

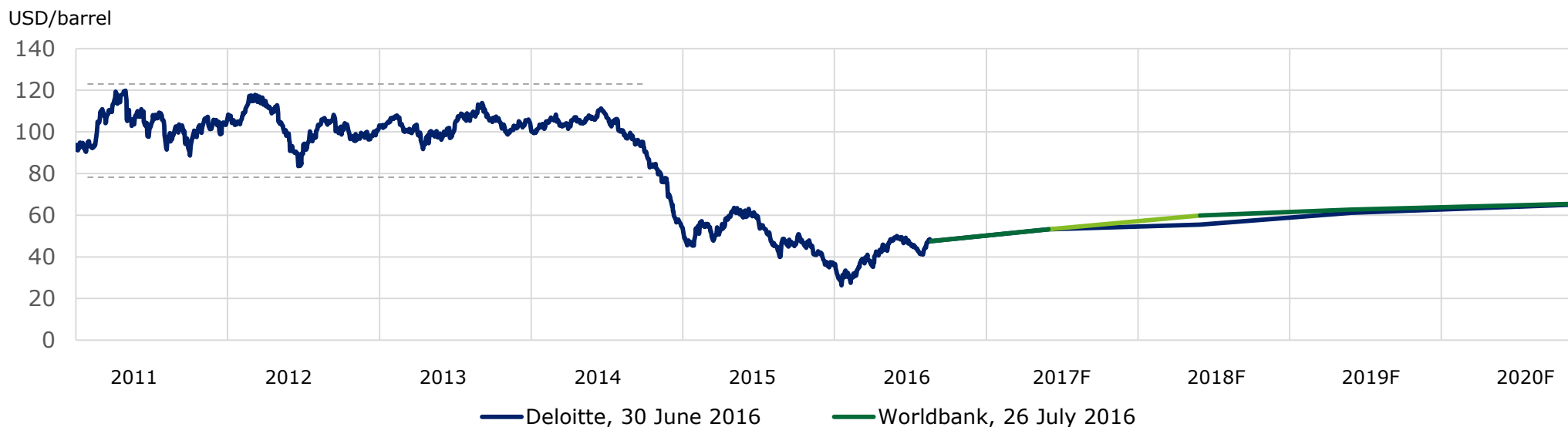
## **Oilfield services market conditions and trends 2016**

Segments: drilling, well maintenance and  
workover, and geophysics

September 2016

Oil price volatility has grown considerably over recent years. The uncertainty makes it complicated for companies to establish long-term plans.

### Forecasted weighted average\* oil price



Source: Deloitte and Worldbank forecasts

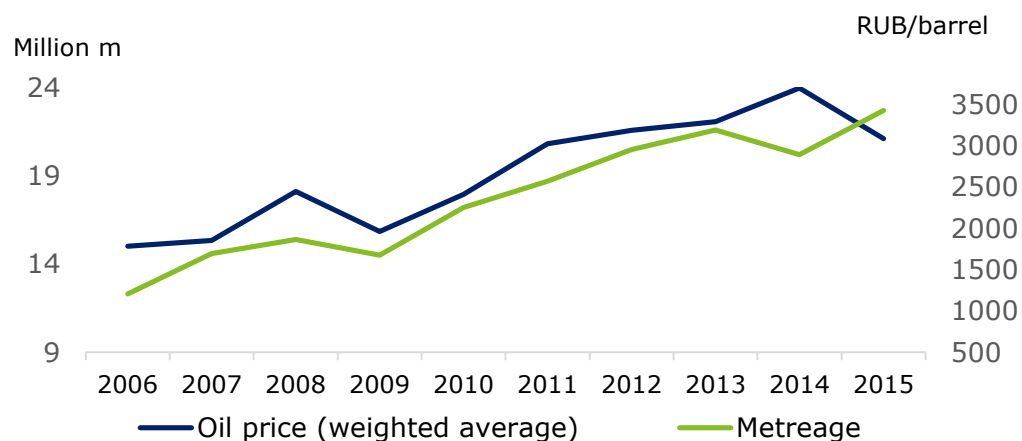
\* The weighted average price is a combination of the prices for Brent and WTI crude oil taken with equal weights

### High volatility and controversial trends

- The considerable reduction in oil prices and volatility on the oil market in 2014-2015 forced analysts to review short-term oil price forecasts regularly.
- As of the beginning of the second half of 2016, most experts agree that oil price recovery is going to be slow.

Despite the downward trend in the commodity markets, Russian companies have set a drilling record.

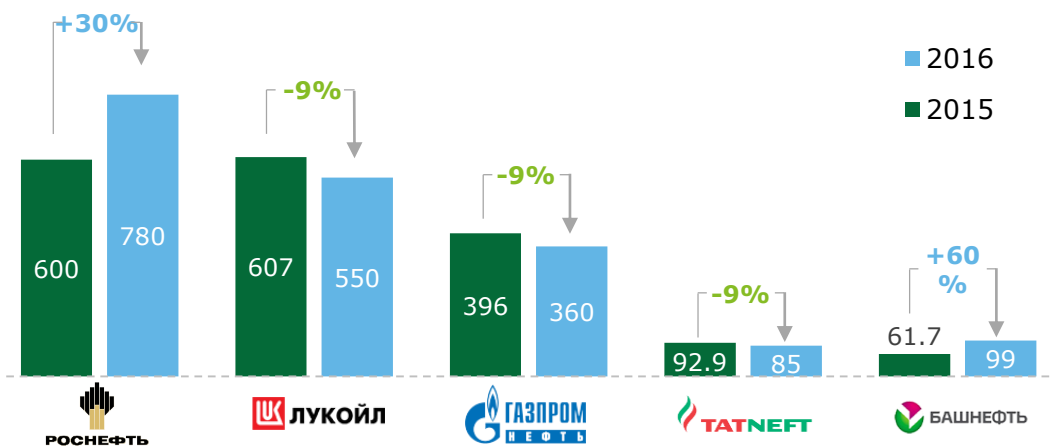
### Average annual oil price and drilling metrage



### Neutral to positive expectations of market participants

- 2015 saw a continued disruption in the correlation between oil prices and drilling metrage: despite the sharp decrease in oil prices, metrage increased by over 10 percent.
- The increase in metrage may have been caused by market expectations. According to Deloitte’s 2016 Russian Oil and Gas Outlook Survey, based on interviews with executives from Russian enterprises, 61 percent of experts expect a rise in oil prices in 2016.
- Despite the neutral to positive expectations, in order to relieve the impact of the current decline in oil prices, the key market players aim to reduce operating costs and improve operating efficiency.

### Capital investments plans for 2016, billion RUB



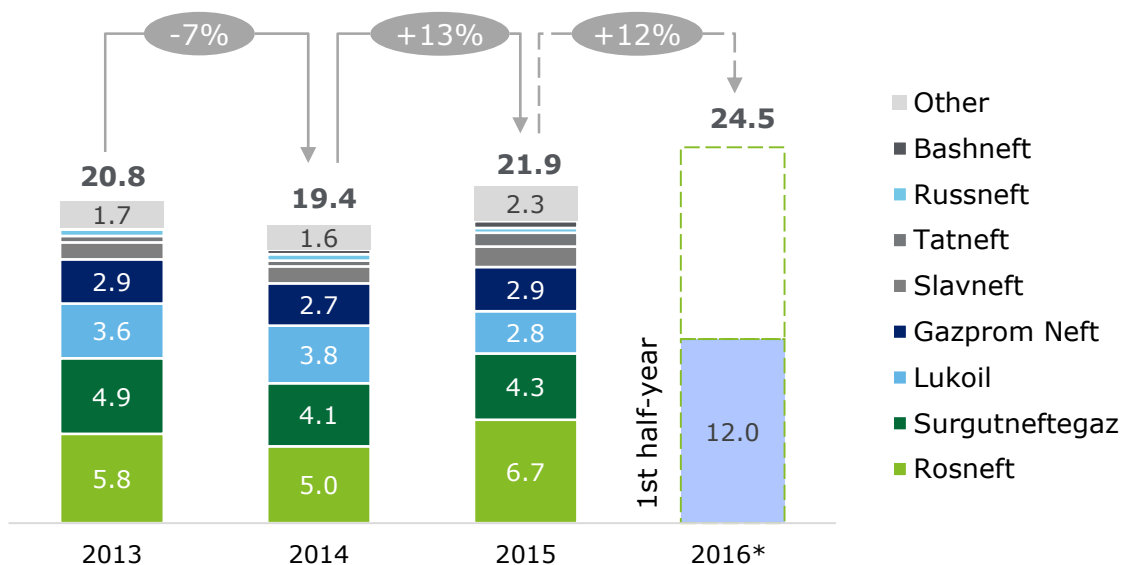
### Capital investment plans for 2016, billion RUB

