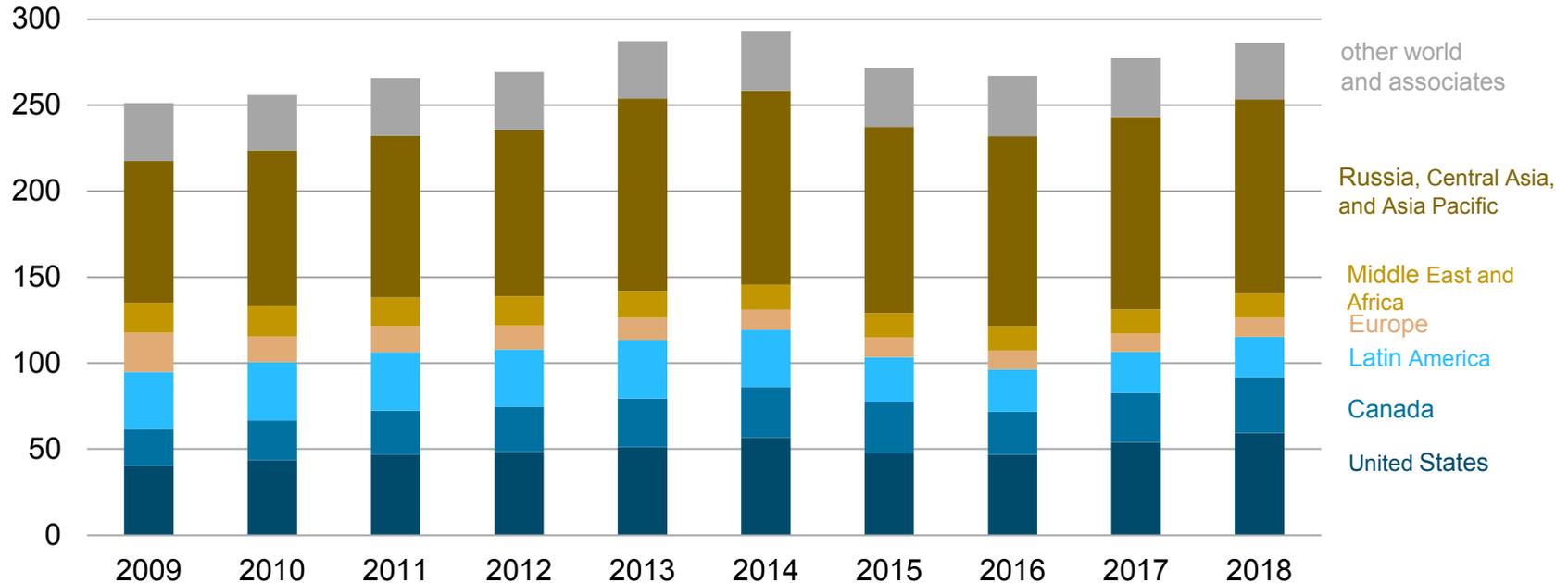


Source: U.S. Energy Information Administration, Evaluate Energy, Intercontinental Exchange, Bloomberg L.P.

