



Ukrainian Gas Market opportunities and risks

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Энергия
в действии

DTEK



Coal Production

Production volumes: **31,3 * mln tons**
 Coal reserves: **1 636 mln tons***
31 mine and
13 coal processing plants



Thermal Generation

Electricity generation: **39,5** TWh**
 Installed capacity: **18.7 GW**
10 Thermal Power Plants,
2 Central Heating and Power Plants



Electricity Distribution

Electricity distribution: **45,8 TWh**
 Network mileage: **129 558 kilometers**
 Distribution companies: **5**
 Number of consumers: **3.5 mln**



Alternative Energy

Electricity generation: **0,6 TWh**
65 wind farms
TOP-5 largest in Europe



Gas Production

Gas reserves: **25 BCM**
 Gas fields: **3**
 Wells: **23**

Production volumes in 2016

31,3
mln tons



39,5
TWh



45,8
TWh



608
GWh



1.6
bln cubic meters



* Taking into account MINE OFFICE OBUKHOVSKAYA JSC (Russia). Reserves status as of 31.12.2016
 ** Data including uncontrolled territory

Gas Production
Share

Volume

1.6 billion cubic meters

Market share*

40%

** Sales & Trading
Share in C&I's

2.5 billion cubic meters

26%

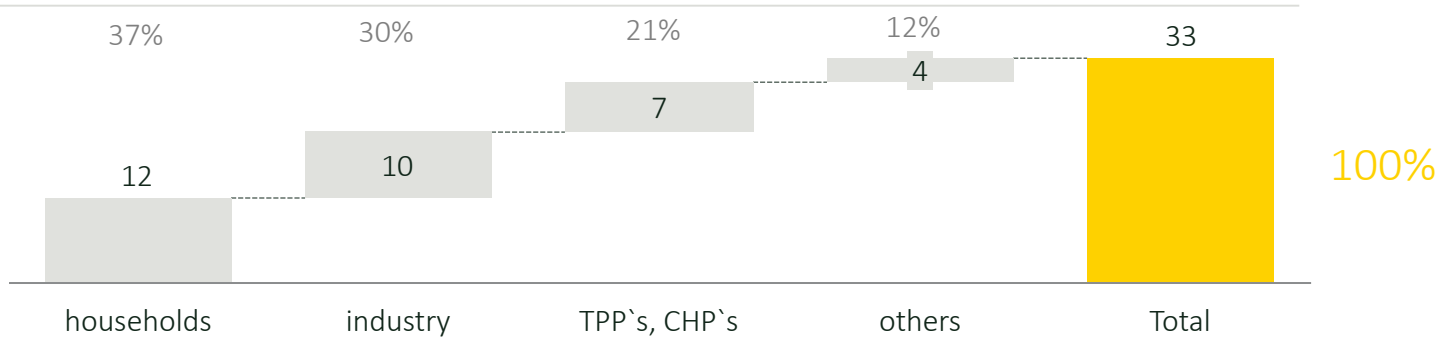
* for private gas producers in 2016

** for C&I consumption in Ukraine in 2016.

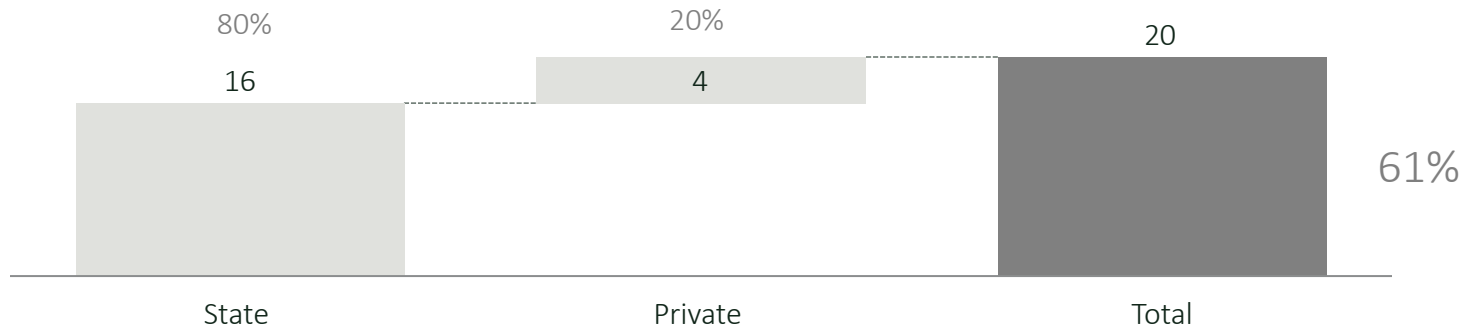
Ukraine covers 67% of internal consumption by its own production, the rest - is by imported resource

