
Managing oil price volatility in Mexico

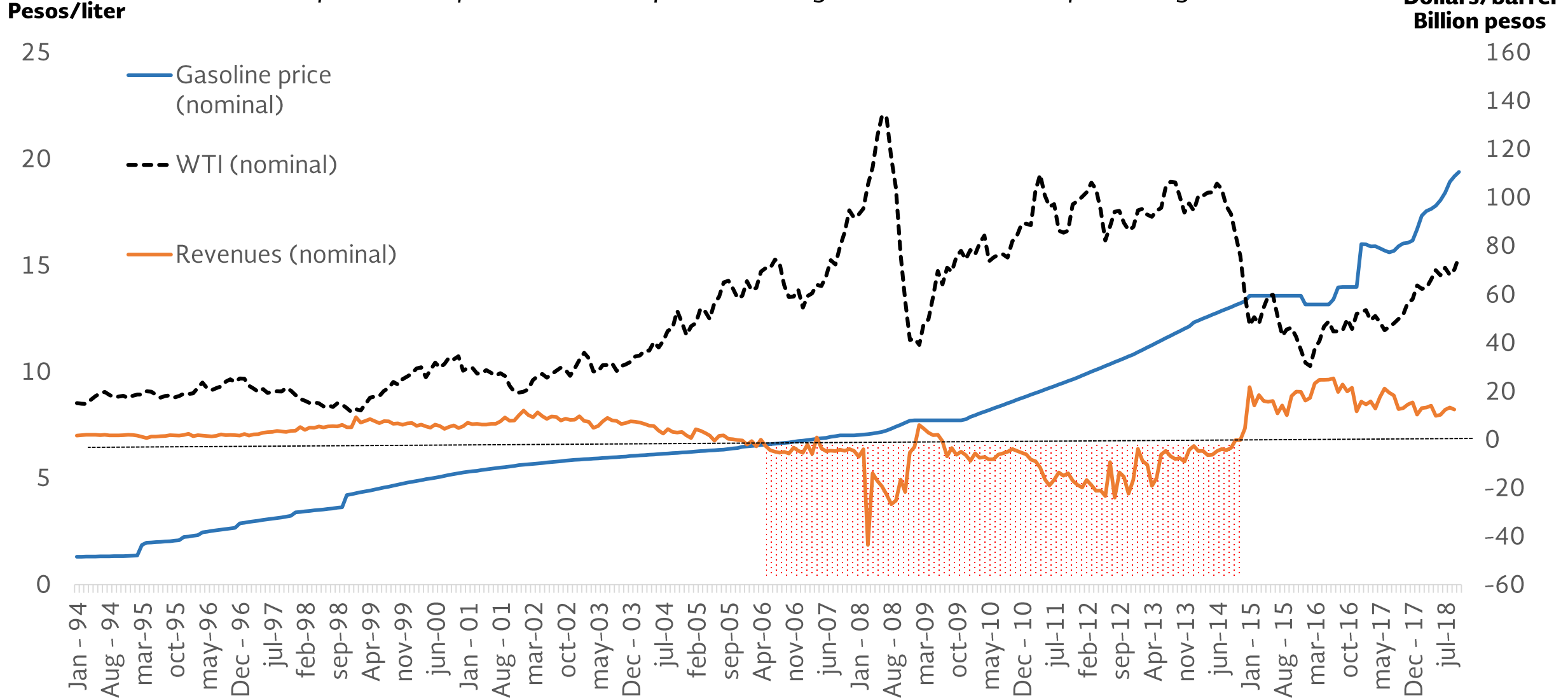
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Secretaría de Hacienda y Crédito Público

ESMAP - Energy Subsidy Reforms
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1 Introduction – overview of pricing policy for fuels in Mexico.