Note: SEC = U.S. Securities and Exchange Commission; b = barrel

# Global proved reserves increased for the second consecutive year in 2018

proved reserves by region  
billion barrels of oil equivalent

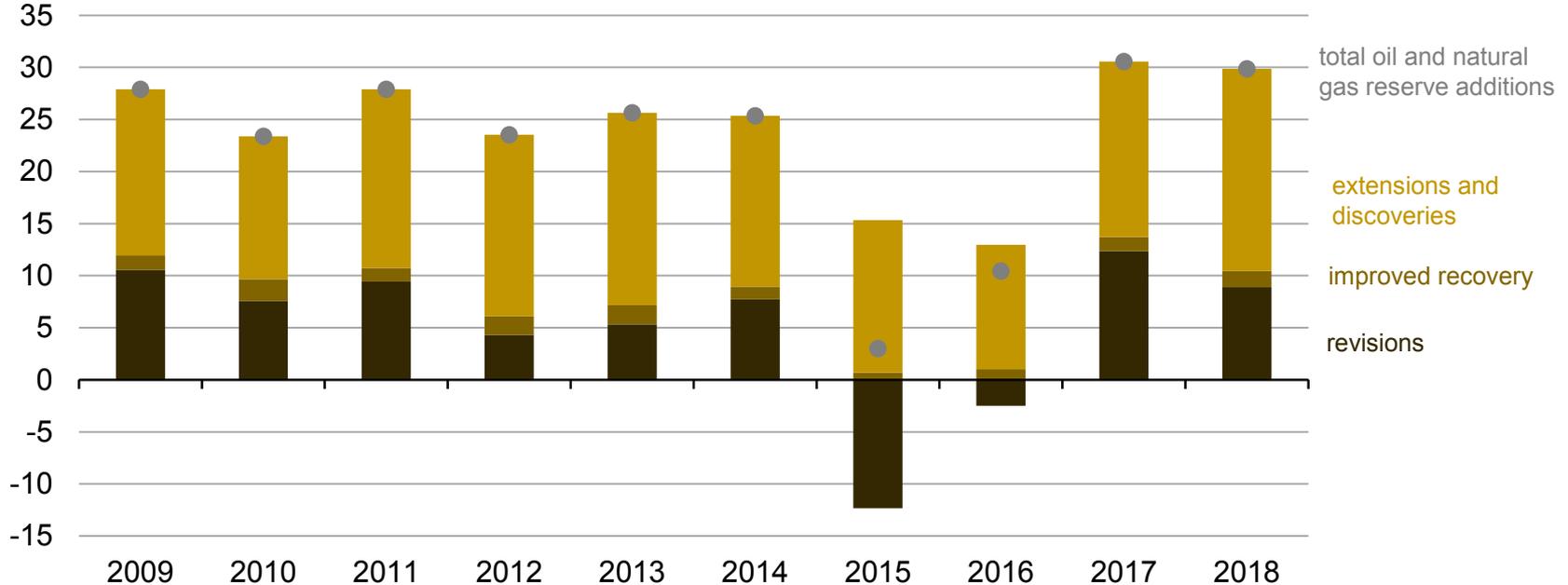


Source: U.S. Energy Information Administration, Evaluate Energy

# Proved reserves additions for liquids and natural gas totaled 30 billion barrels of oil equivalent in 2018

proved reserve additions

billion barrels of oil equivalent

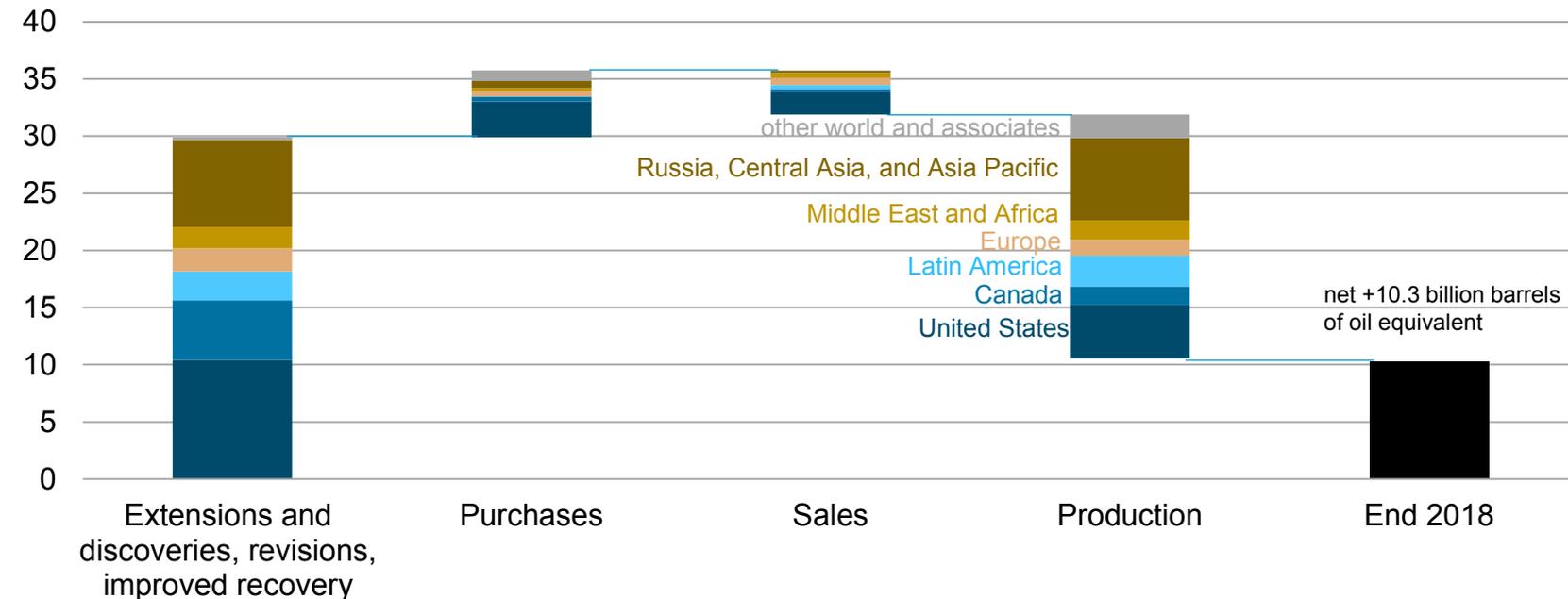


Source: U.S. Energy Information Administration, Evaluate Energy

# After net purchases and production, the companies added 10.3 billion barrels of oil equivalent to proved reserves in 2018

change in proved reserves from 2017 to 2018

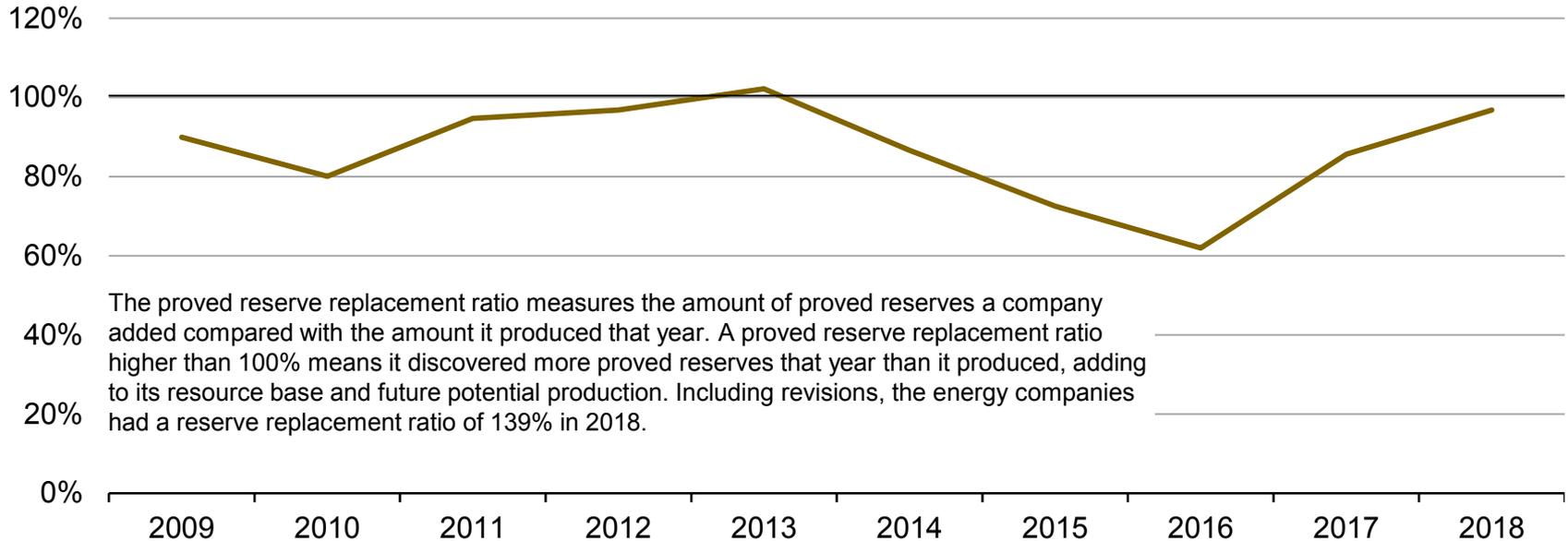
billion barrels of oil equivalent



Source: U.S. Energy Information Administration, Evaluate Energy

# Excluding revisions, the companies replaced nearly every barrel of production through organic proved reserve additions

proved reserve replacement ratio



The proved reserve replacement ratio measures the amount of proved reserves a company added compared with the amount it produced that year. A proved reserve replacement ratio higher than 100% means it discovered more proved reserves that year than it produced, adding to its resource base and future potential production. Including revisions, the energy companies had a reserve replacement ratio of 139% in 2018.

