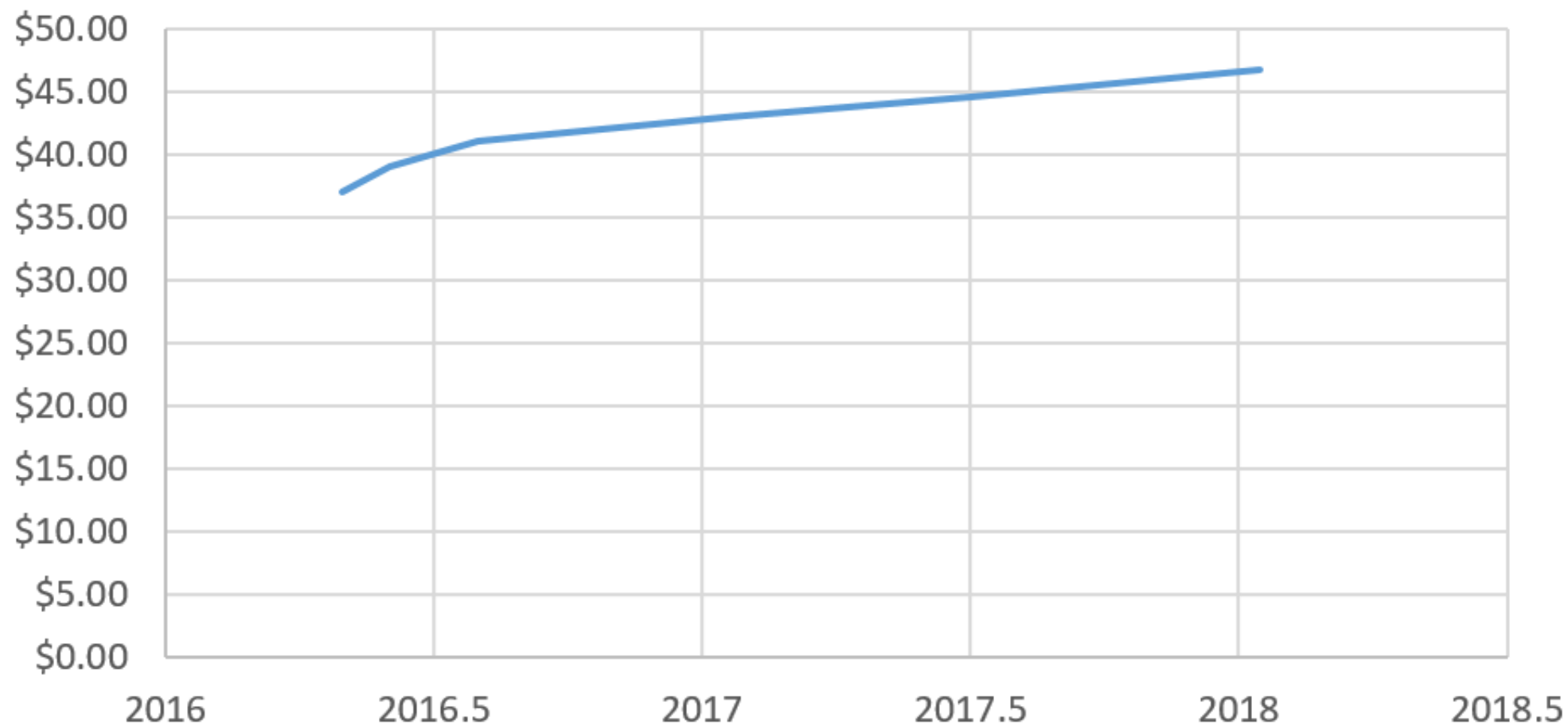


# Oil Futures

- Crude light sweet oil (Chicago Mercantile Exchange after purchase of NYMEX) contract size: 1000 barrels, open interest 431,000 contracts. Physical delivery.
- Brent crude, North Sea (International Petroleum Exchange, London) contract size: 1000 barrels, open interest 232,000 contracts

