Tenth Federal Reserve District Energy Survey Outlook

AAPG Meeting

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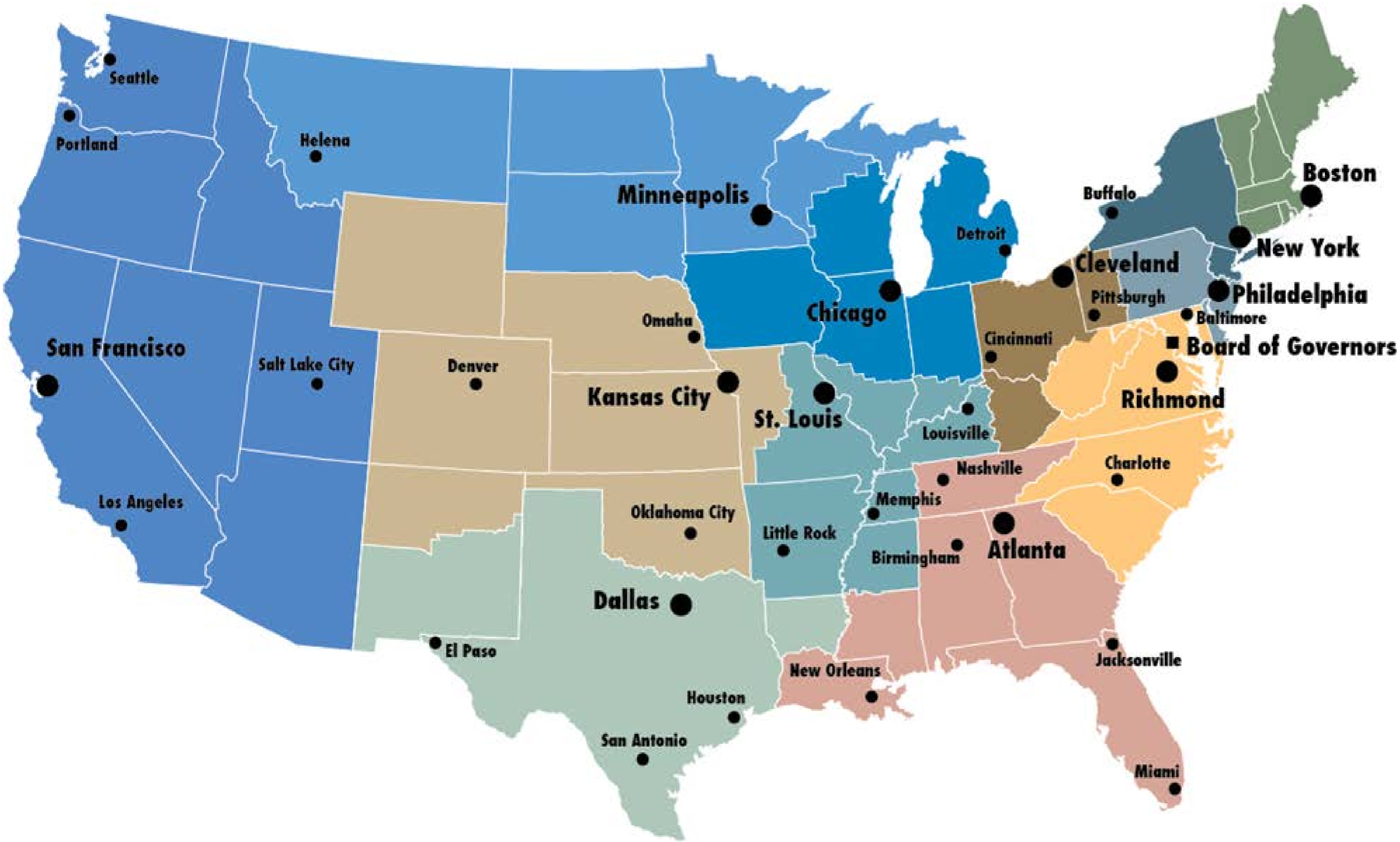
FEDERAL RESERVE BANK of KANSAS CITY