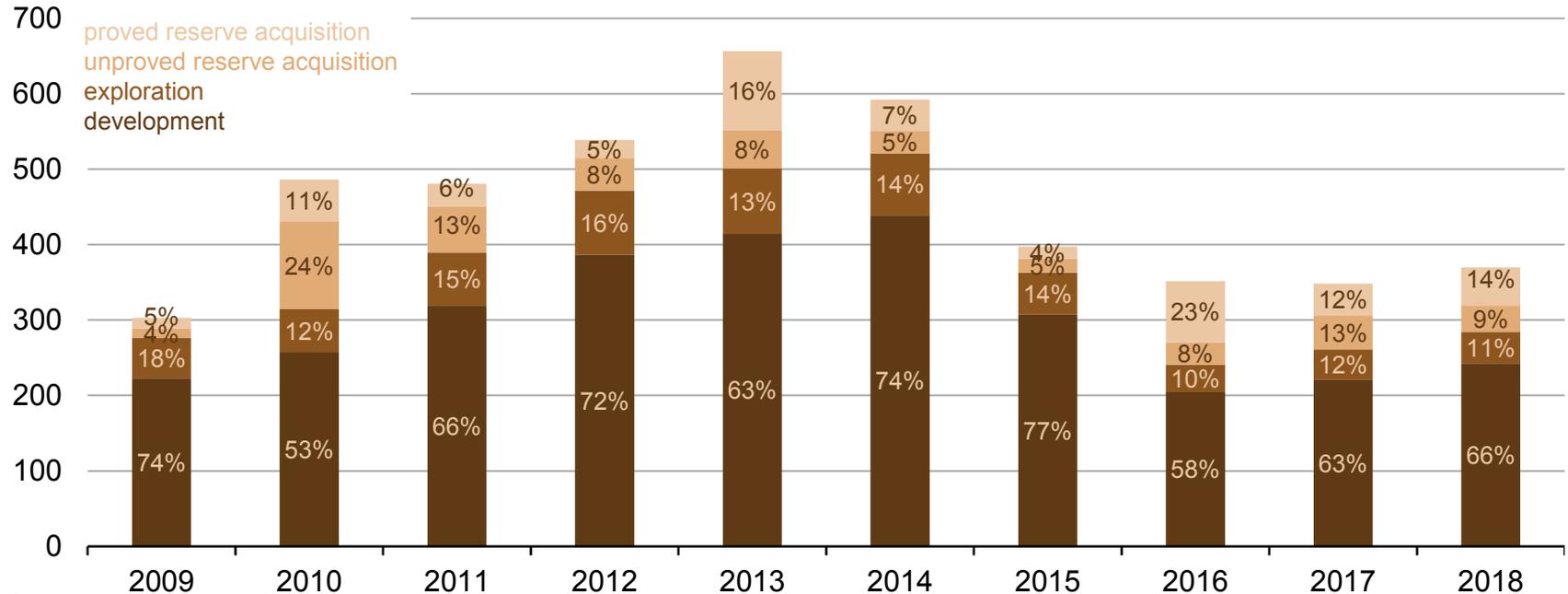
Source: U.S. Energy Information Administration, Evaluate Energy

Note: Excludes proved reserve revisions. Organic proved reserves additions include those added through extensions and discoveries and improved recovery.

# Total upstream costs incurred increased in 2018, the first increase since 2013

upstream costs incurred

billion dollars



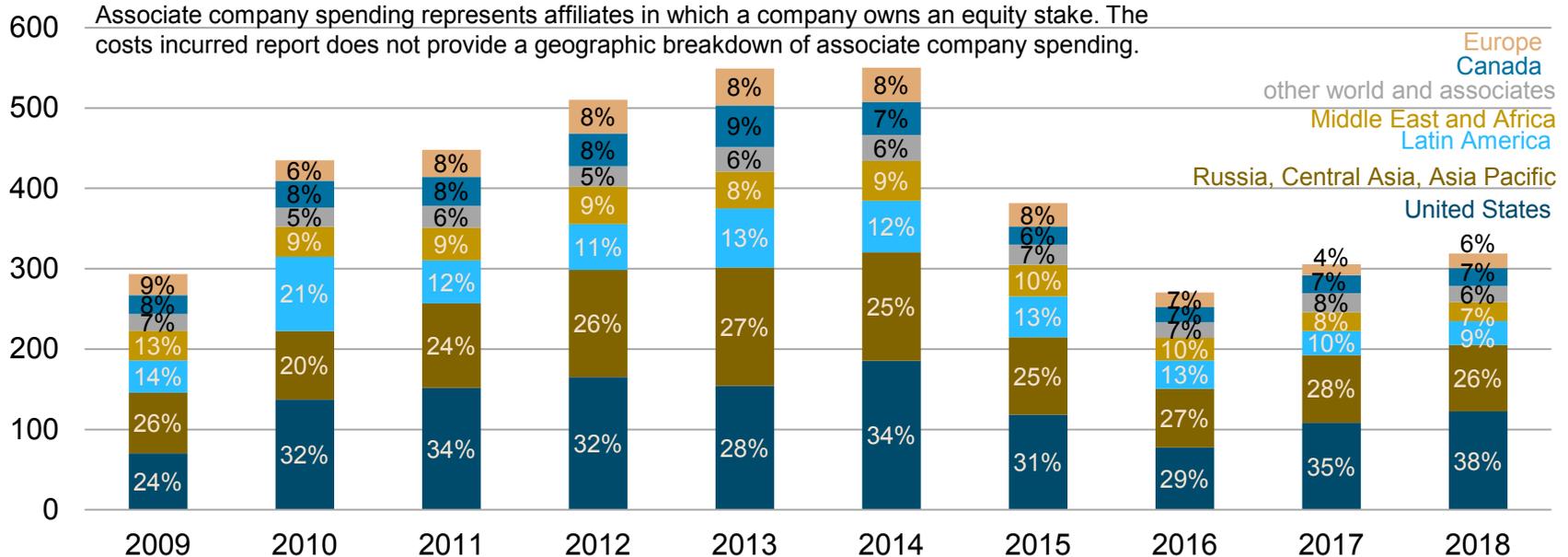
Source: U.S. Energy Information Administration, Evaluate Energy

Note: Percentages are shares of total upstream costs. Percentages may not sum to 100% because of rounding.