Gas Balance in 2016, bcm

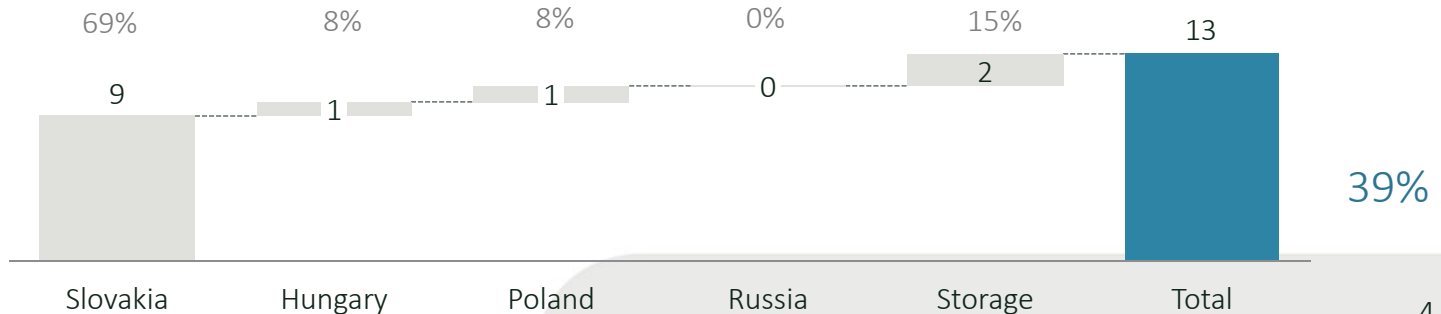
Demand



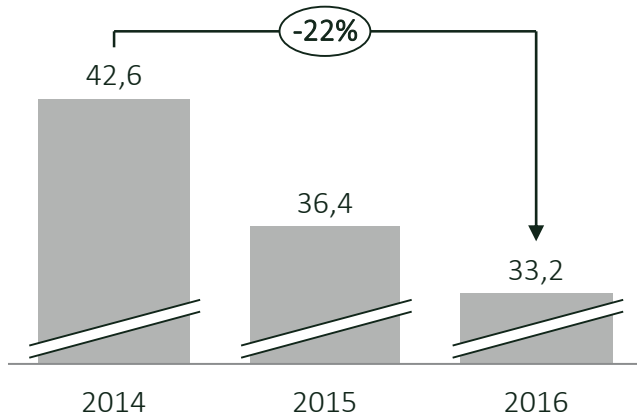
Domestic Production



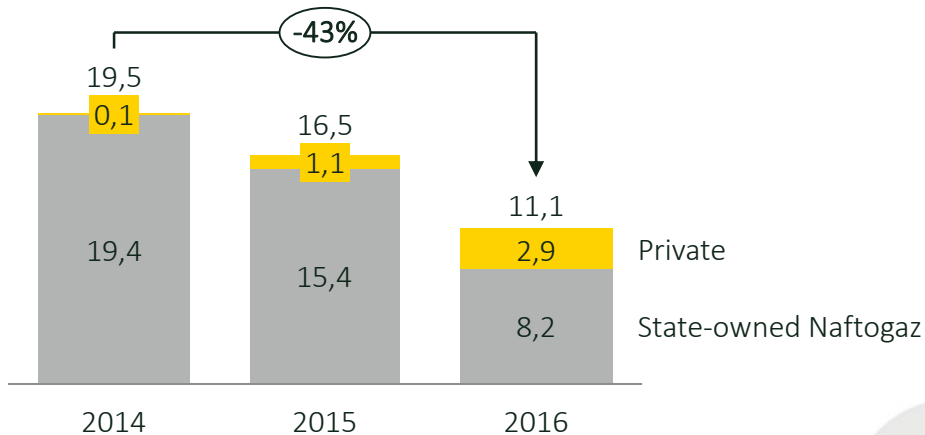
Import + Storage



Gas consumption in Ukraine, bcm



Ukrainian gas importers, bcm



Trends

Due to crisis and loss of control over Crimea and some districts in the Eastern Ukraine, gas consumption fell down by 22%: from 42,6 bcm in 2014 to 33,2 bcm in 2016.