Domestic price of gasoline (regular), WTI and excise tax revenues

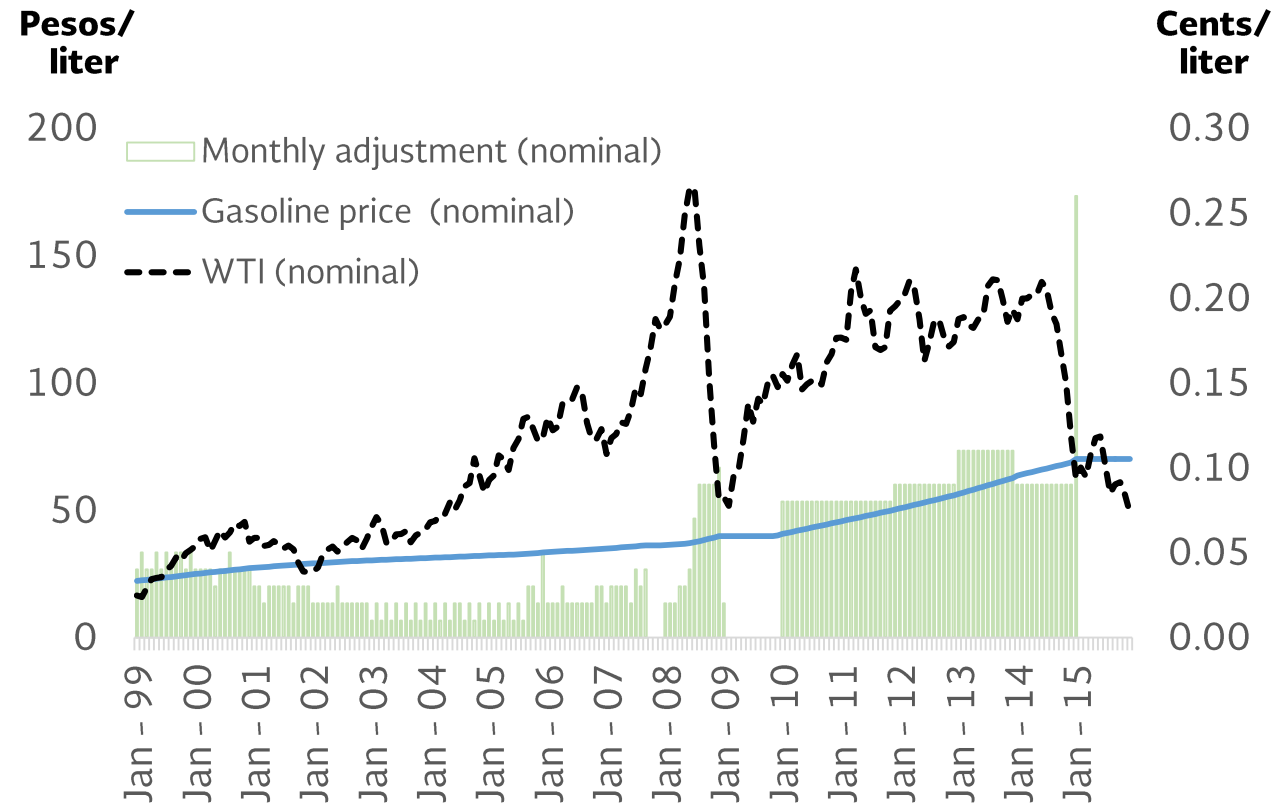
Pesos per liter (left axis), dollars per barrel (right axis) and billion pesos (right axis)



Until 2015, public prices were set on a monthly basis by the Finance Ministry.

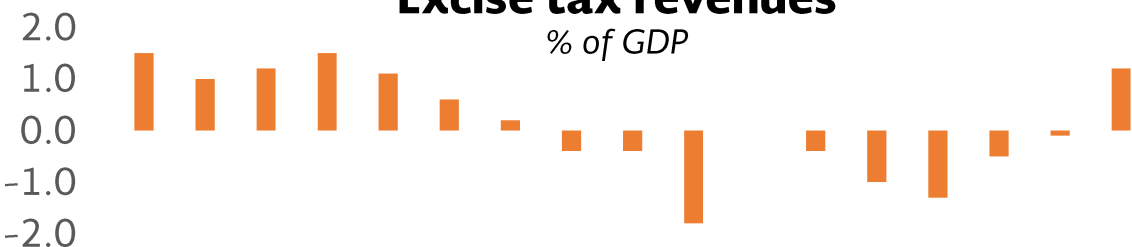
Price of gasoline, WTI and price adjustments

Gasoline prices and WTI (left) in nominal terms (oct 18 =100)