- According to the 2016 Russian Oil and Gas Outlook Survey, 55 percent of experts believe that capital flow into the Russian oil and gas sector will not decline for, at least, the next five years.
- The growth of uncertainty on the market has become one of the reasons why there is no trend towards changing the amount of capital investments in 2016 among the largest vertically integrated oil companies (VIOC). At the same time, the majority of market leaders are not planning to cut capital investments abruptly, which confirms the absence of exceedingly negative expectations.
- According to VIOC representatives, upstream will be the main focus for capital investments. Funds will be allocated towards maintaining and expanding exploration and production.

Source: Company data; the amount of investment includes foreign assets.

Despite the existing uncertainty on the market, according to 2016 results, production and exploratory drilling metrage are expected to grow.

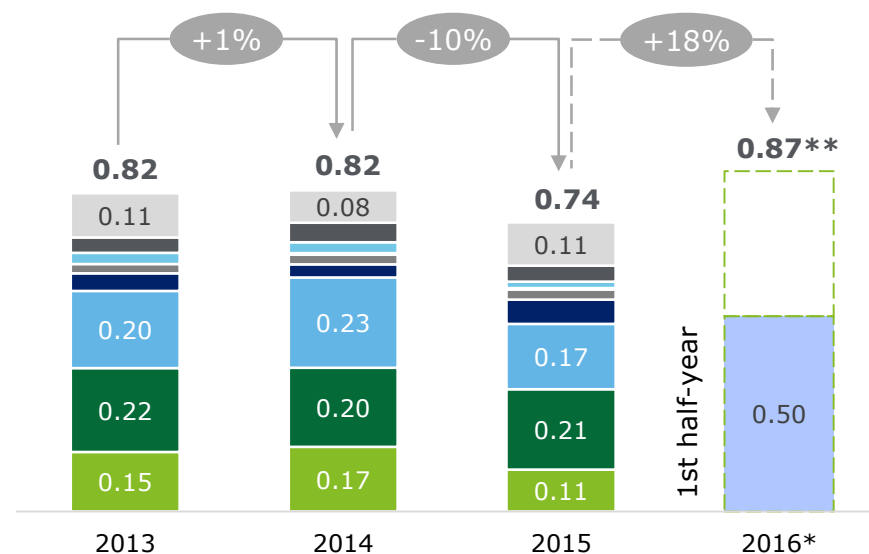
### Production drilling, million m



Source: "Oil and Gas Vertical" magazine (CDU TEK), company data,  
\*Deloitte forecasts

- In 2015, the total production drilling market grew by 13 percent.
- Most key players expanded drilling volumes having implemented their annual plans for production drilling.
- According to the representatives of most companies and actual Q1 data, companies are not planning to reduce the volumes of production drilling in 2016.
- Rosneft stands out among the key players as it is planning to boost the volumes of production drilling by no less than 30 percent.

### Exploration drilling, million m



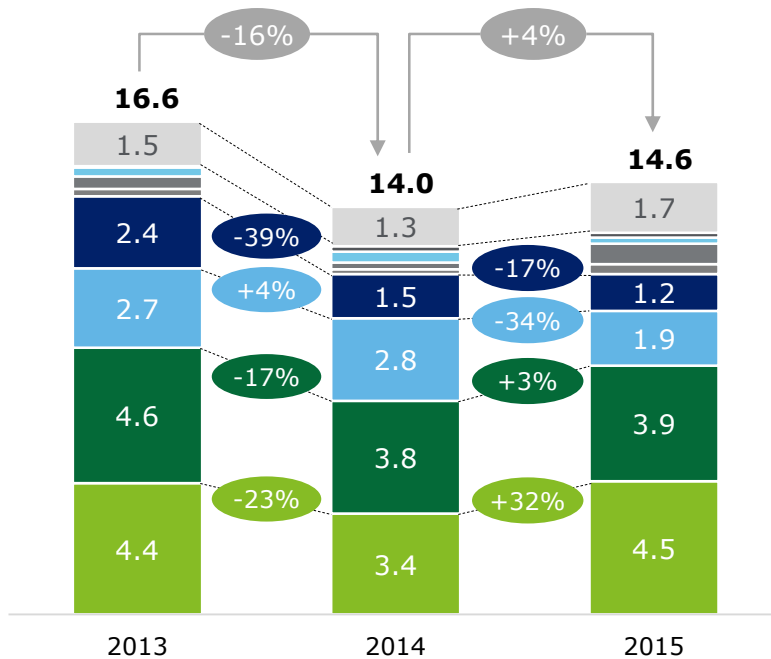
Source: "Oil and Gas Vertical" magazine (CDU TEK), company data,  
\*Deloitte forecasts

- In 2015, the exploratory drilling market volumes decreased by 10 percent, which was due to the uncertainty on the market and the suspension of participation in expensive exploration projects.
- At the same time, according to the results of the first half-year of 2016, exploratory drilling grew by 11.2 percent as compared to the same period last year.
- Hence, in 2016 exploratory drilling metrage is expected to grow, and, by the end of the year, metrage is predicted to be 18 percent higher than in 2015.

\*\* The forecast has been reviewed due to the positive trends demonstrated by the companies at the end of the first half-year of 2016.

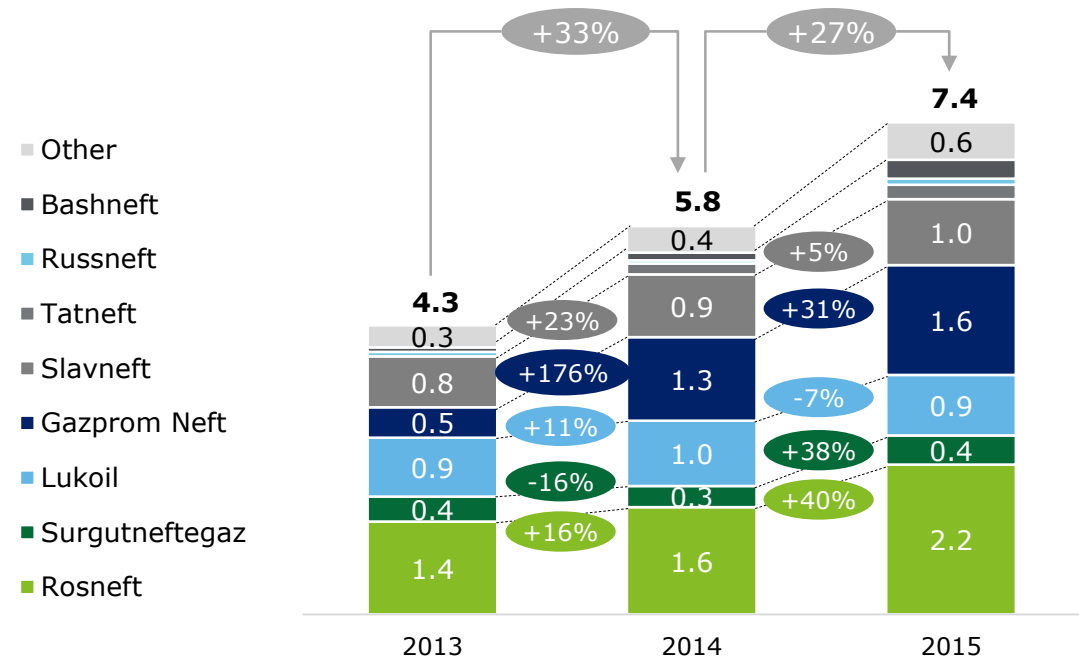
# Horizontal drilling remains a key driver for metrage growth in 2015; directional drilling is growing more slowly.