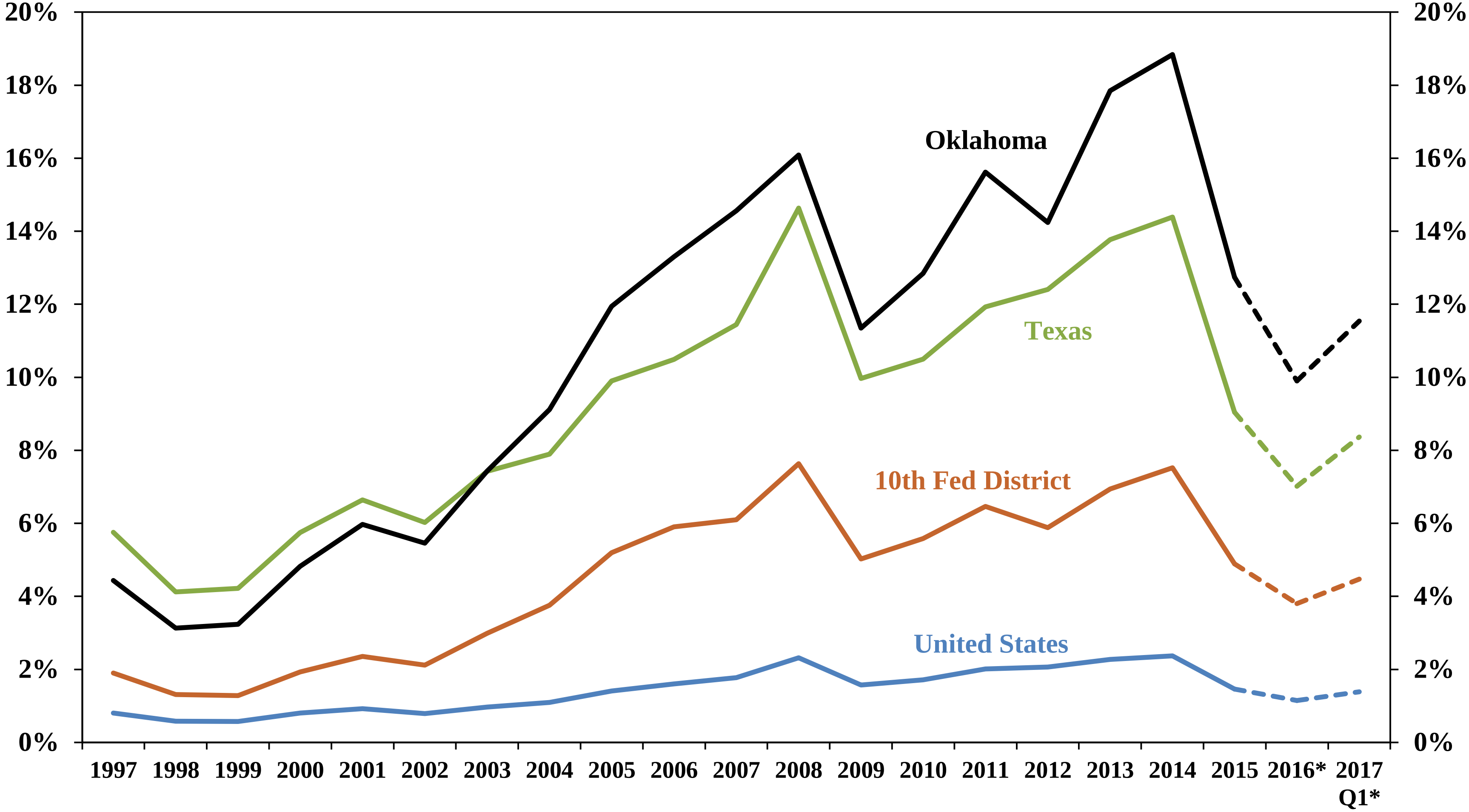
Federal Reserve Districts and Office Locations



As the size of the oil and gas sector rose again after the financial crisis, we started a survey