# Most of the increase in exploration and development spending from 2017 to 2018 was in the United States

exploration and development costs incurred

billion dollars



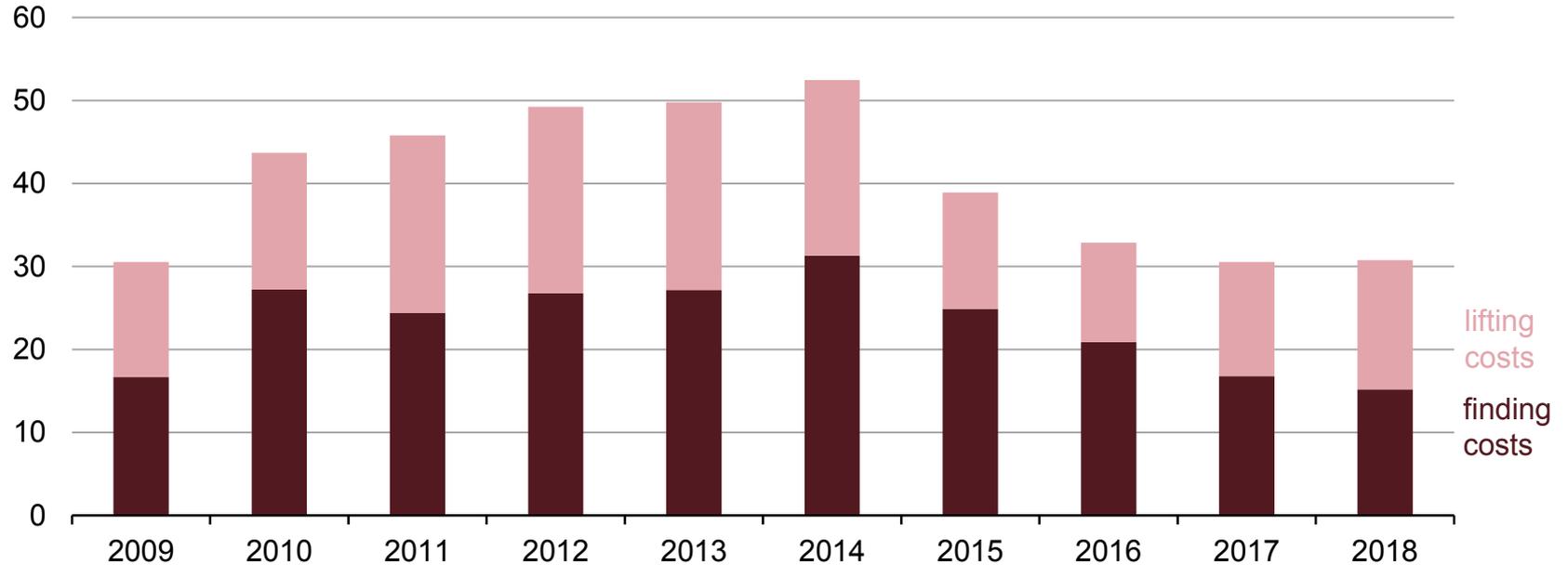
Source: U.S. Energy Information Administration, Evaluate Energy

Note: Percentages are shares of global exploration and development costs incurred. Percentages may not sum to 100% because of rounding.

Includes costs incurred from unproved reserves acquisition.