## Directional drilling, million m



Source: "Oil and Gas Vertical" magazine (CDU TEK)

## Horizontal drilling, million m

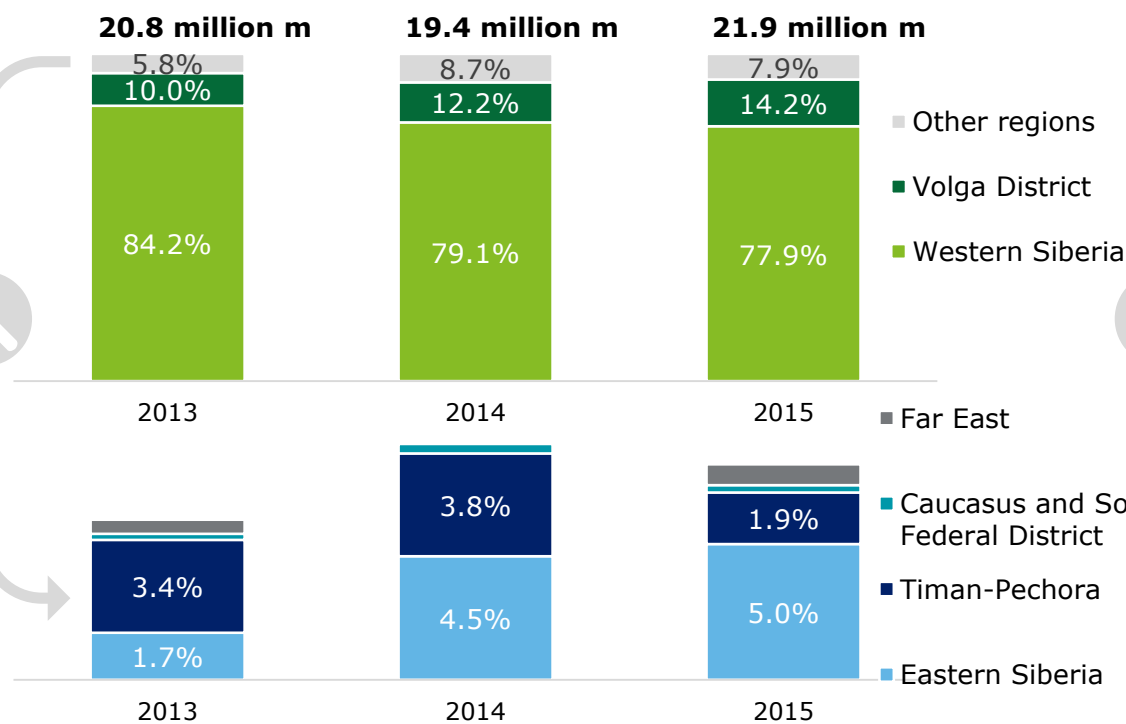


Source: "Oil and Gas Vertical" magazine (CDU TEK)

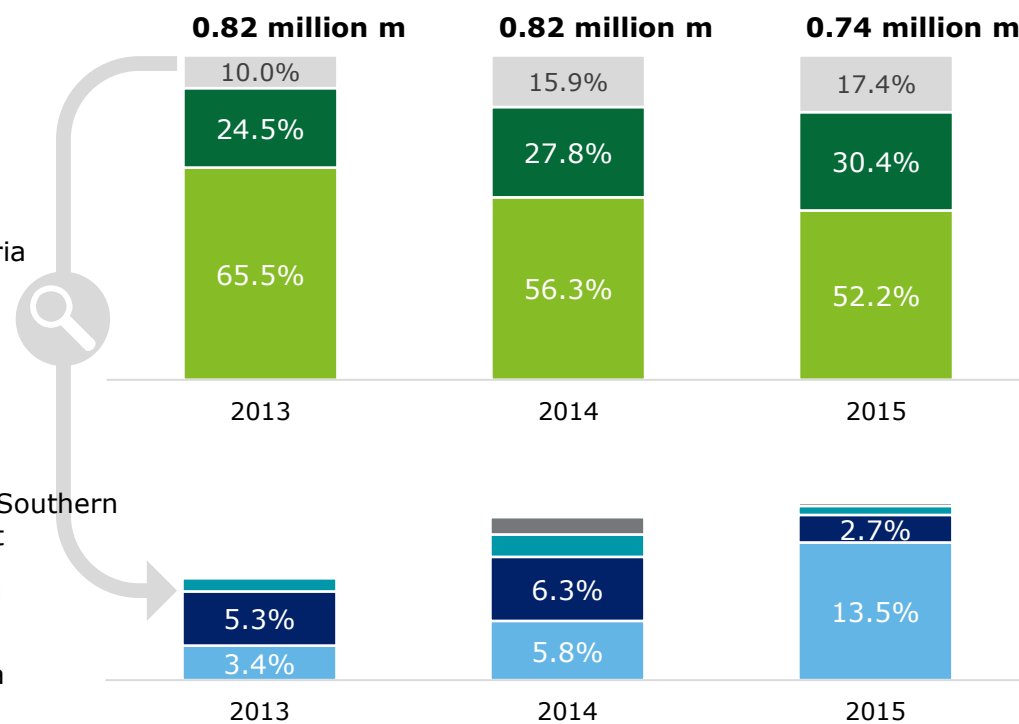
- The 2015 market continued the trend observed in 2014: horizontal drilling metrage increased considerably as compared to the previous year—by 27 percent. It is horizontal drilling that currently drives the metrage growth in the Russian Federation. Most key players continued to increase metrage in horizontal drilling. According to the year's results, metrage in horizontal drilling exceeded metrage in directional drilling at Gazprom Neft and Slavneft.
- Metrage in directional drilling grew by 4 percent in 2015, which was not as considerable as the growth in horizontal drilling metrage. The major boost in directional drilling volumes was due to increased drilling by Rosneft (by 32 percent) as well as by small and medium-sized oil companies. At the same time, Lukoil and Gazprom Neft have reduced directional drilling metrage considerably.

Western Siberia remains a leader in drilling volumes; however, the share of other regions has grown considerably over 2014-2015.