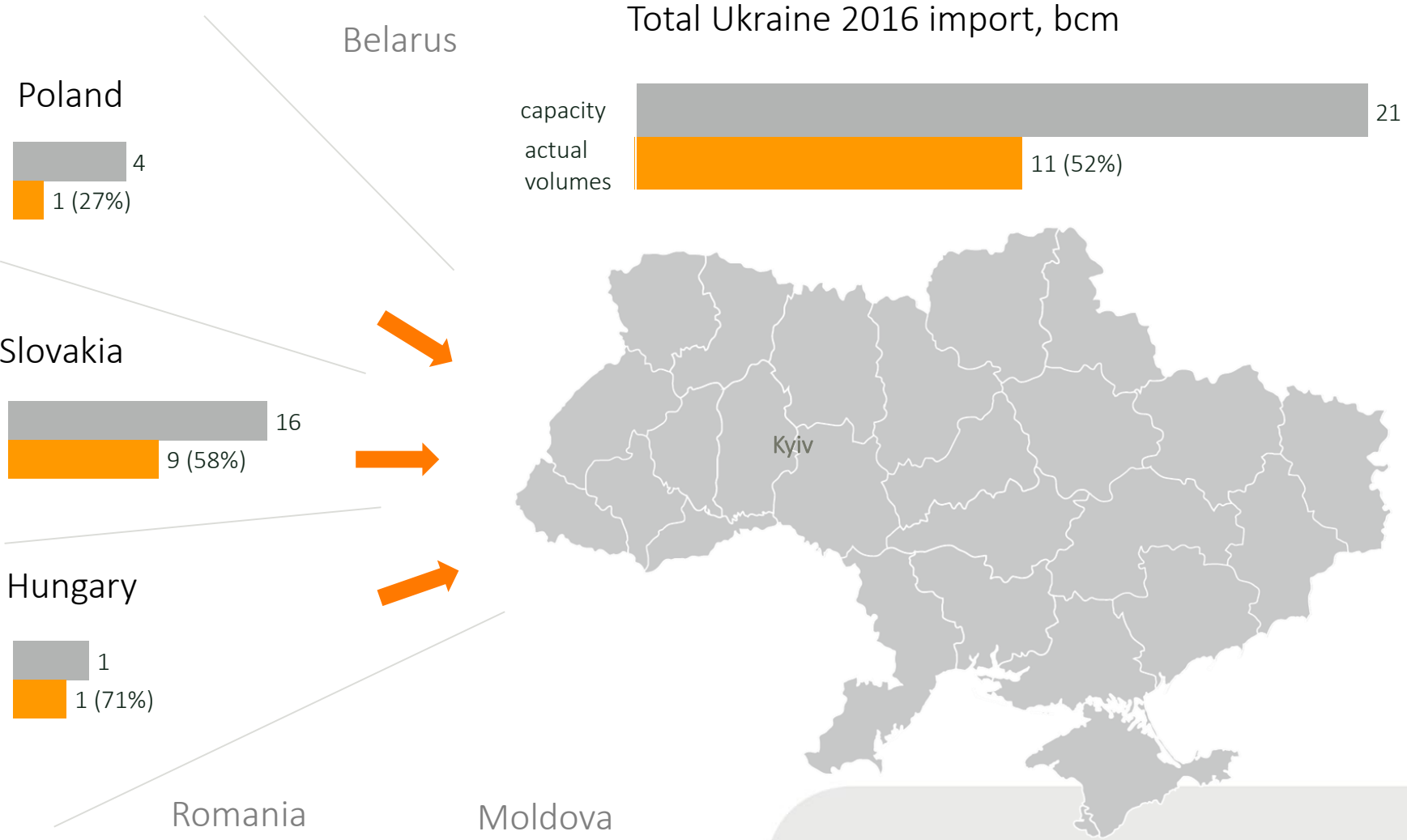
Trends

In 2016 Naftogaz was still the major importer of gas to Ukraine.

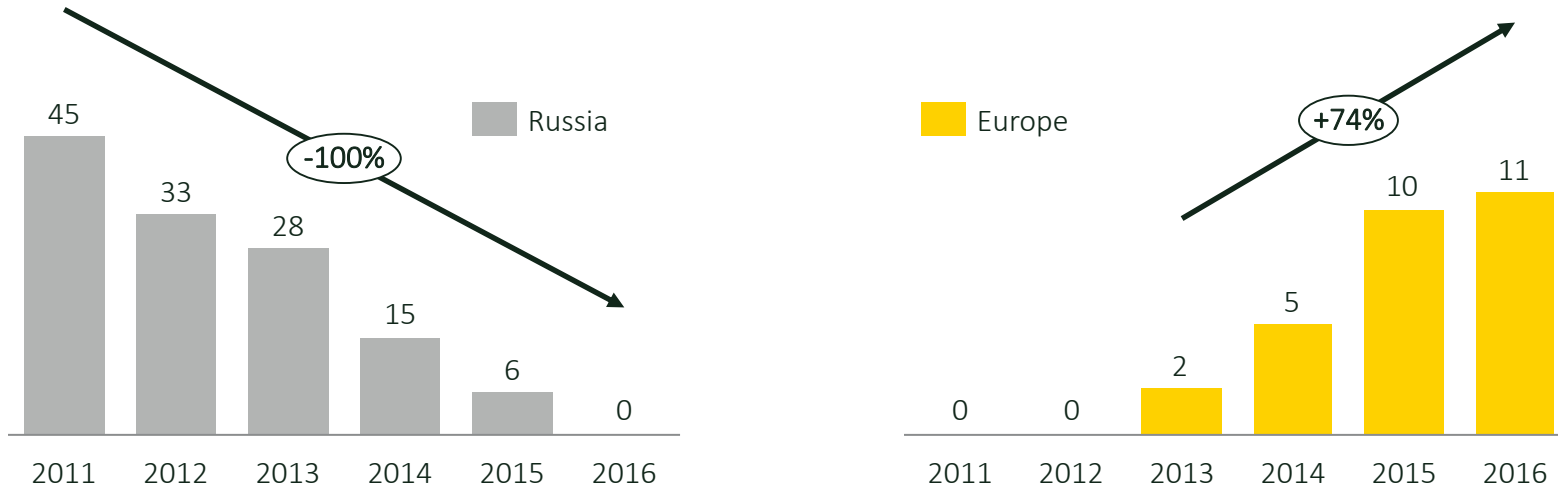
In the same time, the share of private traders involved in gas imports from the EU increased from 7% in 2015 to 26% in 2016.

Border capacities with European countries are 2 times more than actual import in 2016.