Oil and Gas Sector Share of GDP*

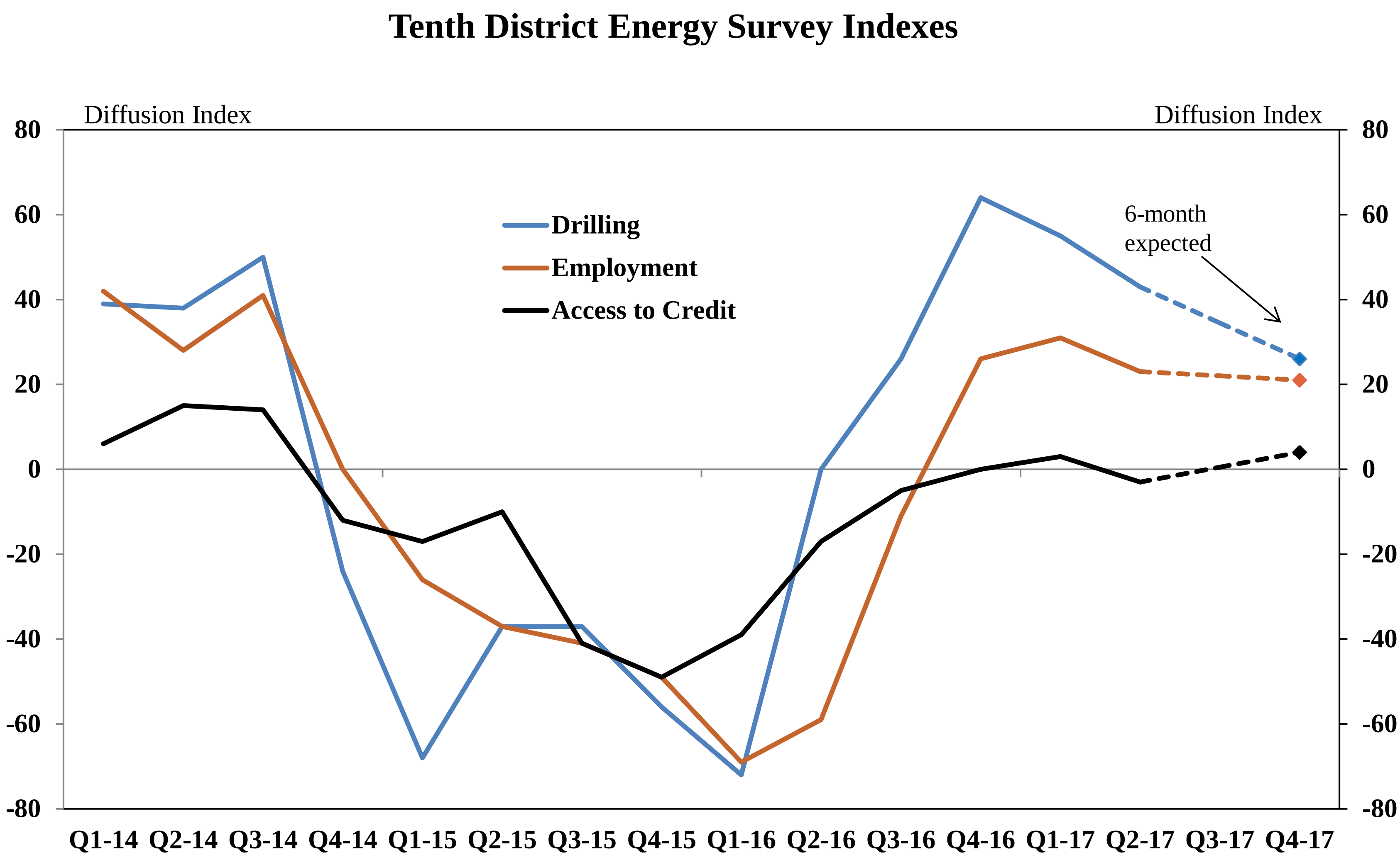
1997-2017



*Oil & Gas Sector = NAICS 211 + NAICS 213;
2016-17 estimates based on size of overall Mining sector