### Metreage distribution in production drilling



### Metreage distribution in exploratory drilling



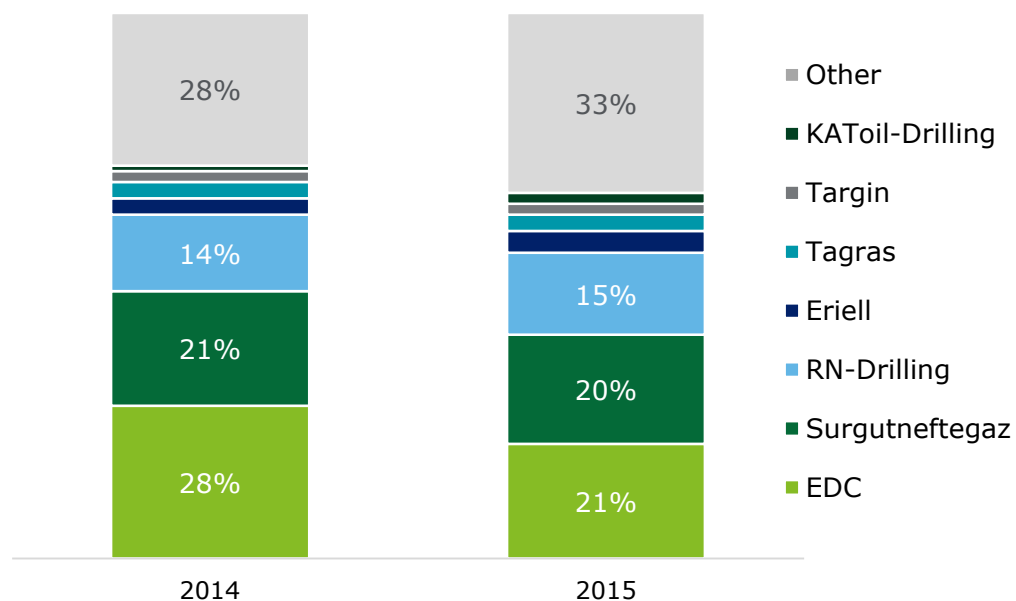
Source: "Oil and Gas Vertical" magazine (CDU TEK), Deloitte analysis

Source: "Oil and Gas Vertical" magazine (CDU TEK), Deloitte analysis

- Western Siberia is still Russia's main oil region, accounting for 78 percent of metreage in production drilling and 52 percent in exploratory drilling in Russia in 2015. However, since 2013, the share of Western Siberia in the total metreage across the abovementioned regions has decreased by 6 and 13 percentage points, respectively.
- Stable and fast growth in drilling volumes has been continuously observed in Eastern Siberia: metreage for 2013-2015 is three times higher, and comprised 5 percent of production drilling and 13.5 percent of exploratory drilling in Russia in 2015.
- Drilling volumes in the Far East continue to change considerably year-on-year: while in 2015, the share of production drilling increased by 0.7 percentage points, a fall by 1.4 percentage points was observed in exploratory drilling.

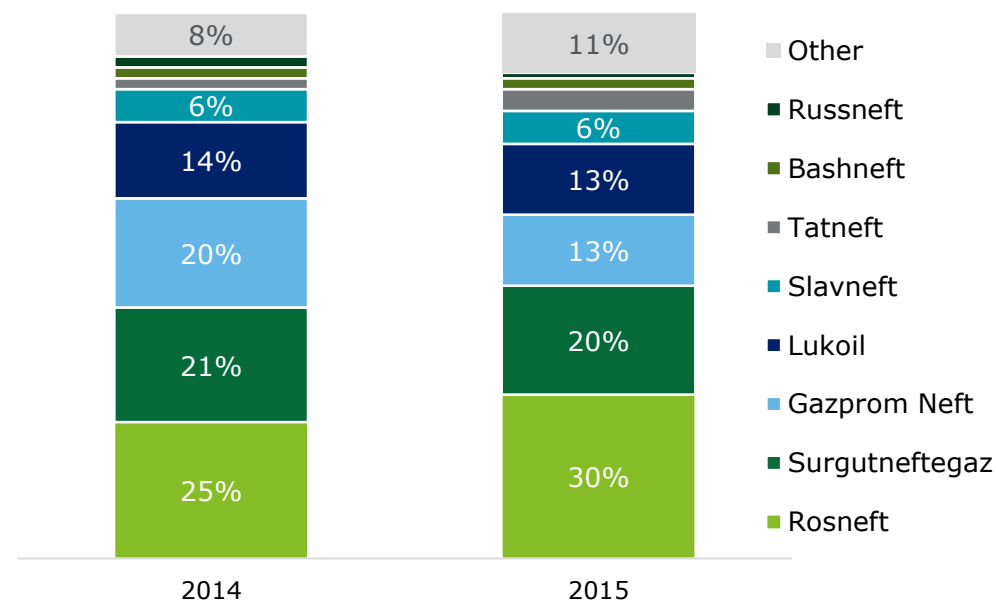
Supply and demand on the drilling market has not seen significant changes; however, EDC's share has been decreasing, and the number of medium and small suppliers is growing.

### Supply on the drilling market (based on metreage)



Source: Company data

### Demand on the drilling market (based on metreage)



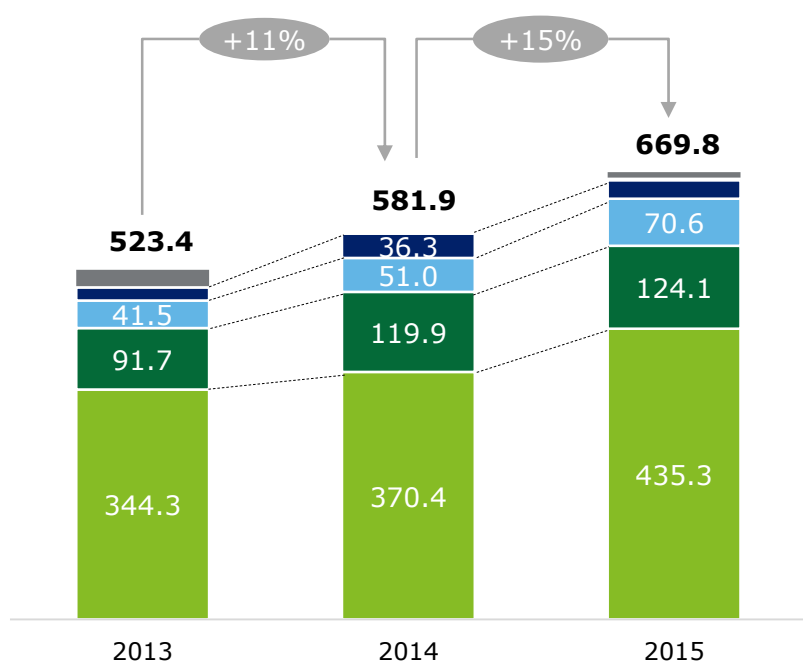
Source: "Oil and Gas Vertical" magazine (CDU TEK)