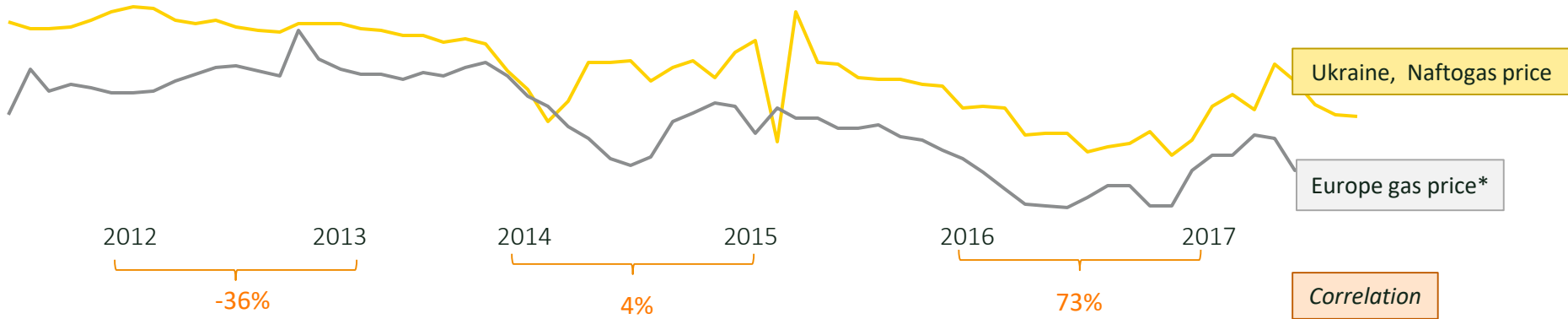
Cross-border capacity, bcm per year



Sources of Ukrainian gas import, bcm



Gas price, euro per MWh



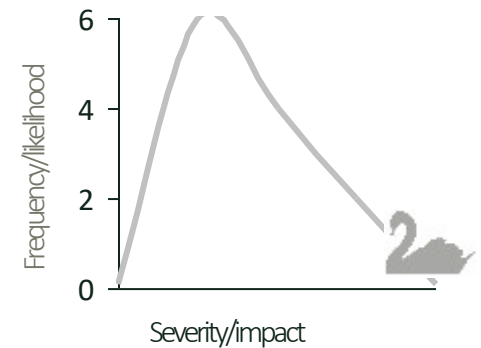
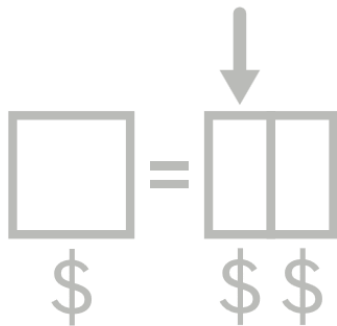
- 1) Diversification of supply to the domestic market.
- 2) Increased price correlation with European HUBS.

*Europe gas price (aver.TTF+Gaspool+CEGH), euro per MWh

Low payment discipline

Foreign exchange rate volatility

Black swan events



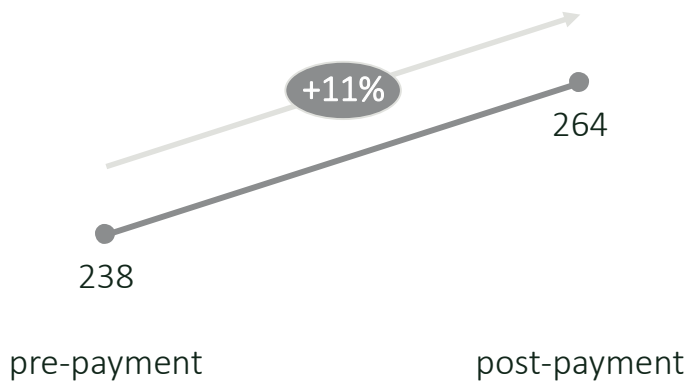
Payment discipline remains weak point for gas sales in Ukraine

Naftogaz gas prices, \$/1000 m3

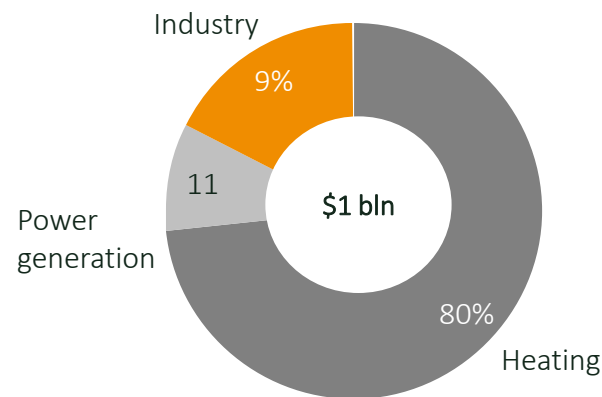
Spread between different terms of payment from 1-st of June 2017 **