Excise tax revenues

% of GDP

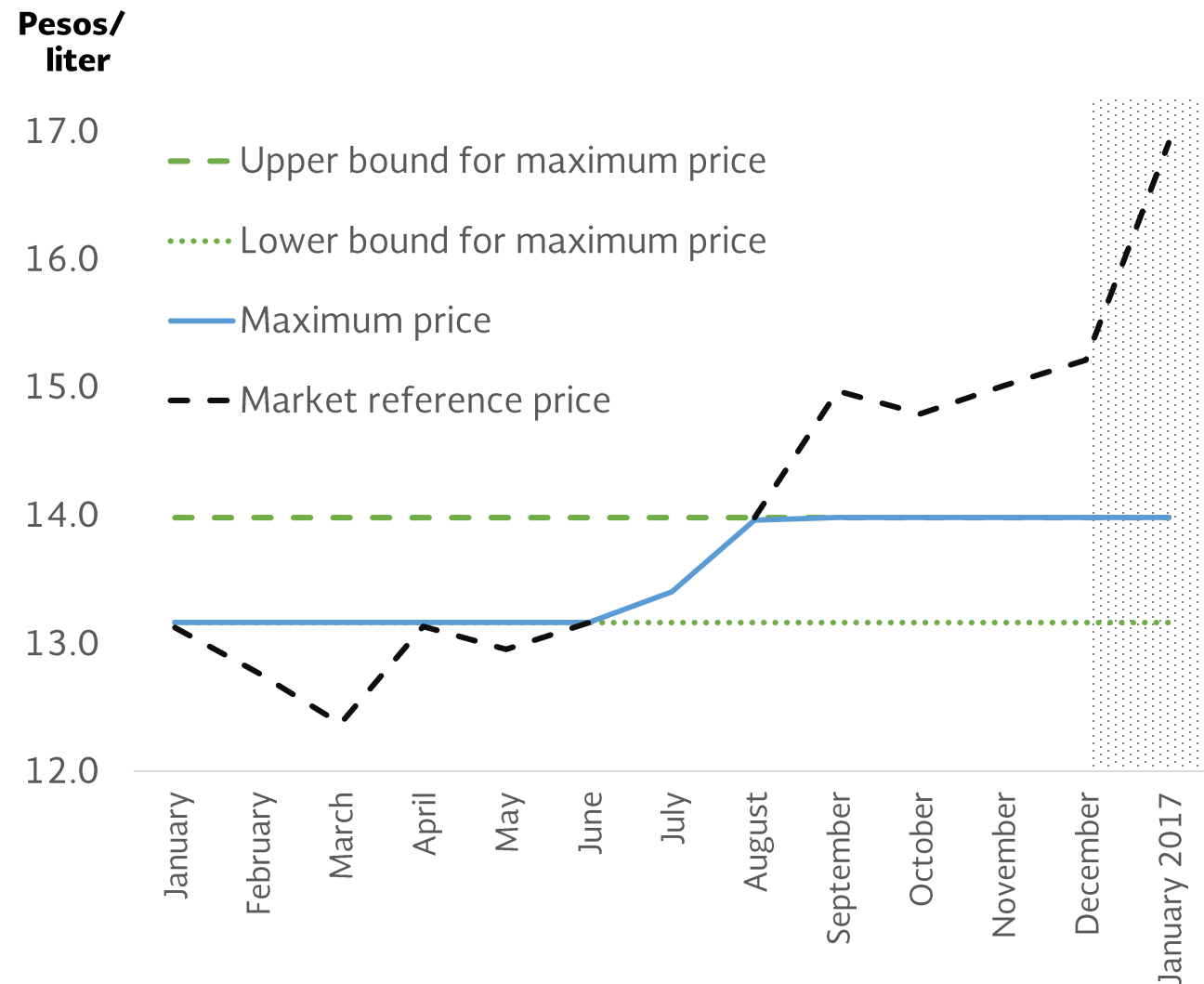


- There was a single price for the whole country (with the exception of the northern-border region).
- Prices were adjusted on a monthly basis by a fixed amount that varied over time.
- Gradual adjustments in prices of fuels were not enough to catch-up with the increasing price of oil.
- The policy objective was never to explicitly subsidize the price of fuels, but rather to smooth the price changes for consumers.
- The excise tax was calculated as the difference between the domestic price and the reference price.
- Negative excise tax revenues were compensated from additional oil revenues from PEMEX (NOC).
- In 2015, maximum prices were introduced. After an increase in January, prices were constant for the year.

In 2016, maximum prices were set by a formula, but only within a limited range.