### High demand concentration and considerable segmentation of suppliers

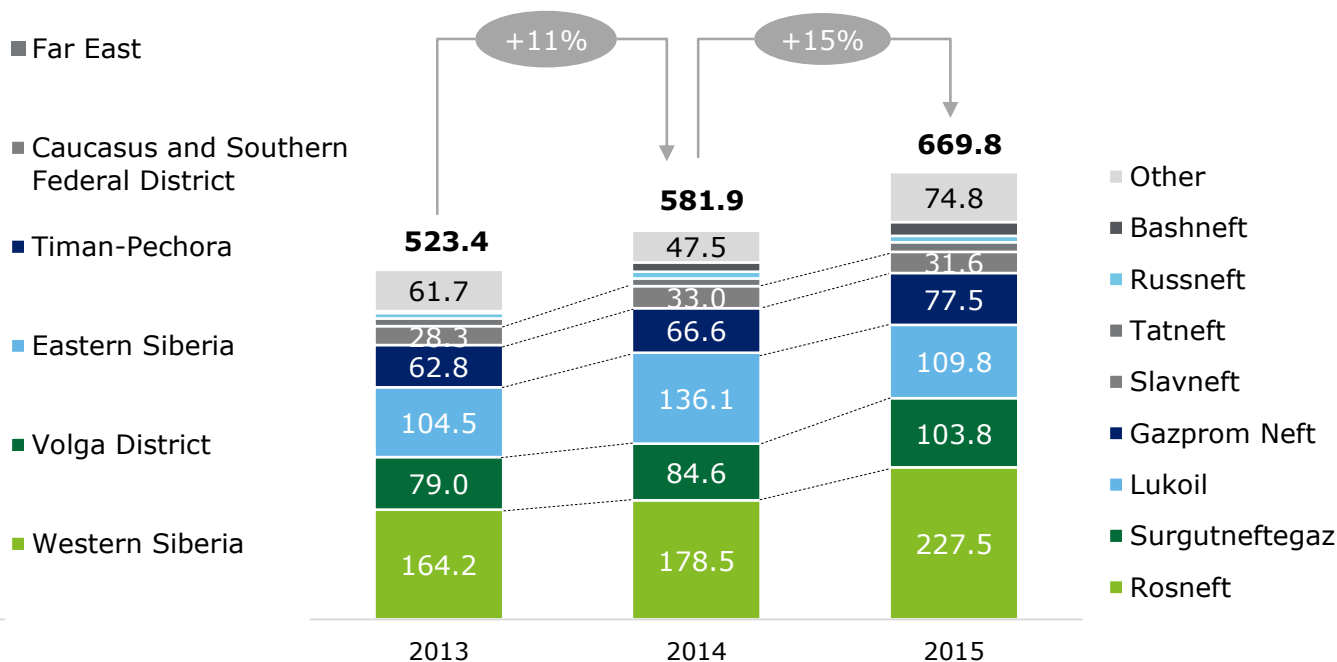
- The four largest Russian oil companies continue to account for most of the drilling demand on the market—more than 75 percent.
- EDC remains the only large independent supplier on the drilling market; however, its market share shrank considerably over 2015—from 28 to 21 percent.
- Despite market expectations, Rosneft has not demonstrated significant growth in the use of its own drilling capabilities.

The increase in the volumes of capital investment in the construction of production wells is due to the desire to sustain production levels at mature oil deposits.

### Capital investment in the construction of production wells, billion RUB



Source: "Oil and Gas Vertical" magazine (CDU TEK)



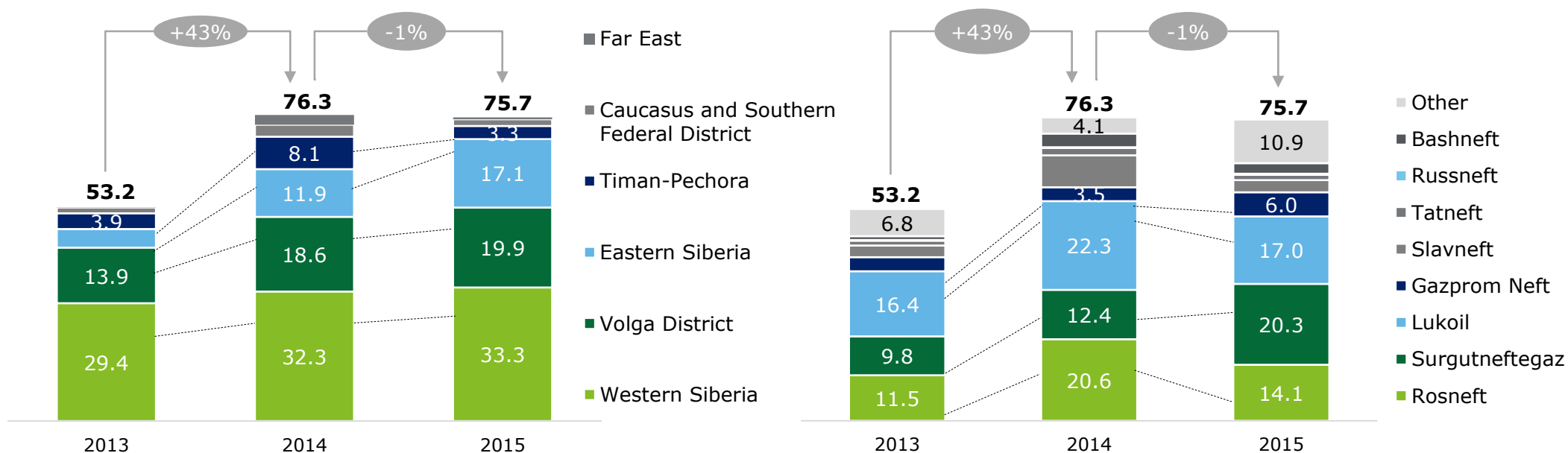
Source: "Oil and Gas Vertical" magazine (CDU TEK)

- Western Siberia accounted for the majority of capital investment in 2015. Capital investment in Russia's main oil region increased by 17 percent as compared to 2014.
- Capital investment in Eastern Siberia has increased by 70 percent since 2013, which is due to increased production in the region.
- Most key players on the market have increased their capital investments as compared to 2014, which is due to the depletion of major highly-productive "old" fields (experiencing the necessity of increasing their oil recovery and replacing worn out equipment).
- Most companies claim that they are not planning to reduce capital investment in the construction of production wells in 2016.



Due to uncertainty on the market, companies are reducing capital investment in the construction of exploration wells.

### Capital investment in the construction of exploration wells, billion RUB



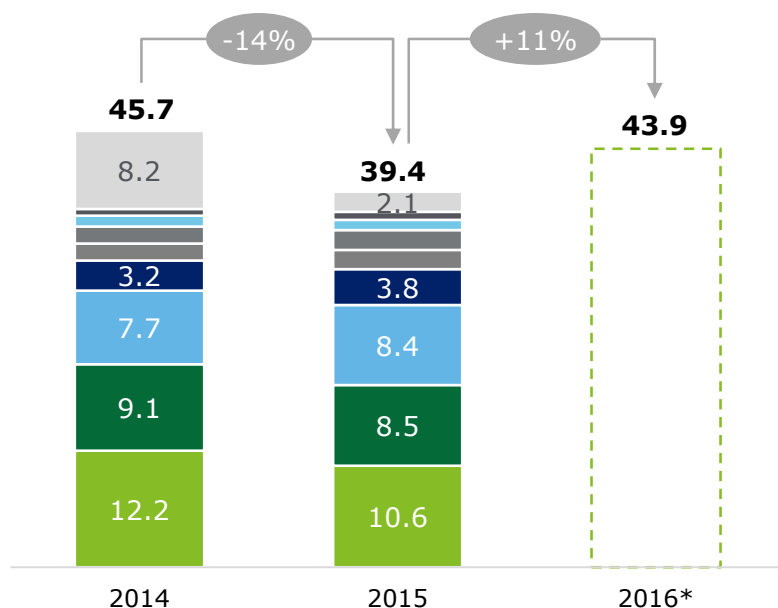
Source: "Oil and Gas Vertical" magazine (CDU TEK)

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- As compared to the considerable increase in capital investment in the construction of exploration wells in 2014, 2015 saw a small fall.
- Capital investment increased by 16 percent in Eastern and Western Siberia, but fell considerably in the Timan-Pechora Region.
- Pressured by the uncertainty on the market, key players have reduced their capital investment in the construction of exploration wells.
- Surgutneftegaz is one of the few companies on the market that has expanded capital investment, having increased it more than 1.5 times.
- Most companies claim not to be planning further reductions in capital investment in the construction of exploration wells in 2016.

The rise in expenses for well maintenance and workover is due to the desire to increase oil recovery at existing oil deposits.