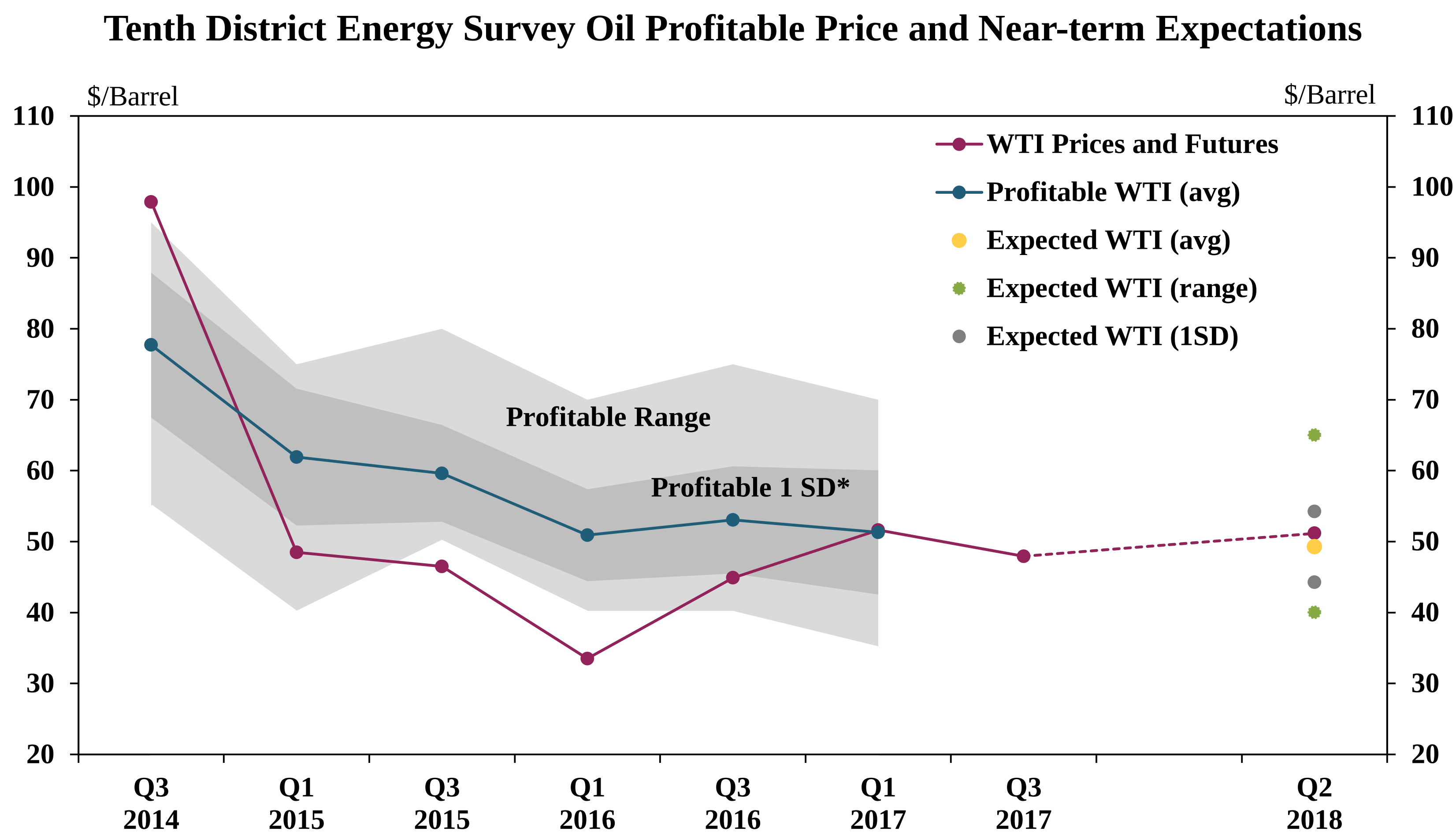
Source: U.S. Bureau of Economic Analysis; author's calculations

In our Q2 survey, growth was expected to slow in second half 2017, with credit access stable