# Finding plus lifting costs were essentially flat from 2017 to 2018

dollars per barrel of oil equivalent

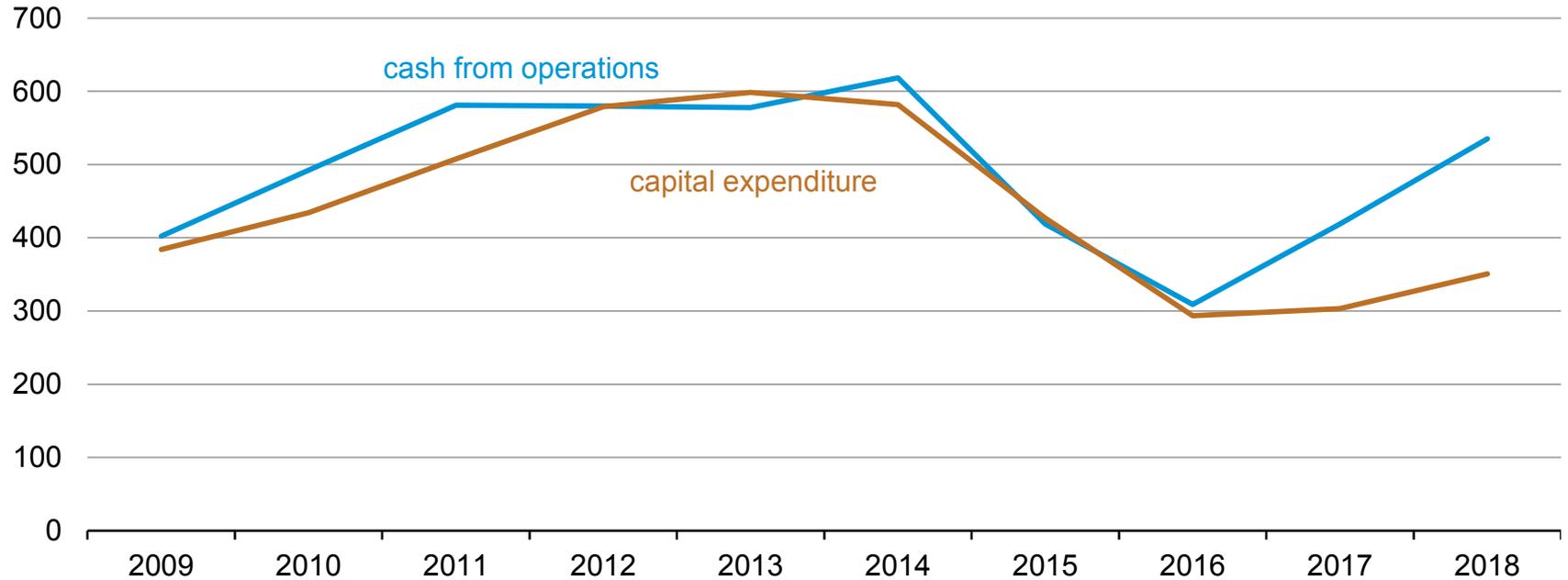


Source: U.S. Energy Information Administration, Evaluate Energy

Note: Excludes proved reserve revisions

# Capital expenditure and cash from operations increased \$47 billion and \$116 billion, respectively, from 2017 to 2018

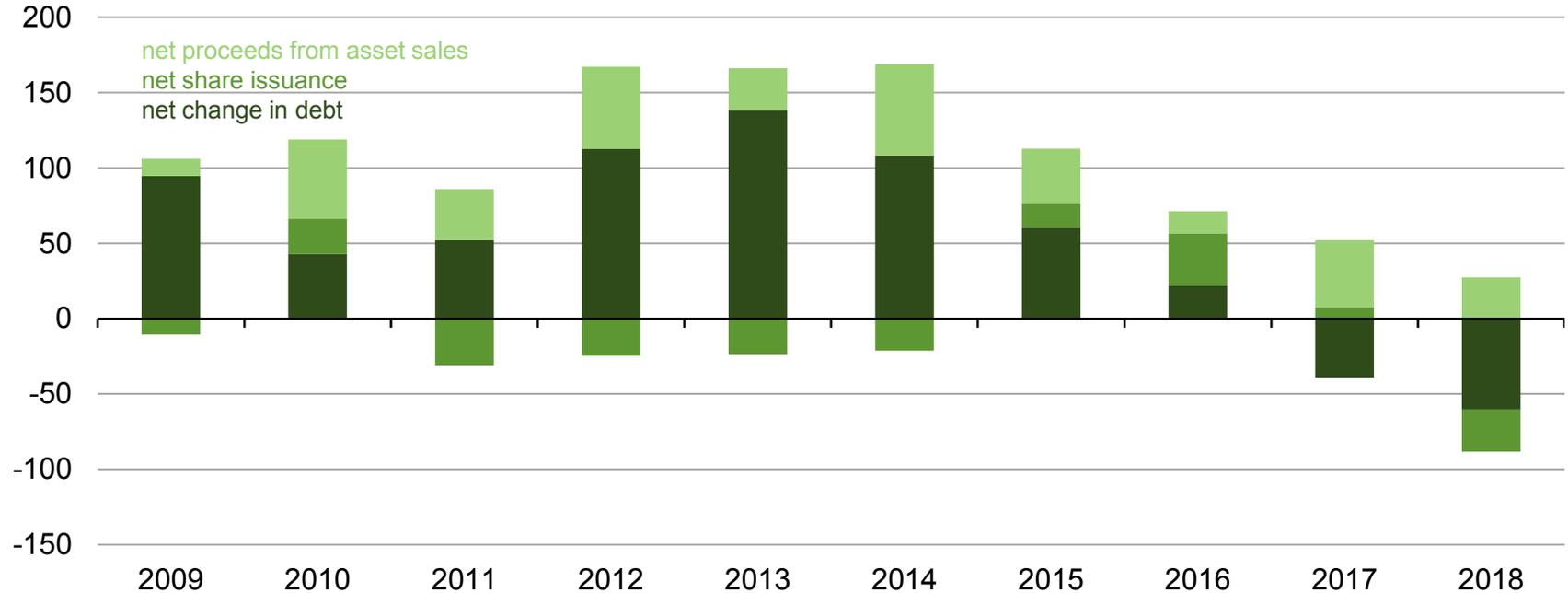
cash flow items  
billion dollars



Source: U.S. Energy Information Administration, Evaluate Energy

# The companies reduced debt by more than \$60 billion in 2018, the most in the 2009–18 period

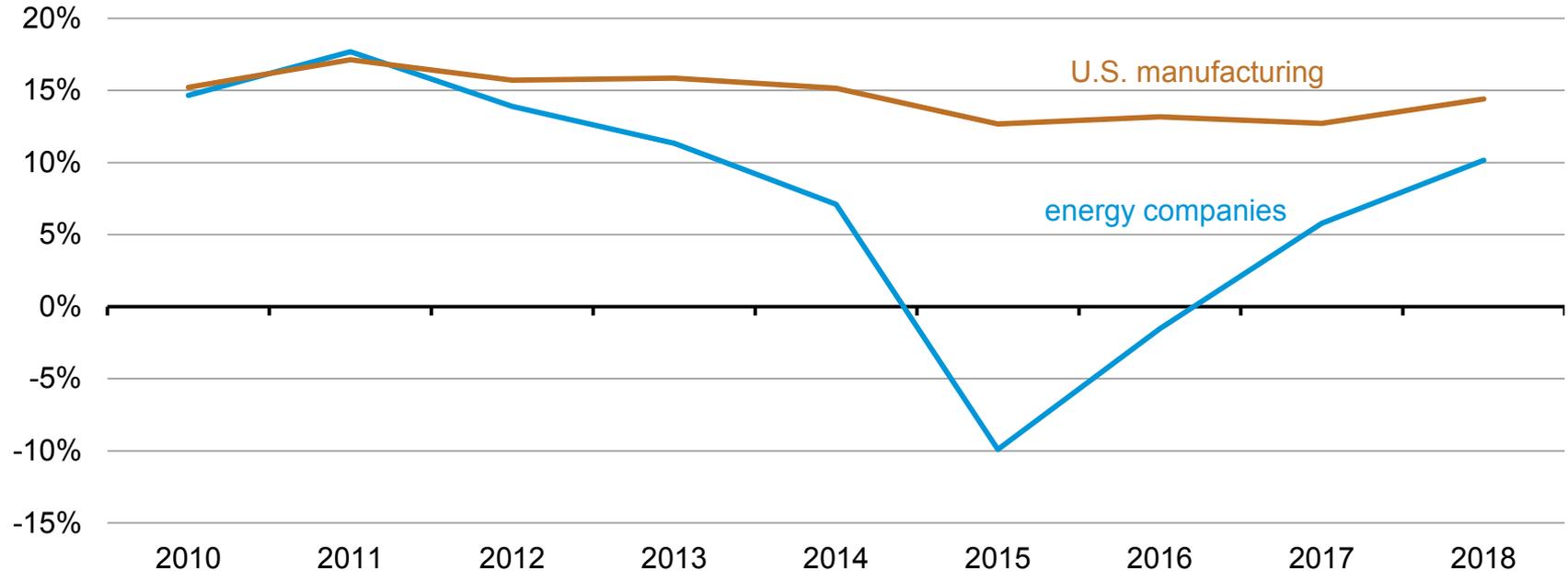