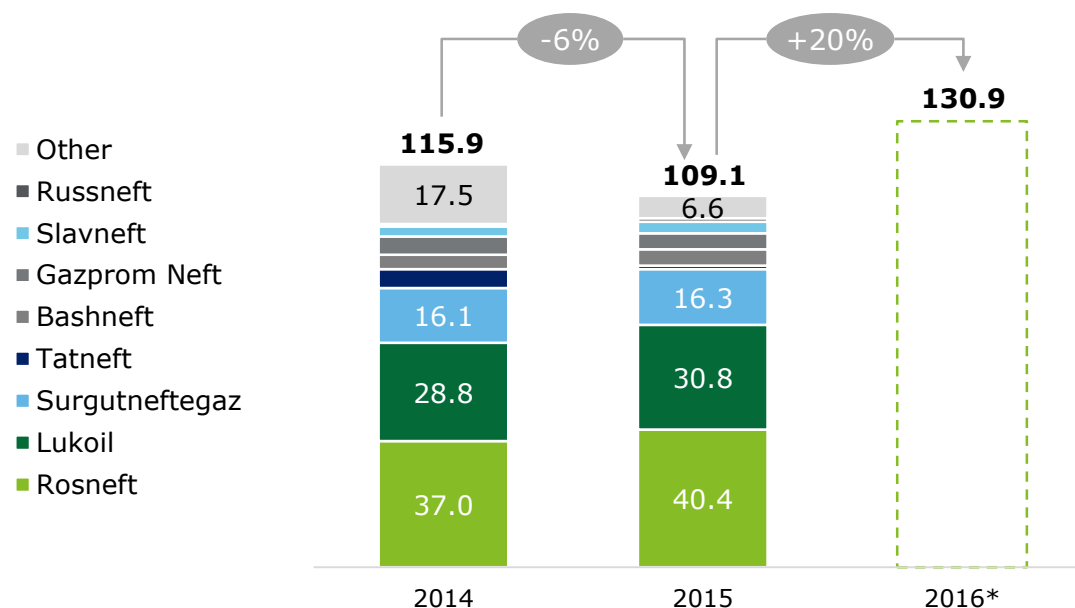
### Well maintenance costs, billion RUB



Source: Source:CDU TEK, \* Deloitte predictions

- In 2015, total well maintenance costs were reduced by 14 percent.
- Most key players, except Surgutneftegaz and Tatneft, reduced their investment in maintenance.
- Q1 2016 witnessed a 10 percent rise in well maintenance costs as compared to Q1 2015.
- Therefore, in 2016 the decrease in well maintenance costs will probably slow down and, by the end of the year, total well maintenance costs may go back to their 2014 level.

### Workover costs, billion RUB

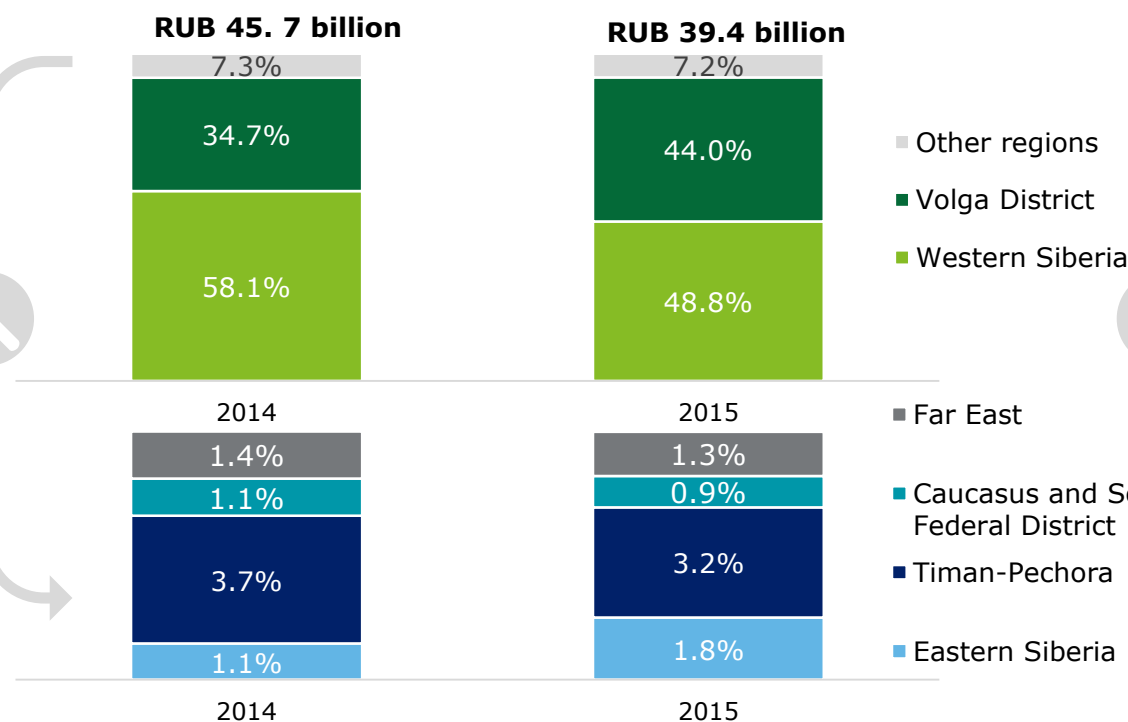


Source: Source:CDU TEK, \* Deloitte predictions

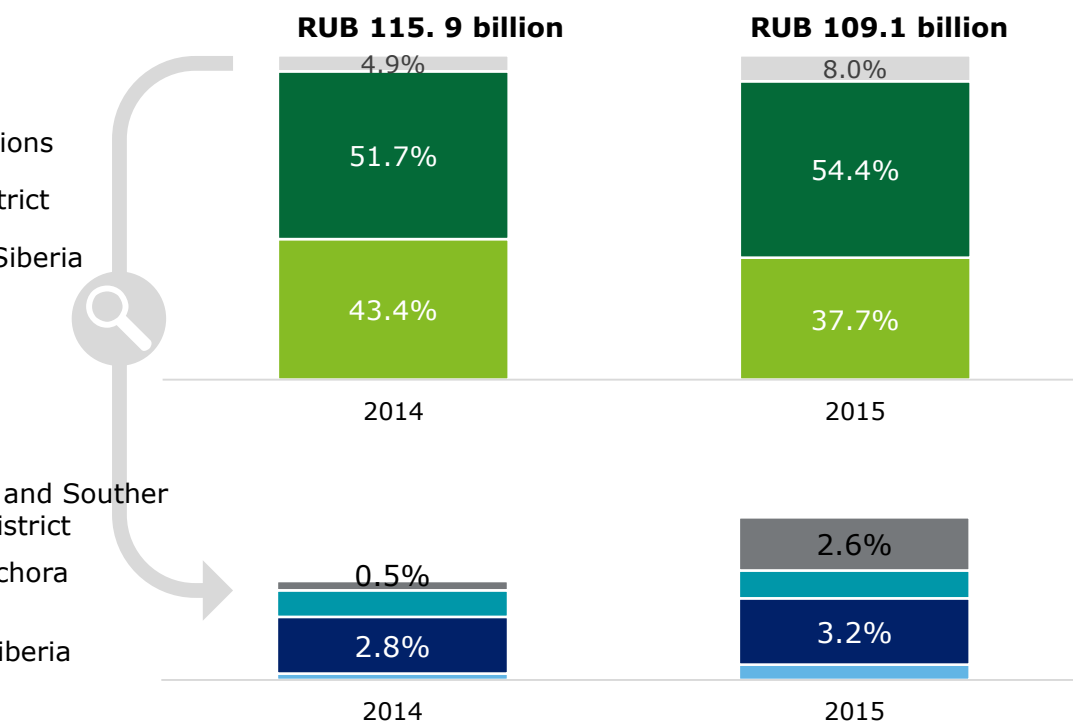
- In 2015, the total amount of companies' investment in workover decreased by over 6 percent.
- Despite the decrease in total costs, almost all key players increased their investment in workover.
- Q1 2016 saw a significant growth in investment in workover both by large and small companies.
- Workover costs may rise by 20 percent in 2016 as compared to the previous year.