Trends

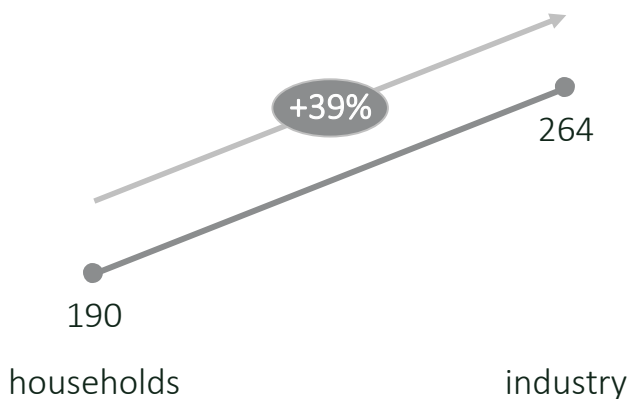
Industrial consumers



Total debt for natural gas in Ukraine*



Households



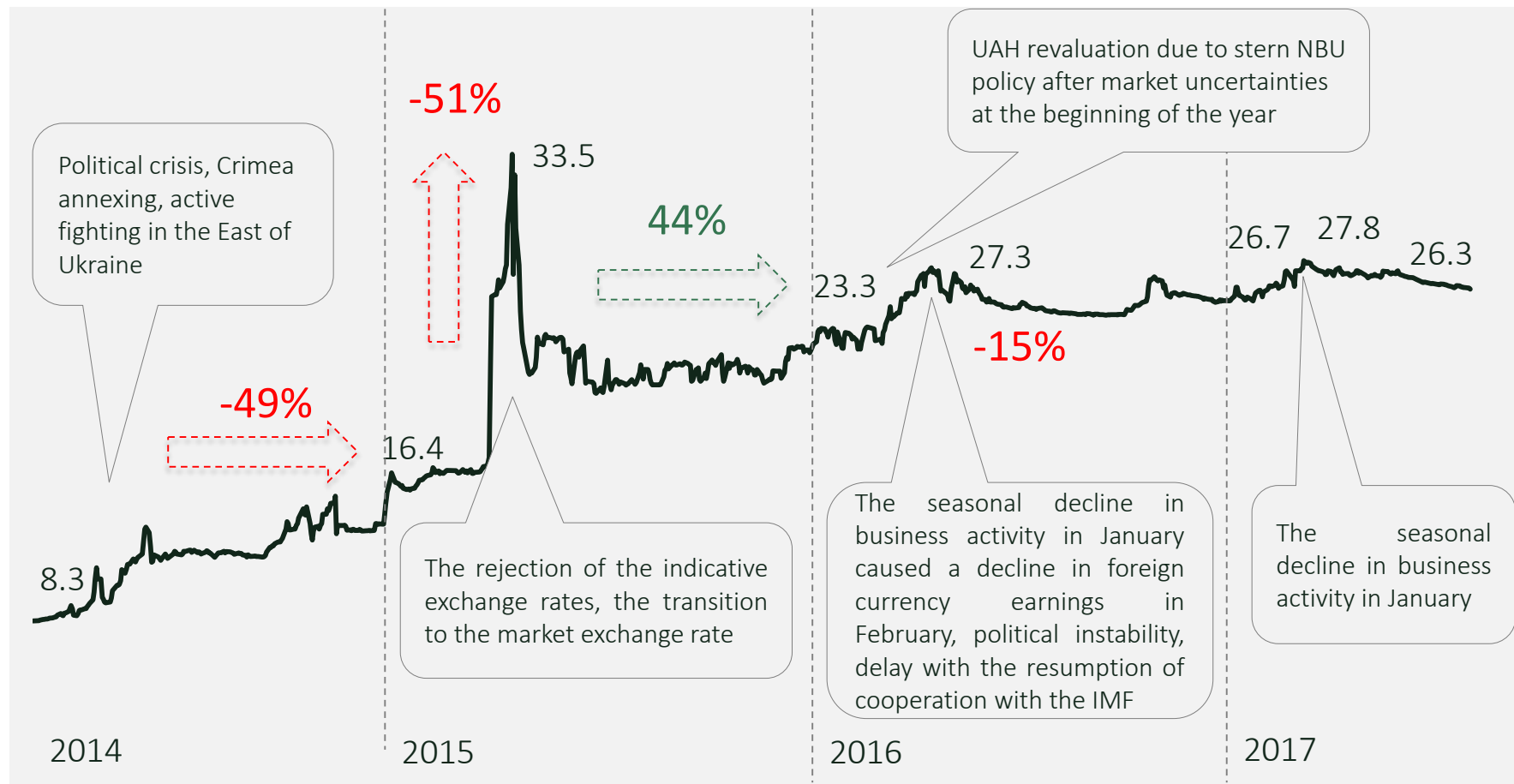
Average monthly debt increase / 2016

USD 10 mm

*as of 11.04.2017, debt to Naftogaz

** FX rate 26 UAH/\$, excl.VAT

FX: USD / UAH



*source: NBU

Lack of transparency & unpredictable changes to the rules of the game often take place in Ukrainian gas market.

Black swan events

Cabinet of Ministers Decree No. 648

- Decree forced most of the financially viable consumers from the private sector to buy gas from Naftogas at Naftogas' inflated prices.
- Private gas producers were forced to inject gas into storage facilities delivering a severe blow to their liquidity

New Nomination Rules for Gas Production Companies

- On June 1, new nomination rules for Gas Production companies were introduced. The changes were articulated to the participants of the gas market.