Price of gasoline in 2016

Pesos per liter (nominal)



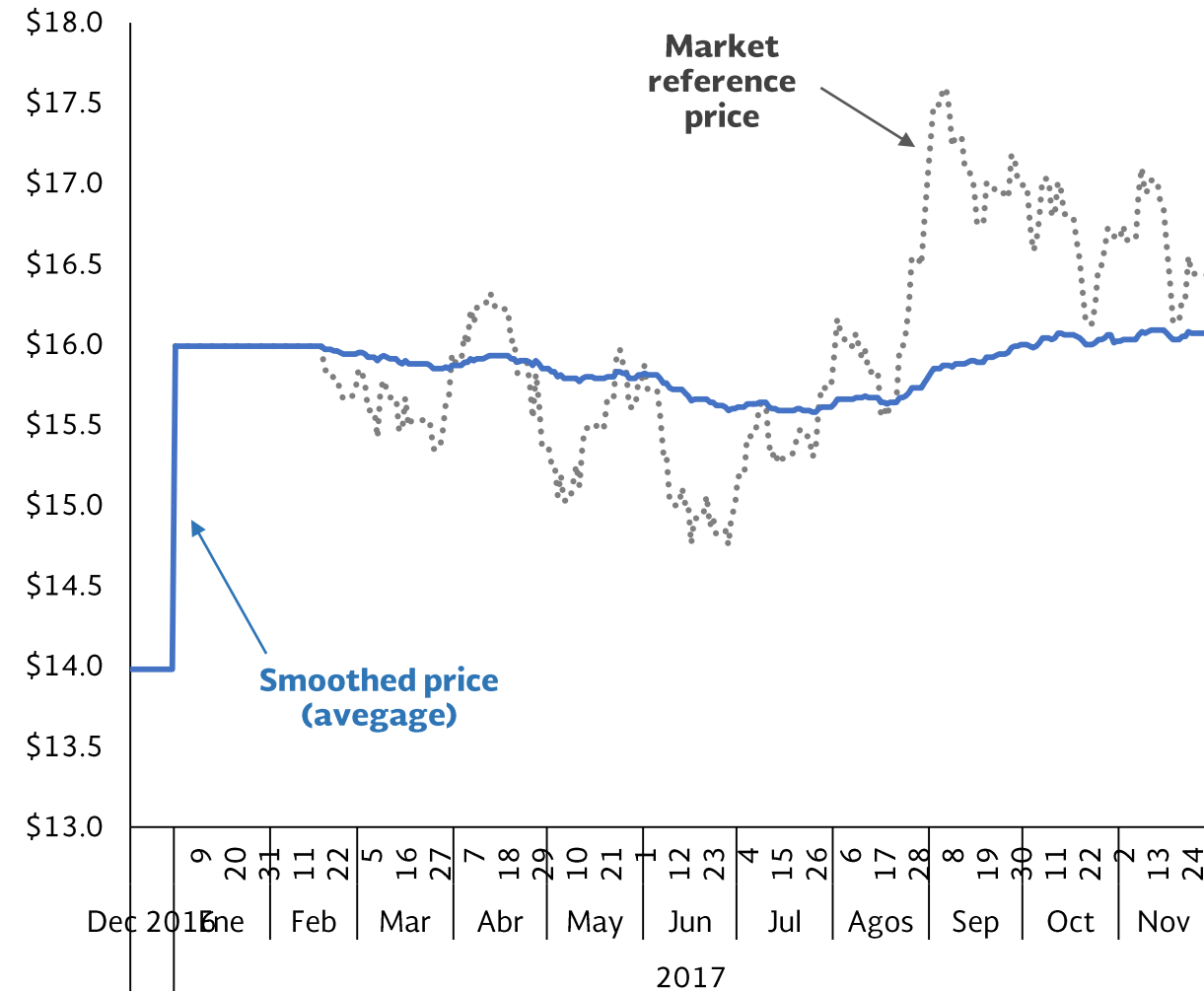
- A single, maximum price was determined monthly by the Finance Ministry.
- Two relevant changes for 2016:
 1. The excise tax was determined in Law as a fixed amount per liter.
 2. Maximum prices set by a formula that reflected reference prices, logistics and the excise tax.
 - The formula only applied within a band of the price in 2015 \pm 3%.
 - “Complementary rate” of the excise absorbed the difference.
- Revenues were 1.4% of GDP for 2016.
- For the first time in modern history, prices decreased in early 2016.
- In the second half of 2016, a significant gap was created between the “shadow” price and the upper bound.