Western Siberia is losing its share in well maintenance and workover costs. In 2015, investment in maintenance in the Volga District and Eastern Siberia grew considerably.

### Well maintenance distribution by region



### Workover distribution by region



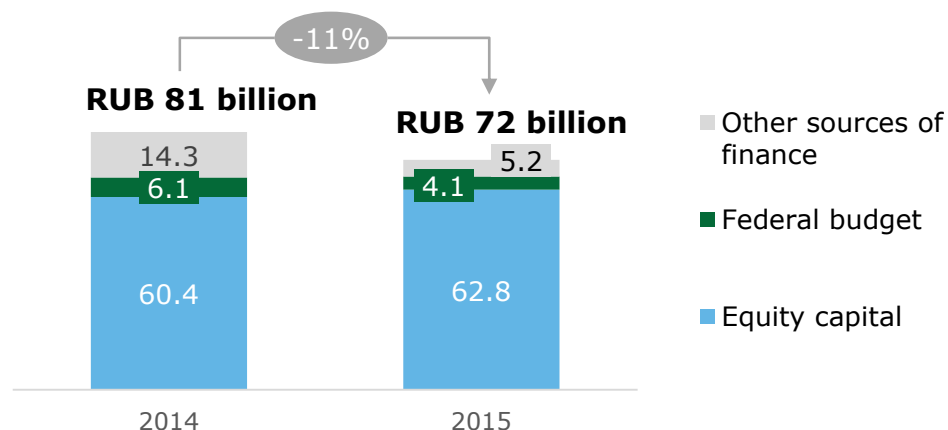
Source: CDU TEK, \* Deloitte analysis

Source: CDU TEK, \* Deloitte analysis

- In 2015, the distribution by region on the maintenance market changed considerably.
- Western Siberia, which is the leader in well maintenance costs, lost 9 percentage points of its share to the Volga District and Eastern Siberia in 2015. The distribution of other regions by aggregate well maintenance costs changed insignificantly.
- The distribution of regions by costs on workover also underwent changes over the past year. The Volga District's share grew by 3 percentage points, the Far East—by more than five times, whereas Western Siberia's share fell by over 6 percentage points.
- The shares of the Caucasus, Timan-Pechora and Eastern Siberia in the investment in workover increased insignificantly.

In 2015, the government and investors reduced financing of geophysical surveys. Offshore projects are seeing a cost decrease.

### Market share of geophysical surveys in the mining and oil and gas industries

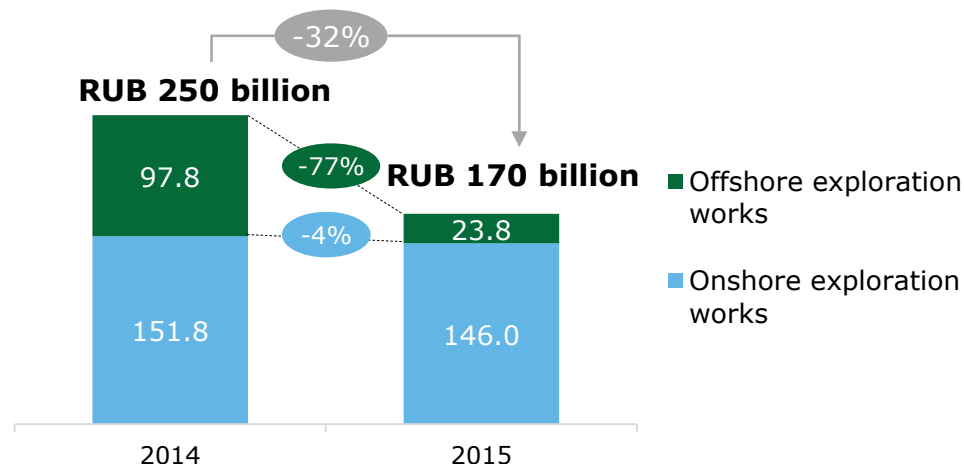


Source: Federal Agency for Mineral Resources, Deloitte analysis

#### Geophysical survey costs fall

- In 2015, the market share of geophysical services (Geographic Information System (GIS) and seismic survey) amounted to RUB 72.06 billion, which is 11 percent less as compared to 2014.
- Russian and foreign investors have considerably reduced financing volumes. Economic sanctions are still limiting capital inflow.
- Reduction of governmental expenses has resulted from the anticipating reduction of the federal budget. This reduction was caused by budget-saving measures.
- In 2016, investments will probably continue to decrease; however, stabilisation is expected in 2017.

### Territorial structure of the exploration works market in the oil and gas industry



Source: Federal Agency for Mineral Resources, Deloitte analysis

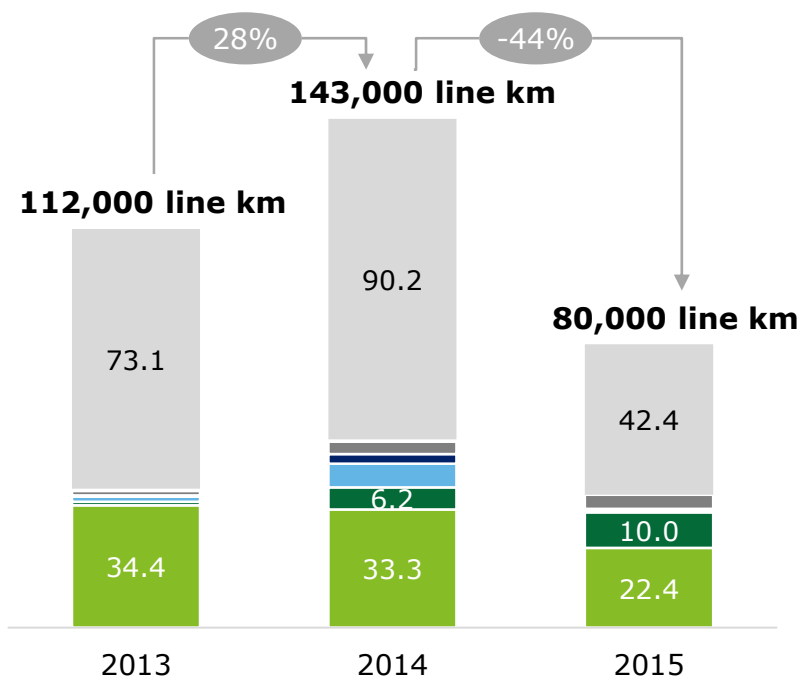
#### Offshore exploration works reduction

- In 2015, costs for exploration works saw a decrease. Costs for offshore works were reduced by 77 percent, which is considered the most dramatic reduction as compared to 2014.
- A high offshore production cost, which is often unjustified as oil prices are low, was the main cause of offshore works reduction.
- Additionally, a reduction of offshore exploration works occurred due to the postponement of drilling works on 10 of Rosneft's large projects. The above was caused by the outflow of foreign partners from the country and by economic sanctions.