Source: FRBKC Energy Survey

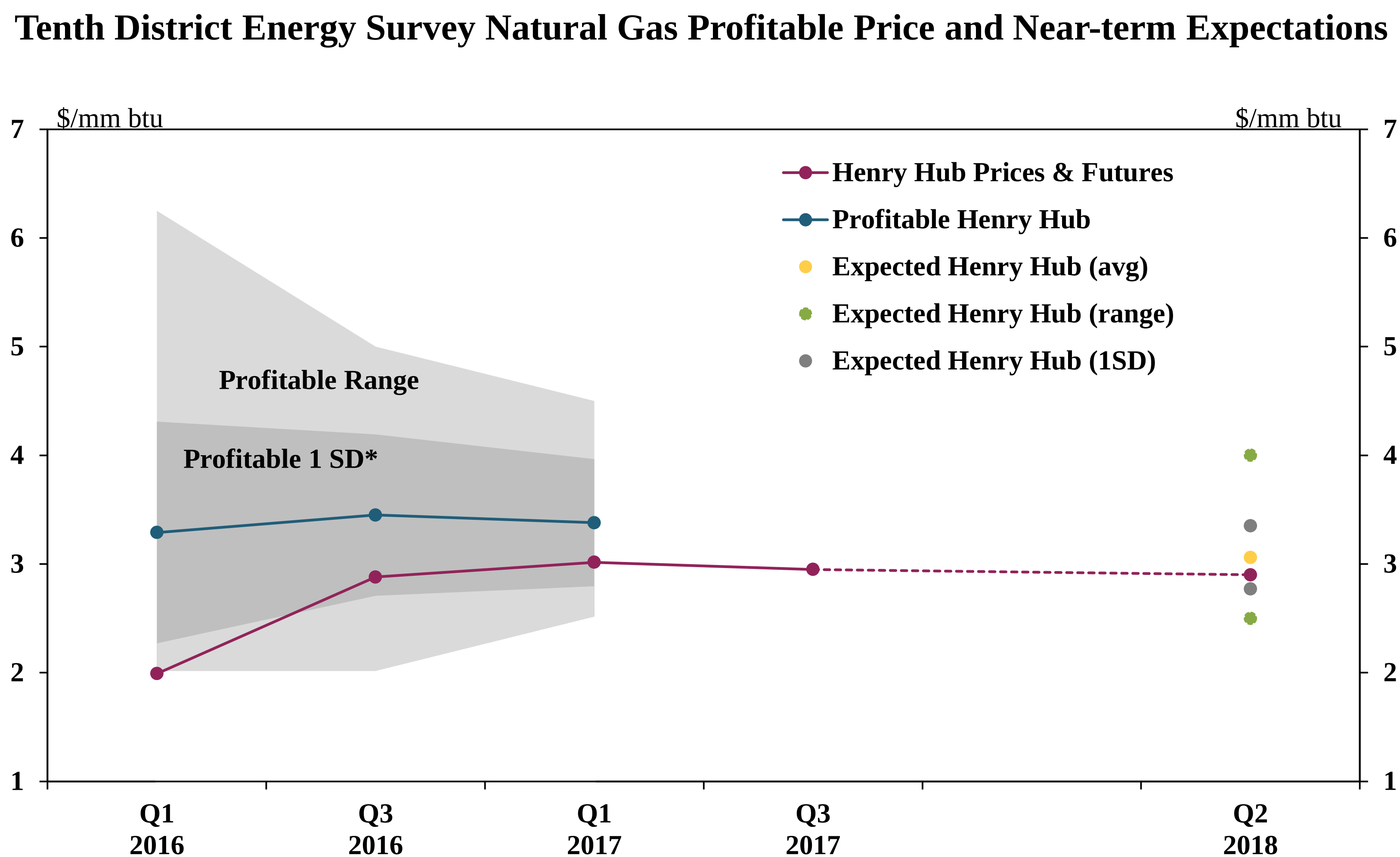
Oil breakeven prices have come down, but oil was expected to stay around $50 through 2018