In 2017, after a significant adjustment in January, prices were determined daily by a smoothing mechanism.

Average price of gasoline in 2017

Pesos per liter (nominal)

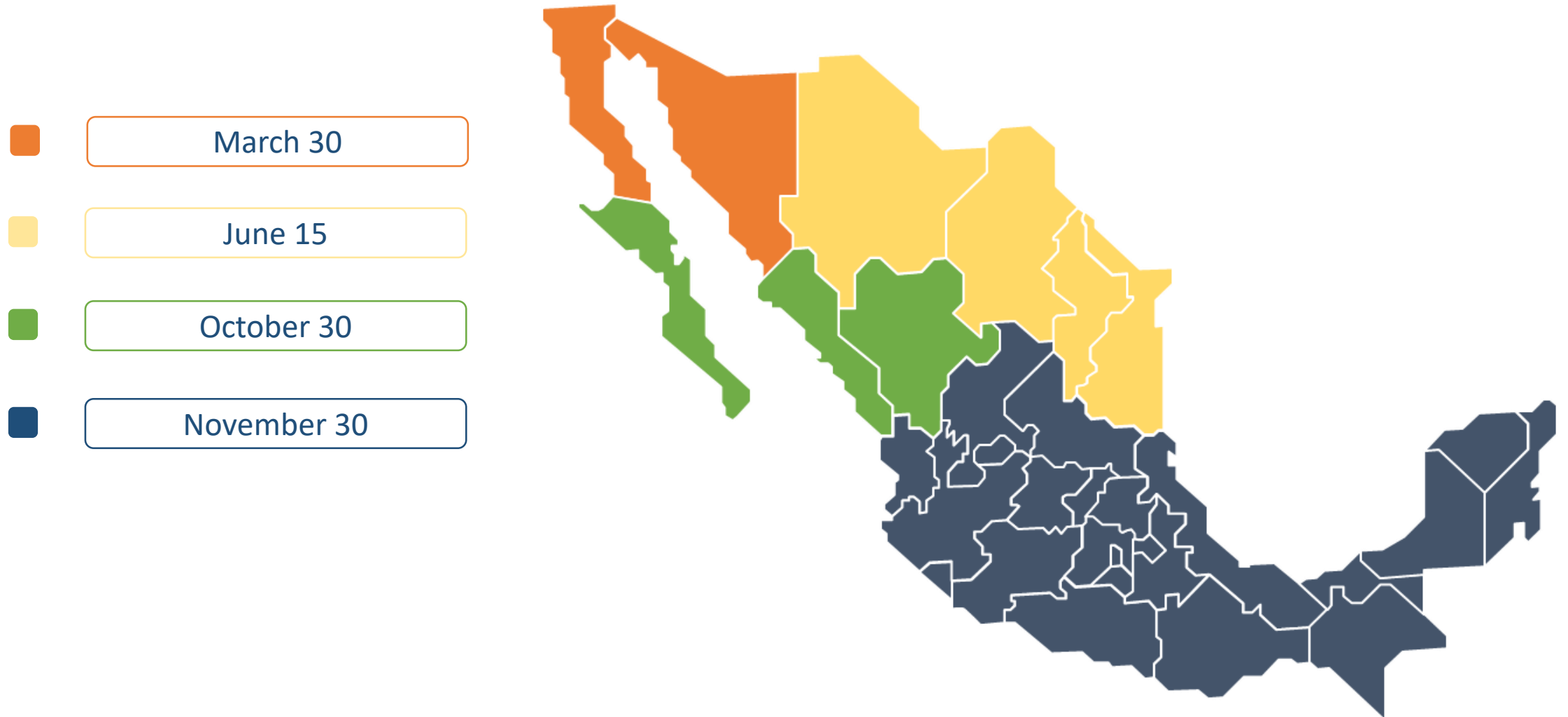
Pesos/
liter



- 83 regional prices were introduced (based on the infrastructure distribution of PEMEX).
- To eliminate the gap, prices were increased by 14.9% on January and kept constant until February 18.
- Maximum daily prices were set by a smoothing mechanism (formally, an error-correction formula) to reduce day-to-day volatility in prices.
- The excise tax rate was adjusted weekly, to account for differences in the shadow and maximum prices.
- The excise tax adjustment was done through a Presidential Decree (no legislative change):
 - The net excise tax rate cannot be less than zero nor can it be higher than the rate in law.
- Revenues were 1.0% of GDP.