- No transition period.
- The companies had only one attempt to file documents. The slightest error in the documents meant a denial of the nomination.
- Chaos ensued in the market with some of the consumers being cut off from gas supply

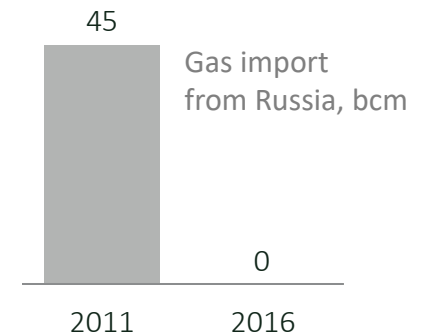
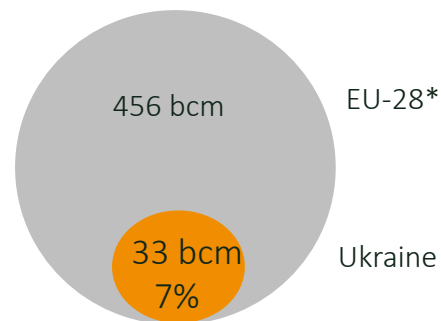
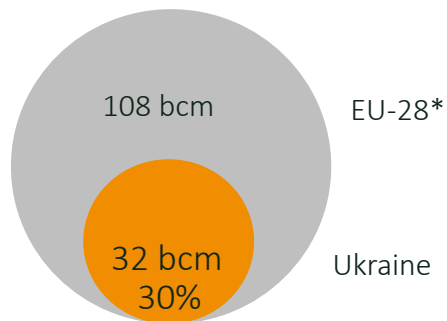
Doubling financial guarantee

- The rule which effectively doubled the amount of financial guarantee from 20% of the monthly volume to 40%.
- Its sudden introduction into operation on June 1 resulted in a number of companies being left without nominations due to the liquidity squeeze in the gas market and no grace period allowed for the gas supplies to remedy the situation.

Storage capacity
#1 in Europe

Stable demand

Absence of
competition from
Russia



* 28 countries of European Union