* SD = Standard Deviation

Source: FRBKC Energy Survey, EIA, CME

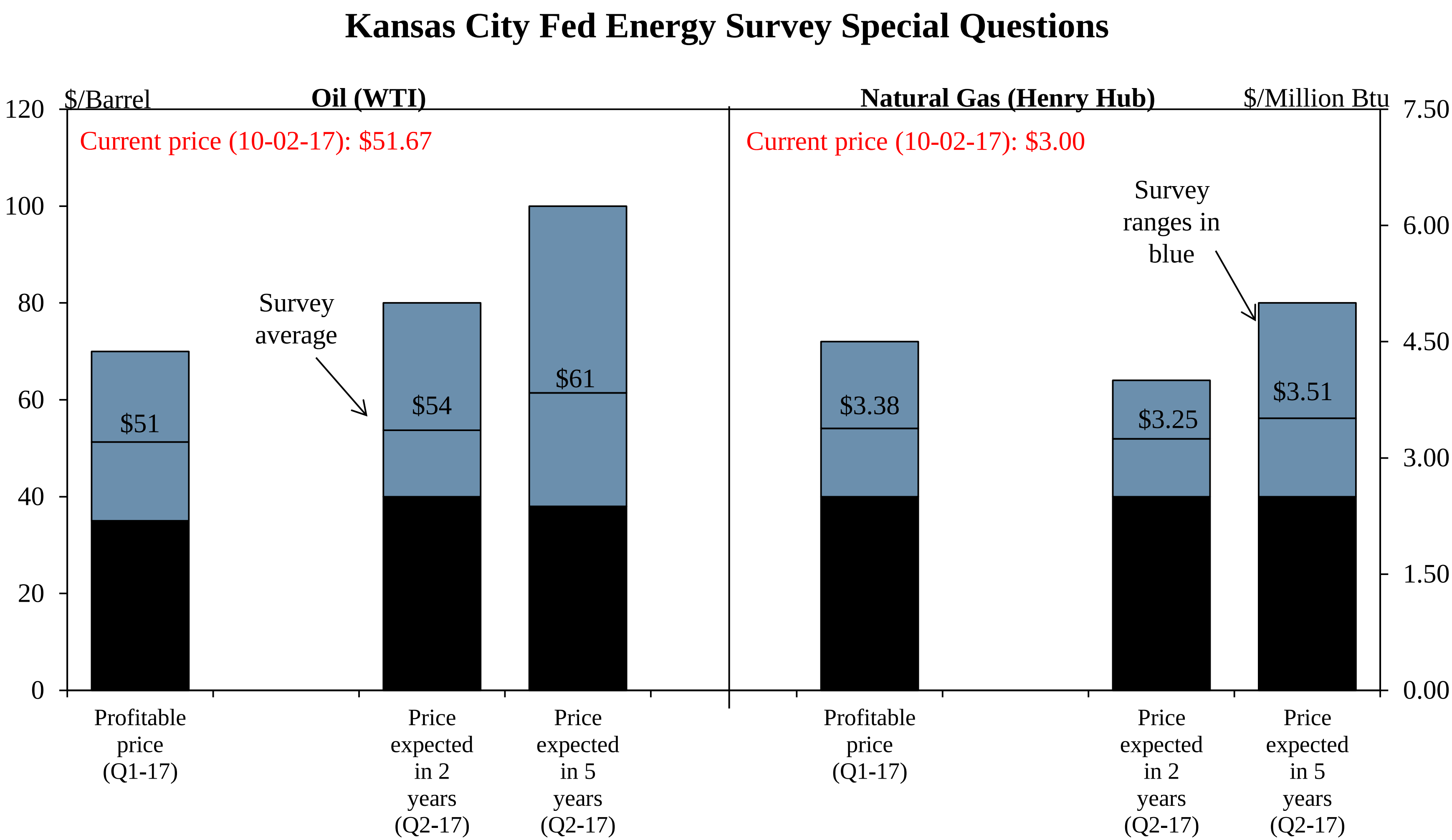
Profitability in the natural gas sector has been even more challenging in recent years



* SD = Standard Deviation

Source: FRBKC Energy Survey, EIA, CME

Looking further into the future, respondents' views on especially their oil price outlook vary widely



Source: FRBKC Energy Survey, CME

Selected comments in Q2 2017 Energy Survey

"U.S. activity will curtail to some degree before year end due to poor returns and market balance will be achieved sometime in 2018. There is too much under-exploited oil supply for prices to rise to 2013 levels for some time."

"The rig count pace of growth is going to slow significantly and probably flat line. The industry has a significant number of drilled but uncompleted wells and this inventory is growing every day."

"The current rise in the rig count is a harvesting operation within the shale plays. Very little exploration seems to be occurring at the moment."

"There are huge volumes of natural gas everywhere. Every oil well being drilled has significant associated natural gas."

"Public companies overpaid for Permian assets and must show reserve and production growth, so drilling will continue to escalate for several months in the Permian, no matter the price. Other basins may counter that a bit when prices are uneconomic."

Third quarter survey results available Friday, October 13 at 10:00 CST at:
https://www.kansascityfed.org/research/indicatorsdata/energy

Source: FRBKC Energy Survey