cash flow items  
billion dollars



Source: U.S. Energy Information Administration, Evaluate Energy

# The return on equity for energy companies increased to 10% and to 14% for U.S. manufacturing companies

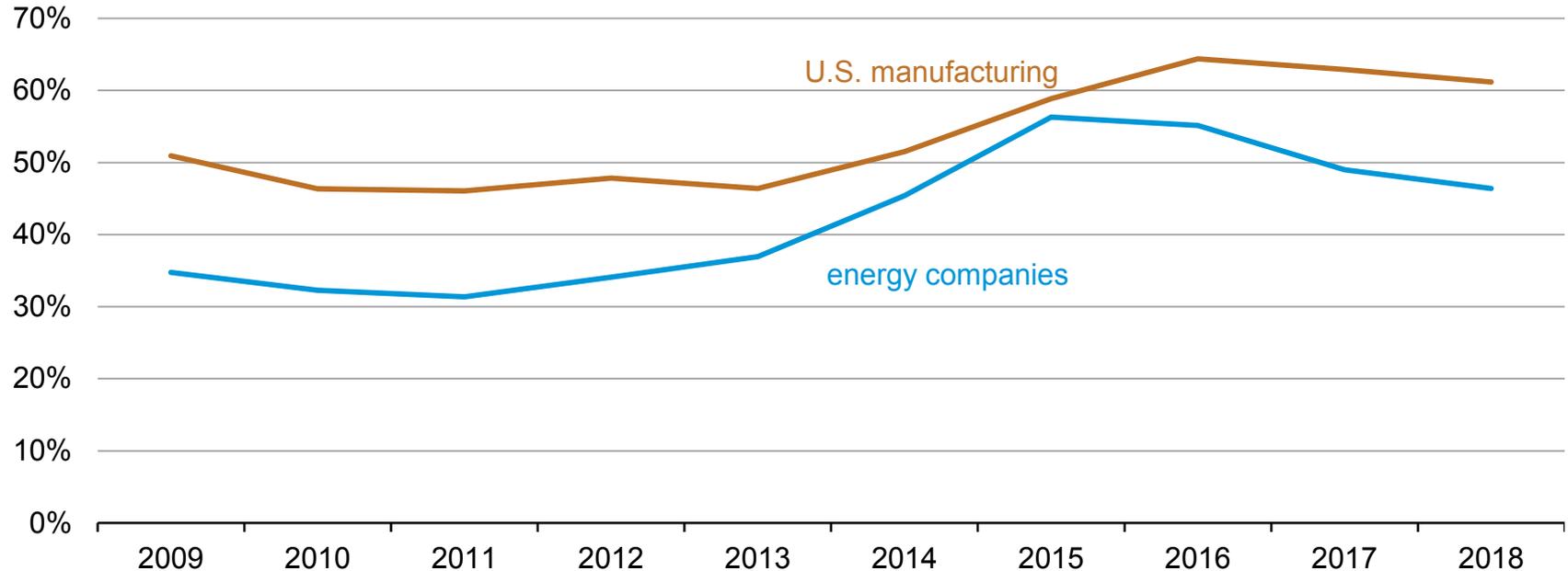
return on equity



Source: U.S. Energy Information Administration, Evaluate Energy, U.S. Census Bureau

# The long-term debt-to-equity ratio fell to 46% for the energy companies and to 61% for U.S. manufacturing companies

long-term debt-to-equity ratio



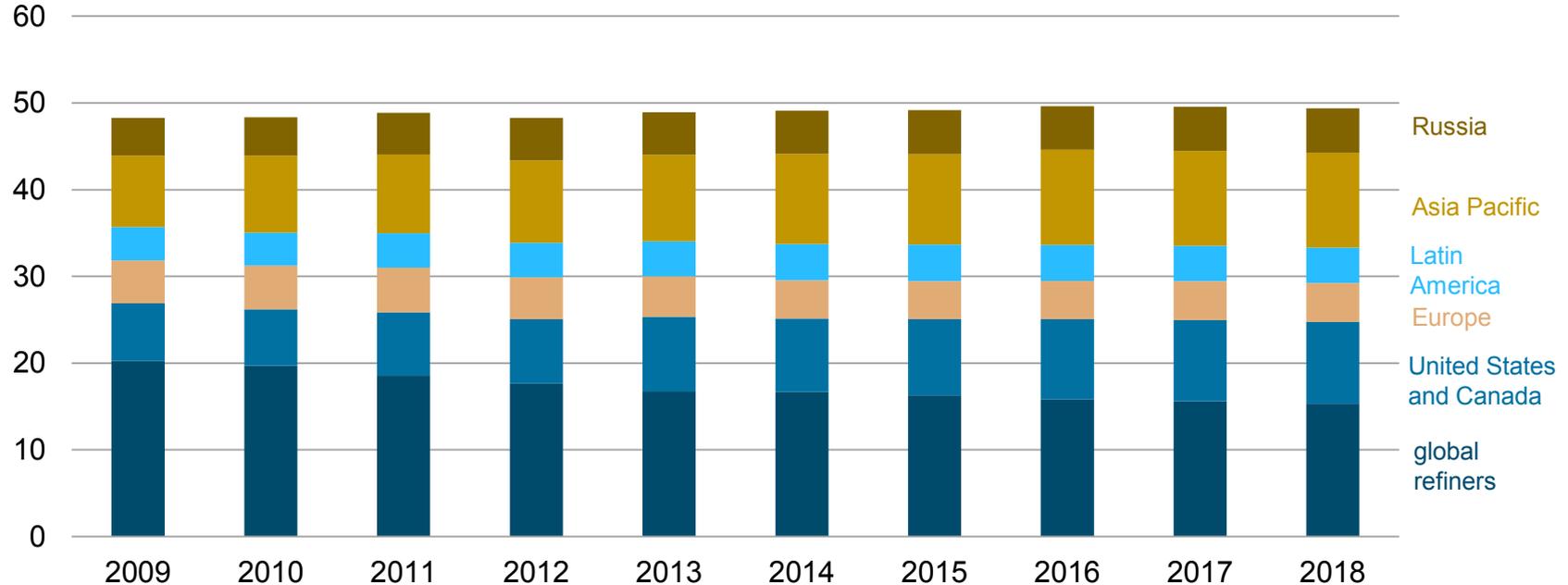
Source: U.S. Energy Information Administration, Evaluate Energy, U.S. Census Bureau