5 In 2017, retail prices were gradually liberalized.

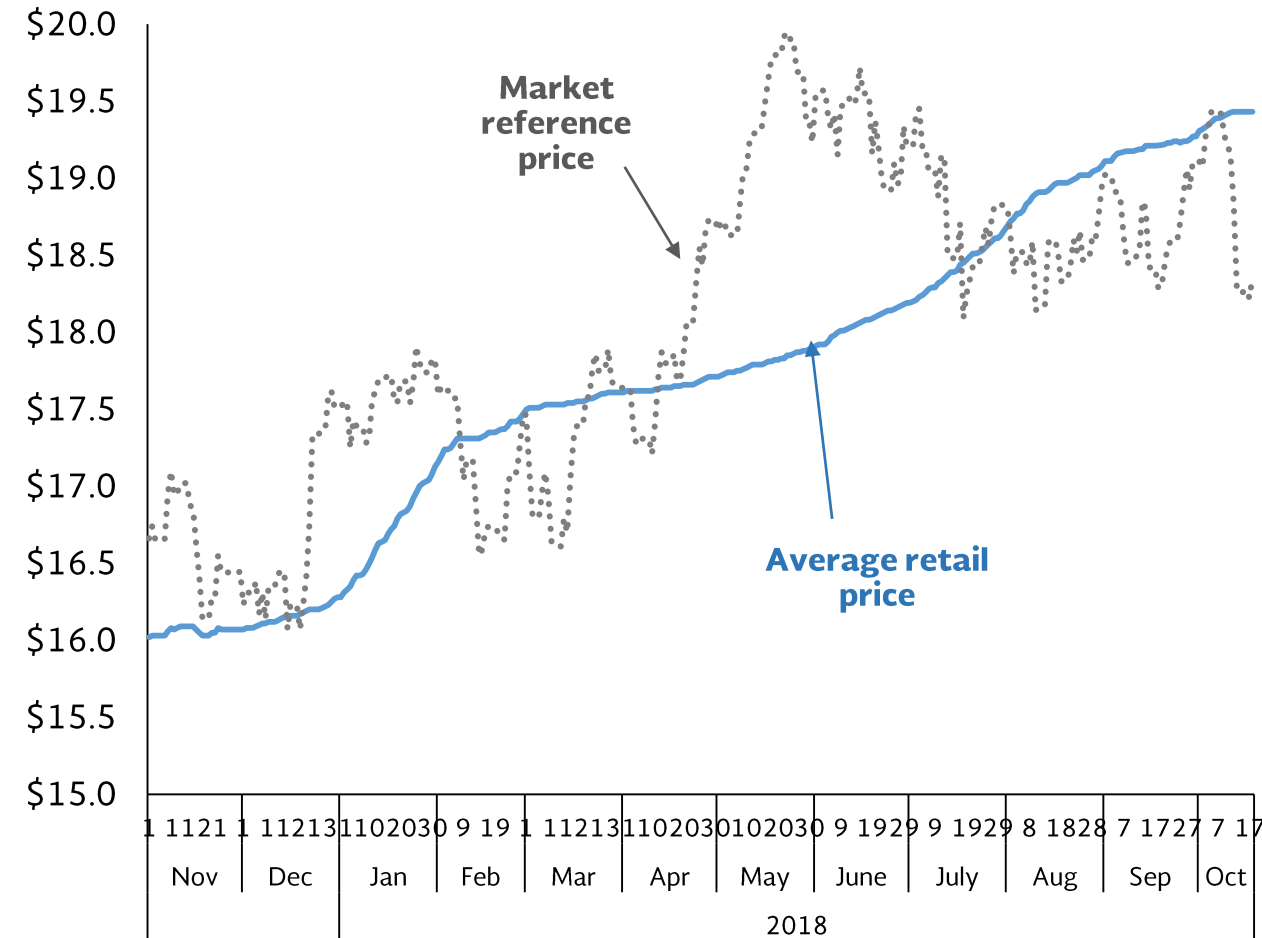
- The regulator published a timeline for regions to be liberalized gradually throughout 2017.