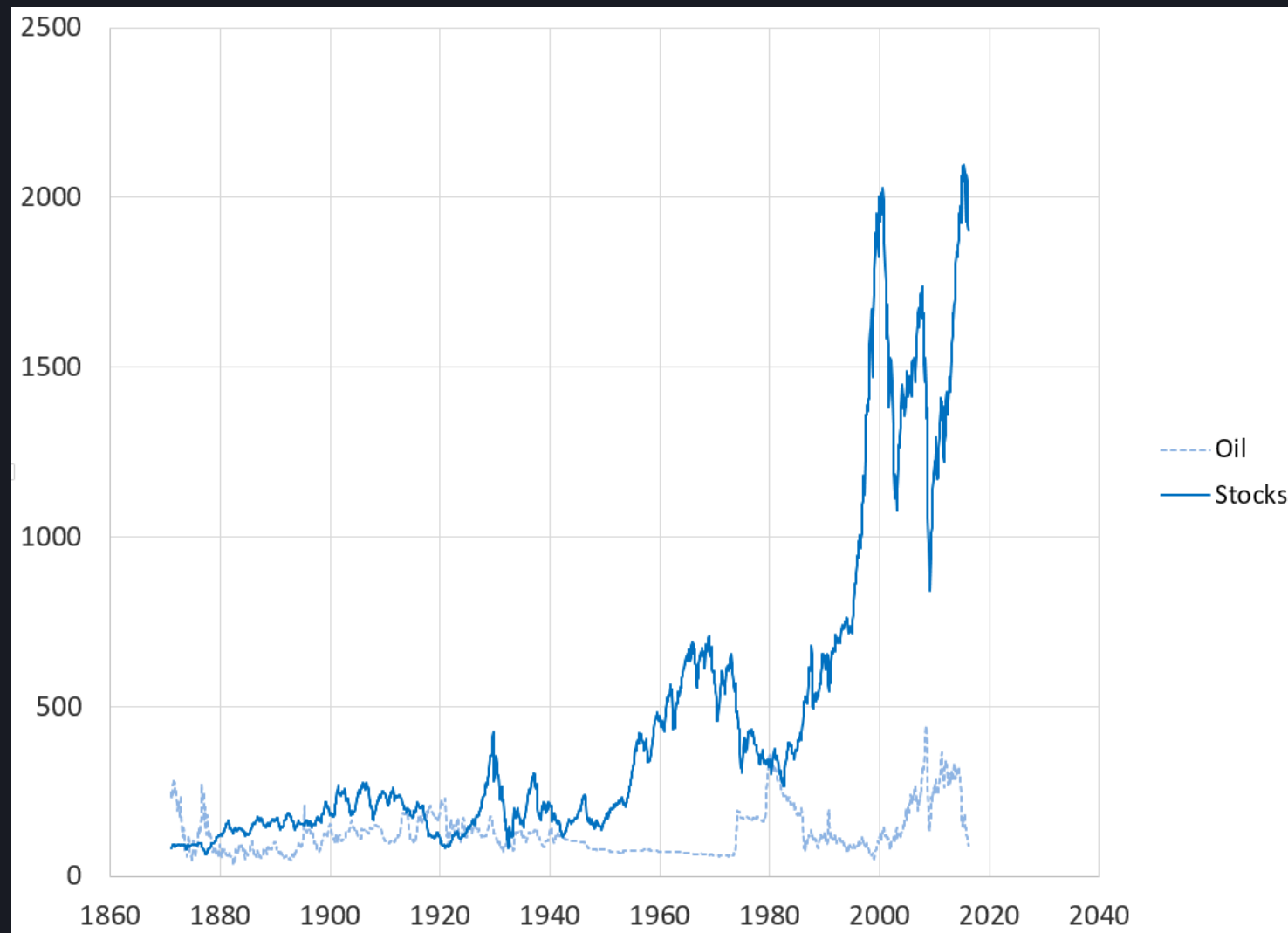
## CME Crude Oil Futures Curve, \$/barrel March 8, 2016



# Nature of Oil Storage

- Most stored oil is “moving through the pipeline” of oil tankers, refiners, distributors and retailers.
- Estimated oil inventories can be found on web site [www.api.com](http://www.api.com).

# Oil Prices and Stock Prices (Real, 1871- 2016)



# Pegging of Oil Prices by Texas Railroad Commission

- Founded 1891 to regulate railroad rates
- 1917 Pipeline Petroleum Law declared pipelines common carriers under the control of the Commission
- Stabilized oil prices until 1970s

# OPEC

- Organization of Petroleum Exporting Countries established 1960 by Iran, Iraq, Kuwait, Saudi Arabia and Venezuela
- Qatar (1961), Indonesia and Libya (1962), Abu Dhabi (1967), United Arab Emirates (1974), Algeria (1969), Nigeria (1971), Ecuador (1973), and Gabon (1975)
- OPEC is weak today because of conflict in middle east, hence low oil prices

# First Oil Crisis, 1973-4

- Arab countries' retaliation for US support of Israel in Yom-Kippur war 1973.
- Triggered sharp recession around world.
- 1973-4 is second sharpest stock market crash in US history. S&P Composite lost 53% of its real value between Dec. 1972 and Dec. 1974. (Only worse two-year experience was June 1930 to June 1932.)

## Second Oil Crisis, 1979-80

- 1979: Iranian revolution, expulsion of the Shah of Iran, Ayatollah, capture of US Embassy hostages in Teheran Nov. 1979.
- Iran-Iraq war erupts 1980, disrupts oil supplies.
- US CPI inflation reaches 18%/year in March, 1980.
- The “great recession” of 1981-82 is the worst recession since Depression of the 1930s.



# Collapse of OPEC Cartel, 1986

- After suffering bombing by Iraq, Iran demands that Iraq be given the same oil export quota as everyone else.
- Other arguments about the disproportionate share of some OPEC states.

# Government Oil Reserves

- Strategic Petroleum Reserve (created 1975) in caverns in Louisiana and Texas – 572 million barrels, only 60 days supply. Not used to stabilize prices.
- In 2000, President Clinton established a 2 million barrel heating oil reserve in New York and New Haven to help stabilize US heating oil prices. US consumption of heating oil about 100 million barrels a year.
- Today, heating oil reserve is in Groton CT and Revere MA.
- Gov't has sold from reserves on a number of occasions since 2000 when price triggers were hit.

# Persian Gulf War, 1990-1991

- August 2, 1990, Surprise invasion of Kuwait by Iraq.
- UN Security Council deadline for Iraq to withdraw by January 15 1991.
- January 16, 1991 Air bombardment of Iraq and its Kuwaiti positions begins.
- February 24, 1991 Allied ground invasion begins.
- War is over February 26, 1991.
- Brief interruption of oil supplies mark recession: NBER dates July 1990-March 1991.

# Second Gulf War Oil Spike

- In anticipation of war, oil rises to nearly \$36 per barrel February, 2003.
- US invaded Iraq, March 19, 2003.
- Symbolic end of war: after capture of Baghdad, crowd topples Hussein stature April 8, 2003.
- Oil falls to \$28 per barrel by April, 2003.

# Volatile Oil Prices after 2008 World Financial Crisis

- In 2008, at height of financial crisis, price per barrel hit \$113/barrel
- In 2016, oil price fell below \$30/barrel
- Fracking technology responded to the 2008 high oil prices with a lag