# Downstream

# Global refining distillation capacity declined slightly in 2018

distillation capacity

million barrels per day

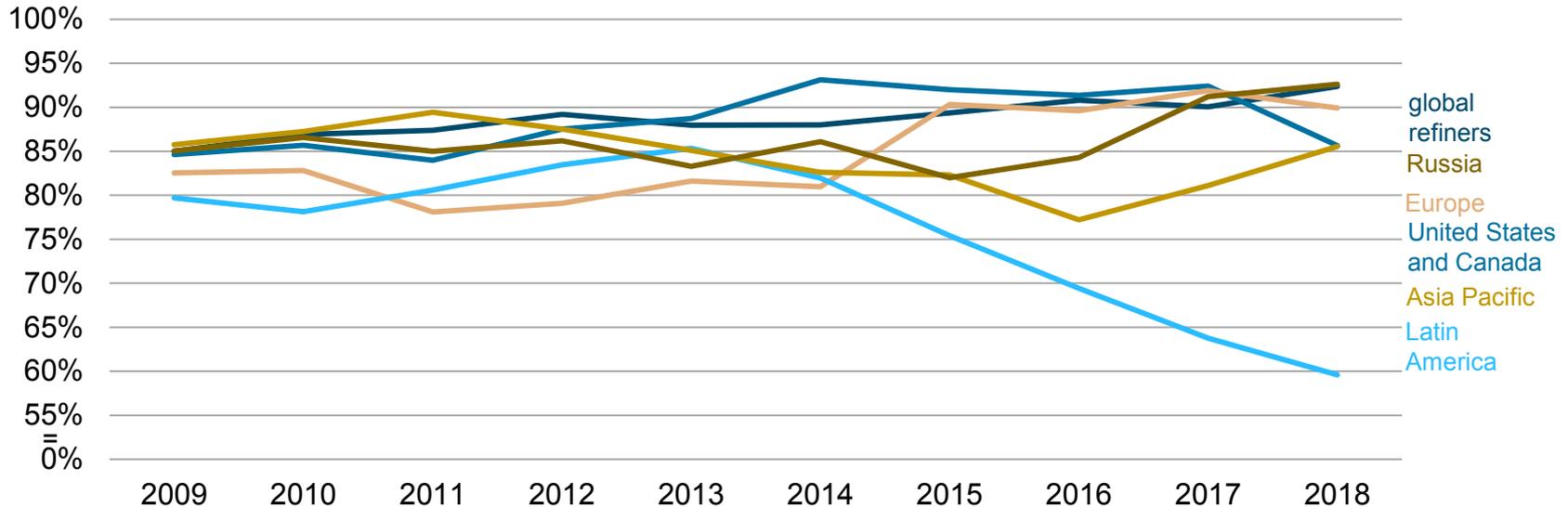


Source: U.S. Energy Information Administration, Evaluate Energy

Note: A global refiner is a company with refining assets in different regions.

# Global capacity utilization was 87% in 2018, but refinery problems in Mexico contributed to a 10-year low in Latin American utilization

capacity utilization

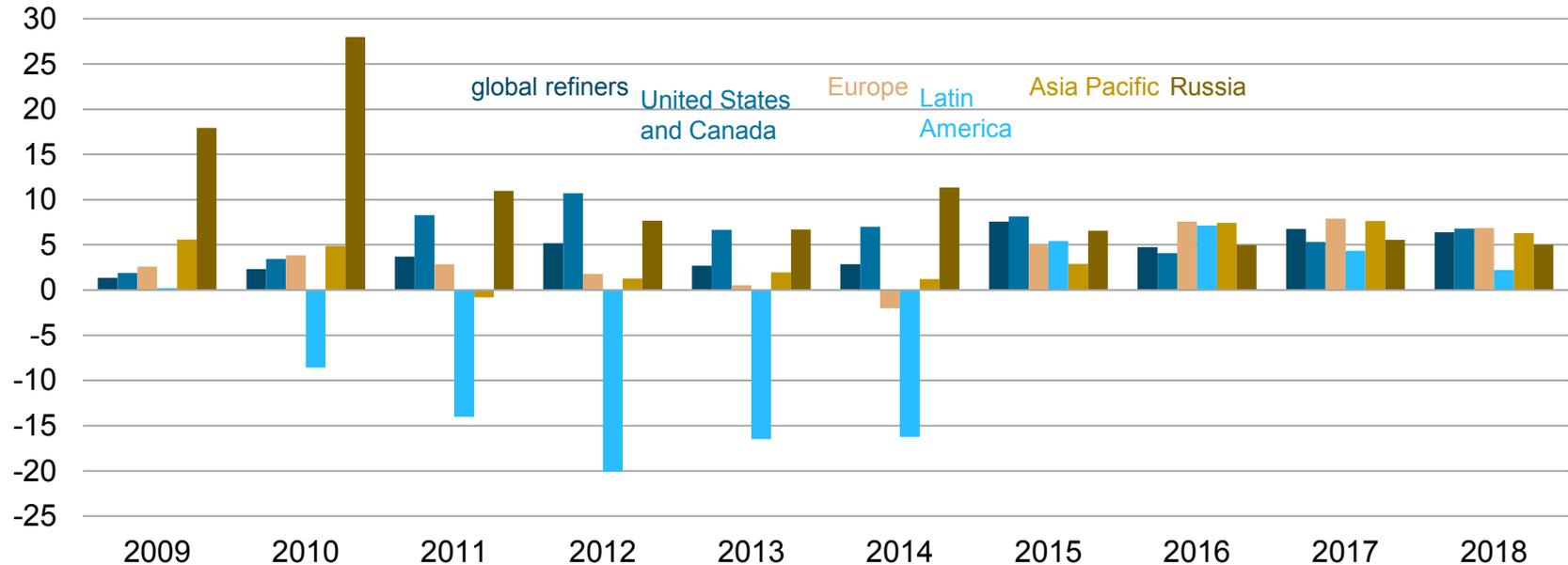


Source: U.S. Energy Information Administration, Evaluate Energy

Note: A global refiner is a company with refining assets in different regions. Because of acquisition accounting between the merger of Marathon Petroleum and Andeavor in 2018, the reported annual refinery runs number is lower than the sum of each company's quarterly refinery runs. This accounting method artificially decreased capacity utilization in the United States and Canada for 2018.

# Earnings per barrel processed declined for most refiners from 2017 to 2018

earnings per barrel processed  
dollars per barrel



Source: U.S. Energy Information Administration, Evaluate Energy

Note: A global refiner is a company with refining assets in different regions.