Gasoline prices since liberalization

Pesos per liter (nominal)

Pesos/
liter

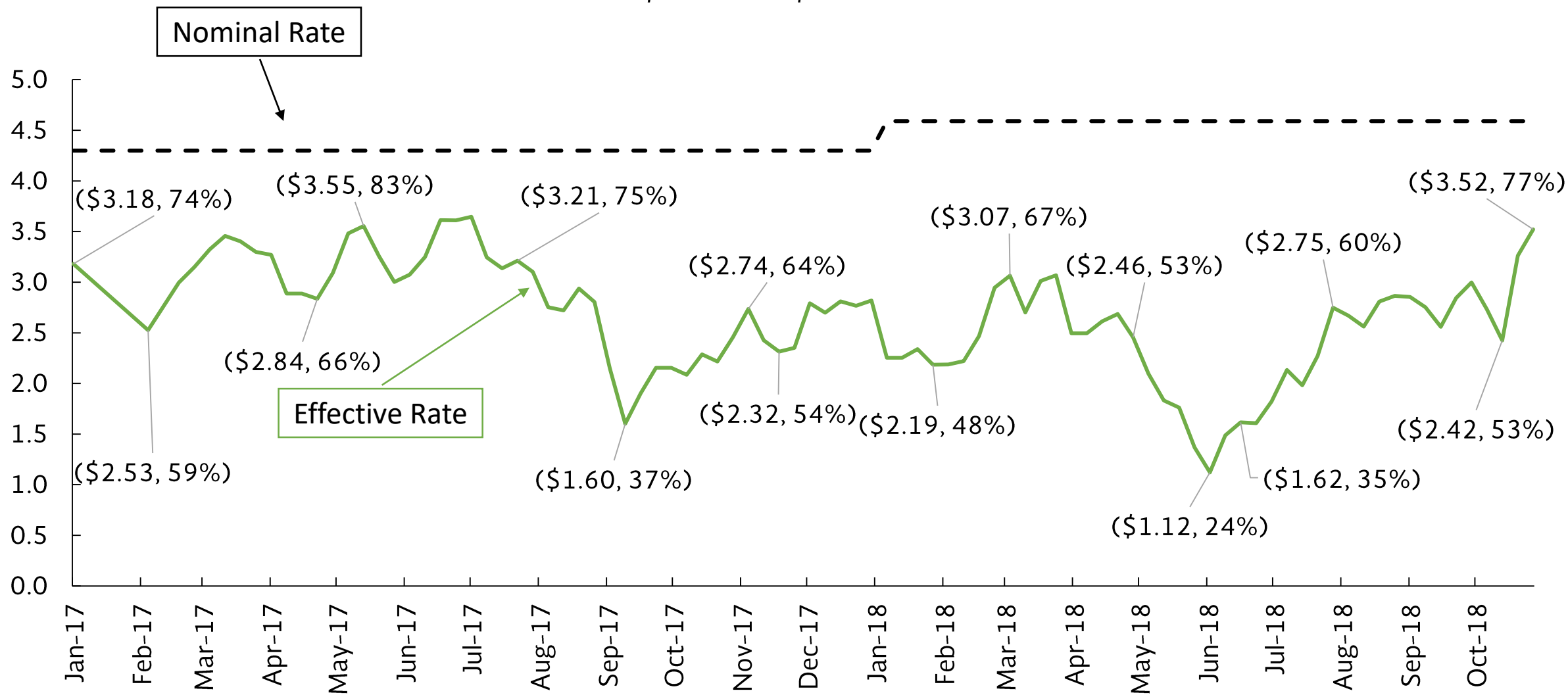


- Retail margins of service stations increased significantly in January 2018, but have remained relatively stable since.
- Wholesale prices for PEMEX remained regulated under a cost-basis regulation established by the regulator:
 - Pemex is allowed to establish a profit margin.
 - It is also allowed to have a “smoothing” mechanism, consistent with the excise tax smoothing.
- Overall, significant daily changes in retail prices have been avoided through the smoothing mechanism.
- Revenues are estimated to be around 0.8% of GDP for 2018.