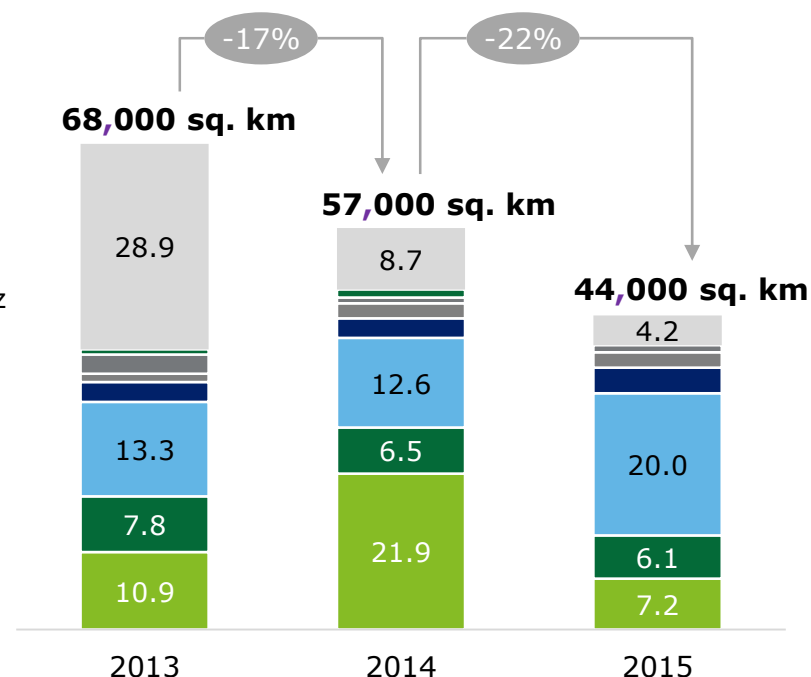
\* Regional budgets of the Russian Federation, credits, funds received from Russian and foreign investors

In 2015, the seismic exploration market saw a significant slow down.

### Seismic exploration 2D\*, line km



### Seismic exploration 3D\*, sq. km



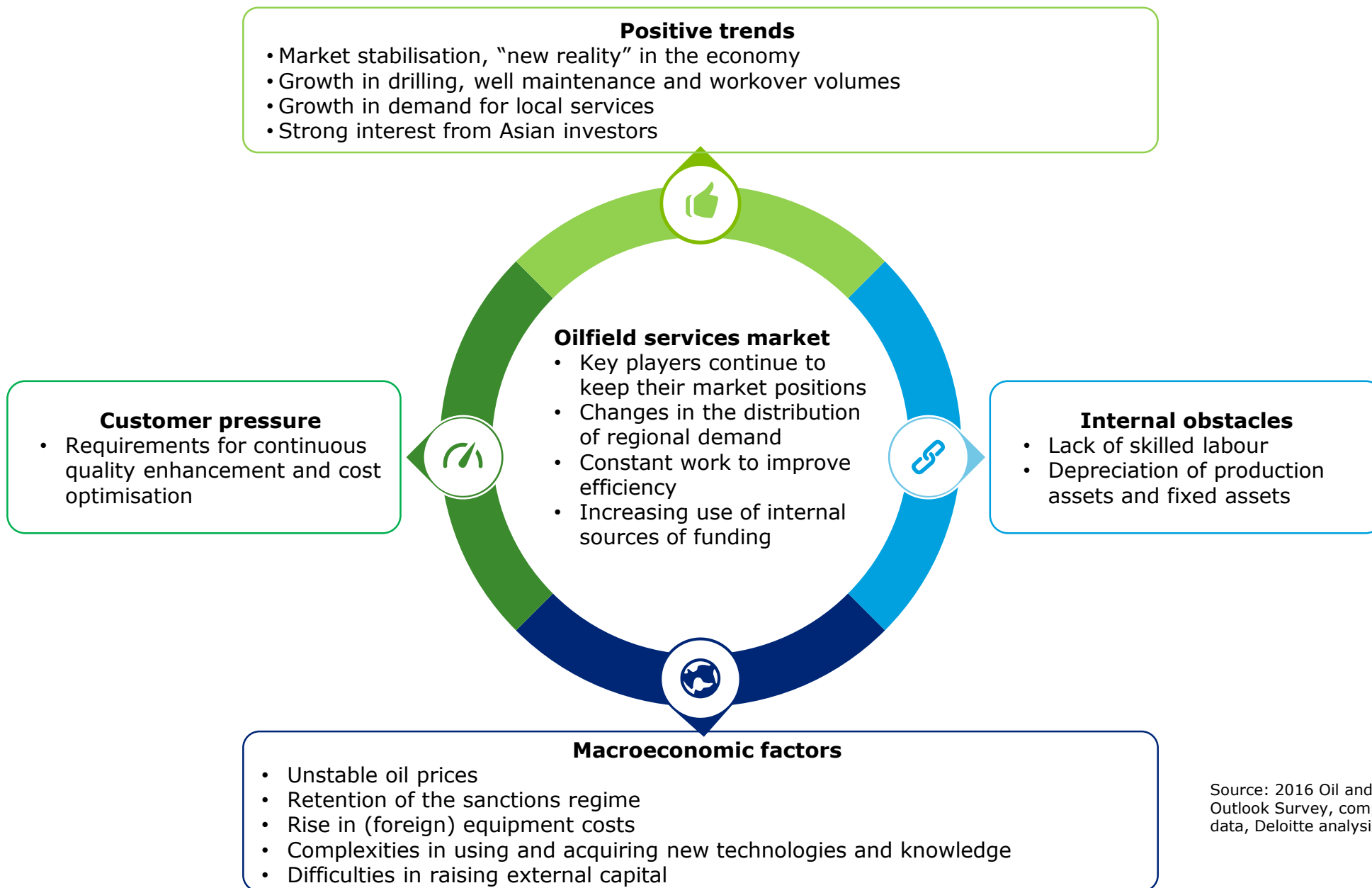
Source: Federal Agency for Mineral Resources, Deloitte analysis

Source: Federal Agency for Mineral Resources, Deloitte analysis

- In 2015, in terms of the fields of 2D and 3D seismic exploration, the market was down by 44 percent and 22 percent, respectively, on a year-to-year basis.
- The 2D seismic exploration segment saw the most significant cost reduction. This is because companies are gradually shifting to 3D seismic exploration as a more informative option.
- Rosneft is considered the key demand booster on the 2D seismic exploration market with a 28 percent market share in 2015.
- Gasprom is considered the key demand booster on the 3D seismic exploration market with a 45 percent market share in 2015.

\* - the market includes both oil and gas and mining industries

# Trends on the Russian oilfield services market



Source: 2016 Oil and Gas Outlook Survey, company data, Deloitte analysis

# Contact information

## Authors:



**Elena Lazko**

**CIS Oil and Gas Leader**

+7 (495) 787 06 00  
[elazko@deloitte.ru](mailto:elazko@deloitte.ru)



**Alexey Nesterenko**

**Senior Manager  
CIS Oil and Gas**

+7 (495) 787 06 00  
[anesterenko@deloitte.ru](mailto:anesterenko@deloitte.ru)



**Gennady Kamyshnikov**

**CIS Energy and Resources  
Leader**

+7 (495) 787 06 00  
[gkamyshnikov@deloitte.ru](mailto:gkamyshnikov@deloitte.ru)



**Steve Openshaw**

**Audit**

+7 (495) 580 96 00  
[sopenshaw@deloitte.ru](mailto:sopenshaw@deloitte.ru)



**Kelly Allin**

**Audit**

+7 (495) 580 96 00  
[kallin@deloitte.ru](mailto:kallin@deloitte.ru)



**Andrey Panin**

**Tax and Legal**

+7 (495) 787 06 00  
[apanin@deloitte.ru](mailto:apanin@deloitte.ru)



**Almaty  
Anthony Mahon**

**Energy and Resources Leader,  
Caspian Region**

+7 (495) 580 96 00  
[anmahon@deloitte.kz](mailto:anmahon@deloitte.kz)



**Kiev  
Artur Ohadzhanyan**

**Energy and Resources Leader,  
West Region**

+38 (044) 490 90 00  
[aohadzhanyan@deloitte.ua](mailto:aohadzhanyan@deloitte.ua)



**Baku  
Nuran Kerimov**

**Energy and Resources Leader,  
Azerbaijan**

+994 (12) 404 12 00  
[nkerimov@deloitte.az](mailto:nkerimov@deloitte.az)



**Global  
Rajeev Chopra**

**Energy and Resources Leader**

+44 775 78 53 50  
[rchopra@deloitte.co.uk](mailto:rchopra@deloitte.co.uk)



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