# Appendix: List of companies in the upstream analysis

|                                     |                                 |                                     |                                  |                                |                                  |
|-------------------------------------|---------------------------------|-------------------------------------|----------------------------------|--------------------------------|----------------------------------|
| Abraxas Petroleum Corporation       | Centennial Resource Development | Equinor ASA                         | Linn Energy                      | Pengrowth Energy Corporation   | SM Energy Company                |
| Aker BP ASA                         | Chesapeake Energy Corp.         | Erin Energy Corporation             | Lonestar Resources US, Inc.      | Penn Virginia Corporation      | Sonde Resources Corp.            |
| Amplify Energy Corp.                | Chevron Corporation             | Extraction Oil & Gas, Inc.          | Lukoil (IFRS)                    | Petrobras (IFRS US\$ Current)  | SRC Energy Inc                   |
| Anadarko Petroleum Corp.            | Cimarex Energy Co.              | ExxonMobil                          | Magnolia Oil & Gas Corporation   | PetroChina                     | Stone Energy Corporation         |
| Antero Resources Corporation        | Clayton Williams Energy, Inc.   | FieldPoint Petroleum Corporation    | Marathon Oil Corp.               | Petrominerales Ltd.            | Suncor Energy Inc.               |
| Apache Corporation                  | CNOOC Ltd                       | Forest Oil Corporation              | Mariner Energy                   | PetroQuest Energy, Inc         | T-Rex Oil, Inc.                  |
| Apco Oil and Gas International Inc  | Concho Resources Inc            | Frontera Energy Corporation         | Matador Resources Company        | Pioneer Natural Resources Comp | Talos Energy Inc.                |
| Approach Resources Inc              | ConocoPhillips                  | Galp Energia                        | Maverick Natural Resources, LLC  | PTT                            | TNK-BP International Ltd         |
| Athlon Energy Inc.                  | Contango Oil and Gas Company    | Gastar Exploration Inc.             | Mid-Con Energy Partners, LP      | QEP Resources Inc              | Total                            |
| ATP Oil & Gas Corp.                 | Continental Resources, Inc.     | Gazprom Neft                        | Montage Resources Corporation    | Range Resources Corporation    | TransAtlantic Petroleum Ltd.     |
| Bankers Petroleum Ltd               | Crescent Point Energy Corp      | GeoPark Limited                     | Murphy Oil Corporation           | Repsol                         | TransGlobe Energy Corporation    |
| Baytex Energy Corp.                 | Denbury Resources Inc.          | Gran Tierra Energy Inc.             | Newfield Exploration Company     | Ring Energy Inc                | Triangle Petroleum Corporation   |
| Berry Petroleum Corporation         | Devon Energy Corporation        | Halcon Resources Corporation        | Nexen Inc.                       | Roan Resources Inc.            | Unit Corp                        |
| BG Group                            | Diamondback Energy Inc.         | Harvest Natural Resources Inc.      | Noble Energy                     | Rosehill Resources Inc.        | Vaalco Energy Inc                |
| Black Stone Minerals LP             | Earthstone Energy Inc.          | Hess Corp                           | Northern Oil & Gas, Inc          | Rosetta Resources Inc.         | Vanguard Natural Resources, Inc. |
| Blue Ridge Mountain Resources, Inc. | Ecopetrol                       | HighPoint Resources Corporation     | Oasis Petroleum Inc.             | Rosneft                        | W & T Offshore                   |
| Bonanza Creek Energy Inc            | Encana Corporation              | Houston American Energy Corp        | Occidental Petroleum Corporation | Royal Dutch Shell              | Whitecap Resources Inc.          |
| BP Plc.                             | Endeavour International Corp    | Husky Energy Inc.                   | OMV                              | Royale Energy Inc.             | Whiting Petroleum Corporation    |
| Brazos Valley Longhorn, L.L.C.      | Energen Corp                    | International Petroleum Corporation | Panhandle Oil & Gas Inc.         | RSP Permian Inc                | WPX Energy, Inc.                 |
| California Resources Corporation    | Energy XXI Gulf Coast, Inc.     | Jagged Peak Energy Inc.             | Paramount Resources Ltd.         | Sabine Oil & Gas Corporation   | XTO                              |
| Callon Petroleum                    | Enerplus Corporation            | Kodiak Oil & Gas Corp.              | Parex Resources Inc.             | Sanchez Energy Corp            | YPF Sociedad Anonima             |
| Camber Energy, Inc.                 | ENI                             | Kosmos Energy Ltd                   | Parsley Energy Inc.              | SandRidge Energy, Inc.         | Yuma Energy, Inc.                |
| Canadian Natural Resources Limited  | EOG Resources                   | Laredo Petroleum                    | PDC Energy, Inc.                 | Seven Generations Energy Ltd.  | Yuma Energy, Inc. (Pre Davis)    |
| Carrizo Oil & Gas, Inc              | EP Energy Corporation           | Legacy Reserves Inc.                | PEDEVCO Corp.                    | Sherritt International Corp    |                                  |
| Cenovus Energy Inc.                 | EPL Oil & Gas Inc               | Lilis Energy Inc.                   | Pemex                            | Sinopec                        |                                  |

Source: U.S. Energy Information Administration, Evaluate Energy

Note: Some companies merged, split, or delisted before 2018. A total of 116 companies existed in 2018.

## Appendix: List of companies in the downstream analysis

|                        |                                |                               |                           |
|------------------------|--------------------------------|-------------------------------|---------------------------|
| Alon USA Energy        | Gazprom Neft                   | Neste Corporation             | Royal Dutch Shell         |
| Andeavor               | Grupa Lotos                    | OMV                           | Sinopec                   |
| Blue Dolphin Energy Co | HollyFrontier Corporation      | Par Pacific Holdings, Inc.    | Suncor Energy Inc.        |
| BP Plc.                | Husky Energy Inc.              | PBF Energy Inc                | TNK-BP International Ltd  |
| Chevron Corporation    | Imperial Oil Limited           | Pemex                         | Total                     |
| ConocoPhillips         | INA Group                      | Petrobras (IFRS US\$ Current) | TUPRAS                    |
| CVR Energy, Inc.       | Indian Oil Corporation Limited | PetroChina                    | Valero Energy Corporation |
| Delek US Holdings      | Lukoil (IFRS)                  | Phillips 66                   | Western Refining Inc.     |
| ENI                    | Marathon Oil Corp.             | PKN Orlen                     |                           |
| ExxonMobil             | Marathon Petroleum Corporation | Repsol                        |                           |
| Galp Energia           | MOL                            | Rosneft                       |                           |

Source: U.S. Energy Information Administration, Evaluate Energy

Note: Some companies merged, split, or delisted before 2018. A total of 35 companies existed in 2018.

# Background

- The upstream analysis focuses on the financial and operating trends of 116 global oil and natural gas companies (called *the companies* or *the energy companies*), and the downstream analysis focuses on 35 companies
- The data come from the public financial statements each company publishes, which a data service (Evaluate Energy) aggregates for ease of data analysis
- For consistency, an energy company's assets that were acquired by another company in the group in 2009 or later were kept in the data for the previous years
- Several charts show comparisons between energy companies and the U.S. manufacturing industry. The data were collected from the U.S. Census Bureau's *Quarterly Financial Report*

## Brief description of terms

- *Cash from operations* is a measure of income from the company's regular business activities
- *Capital expenditure* represents cash used to purchase property, plant, and equipment
- *Financing activities* measure inflows and outflows in debt or equity markets, including dividends, share issuance or repurchases, and debt issuance or repayments
- *Return on equity* is a measure of the profit a company earns on money that shareholders have invested
- *Market capitalization* is the total value of a company's outstanding, publicly traded shares

## Brief description of terms

- *Net income* represents profits after taxes and depreciation
- *Asset impairments* occur when a company lowers the estimated value of a property to reflect current market value, which may result from the loss of production potential or a decline in oil prices
- *Upstream activities* refers to crude oil exploration, production, and other operations that occur before refining
- *Downstream activities* refers to refinery operations, product sales, and marketing at the wholesale and retail levels