7 Smoothing mechanism for the excise tax.

Nominal and Effective Excise tax rates (regular gasoline)

Pesos per liter (% of the nominal rate)



8 Main takeaways from the experience of Mexico.

- A comprehensive Energy Reform provided a clear legal mandate to liberalize fuel markets by 2018, at the latest.
- The liberalization process was done in phases, which in hindsight had both advantages and disadvantages.
- The smoothing mechanism was implemented through a Presidential Decree.
 - By avoiding the need for authorization from Congress, this feature of the Mexican legal system provided more freedom to implement the mechanism.
 - However, the mechanism is constrained by the fact that the net excise tax cannot be lower than zero nor higher than the rate in law (vs the “complementary rates” used in 2016, which were stated in Law).
- The mechanism implies a heavy administrative burden for both firms and the revenue-collecting authority (SAT).
- Having a dominant firm (Pemex) has also allowed the process to be implemented more smoothly.
- Revenues from the excise tax are volatile.
 - A key factor for Mexico is the fact that it is a net oil exporter: additional revenues from rising oil prices are partly offset by lower revenues from the excise tax on fuels (and vice versa).

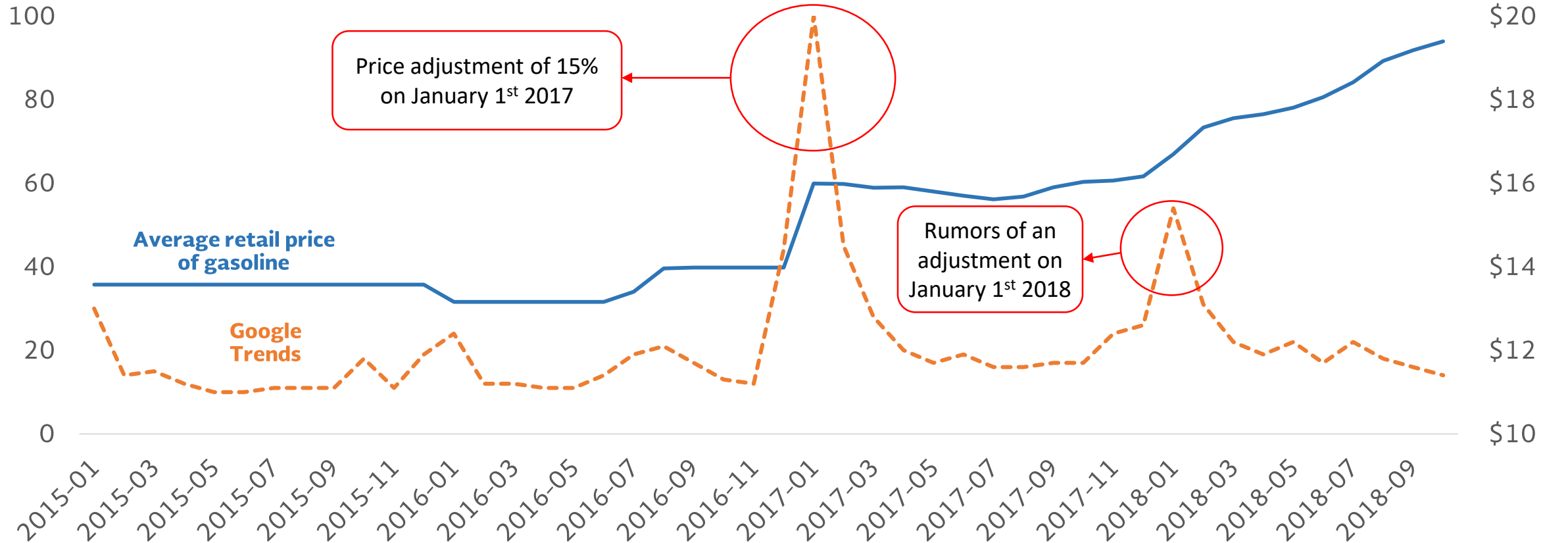
8 Main takeaways from the experience of Mexico.

- The move to daily prices was key for society to become used to gradual, but small, changes.

Google searches of "Price of gasoline" and price of gasoline

Index (January 2017 = 100), pesos per liter

Google searches
(Jan 17=100)



9 Other considerations.

- Tax accreditations for the agricultural sector.
 - Much remains to be done in order to provide better targeting.
- LPG prices are determined by market conditions since January 2017.
 - Effective competition needs to be fostered in the wholesale (Pemex) and retail markets.