Banking Analysis

# A sticky situation for banks, but is it really that bad?

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- **The direct exposure of commercial banks to the O&G downturn is relatively small**
- **Large regional banks in energy-rich states are more exposed to O&G loans**
- **Risks to small regional banks stem from second round effects**
- **The downturn will affect commercial banks' profitability, but not overall financial stability**

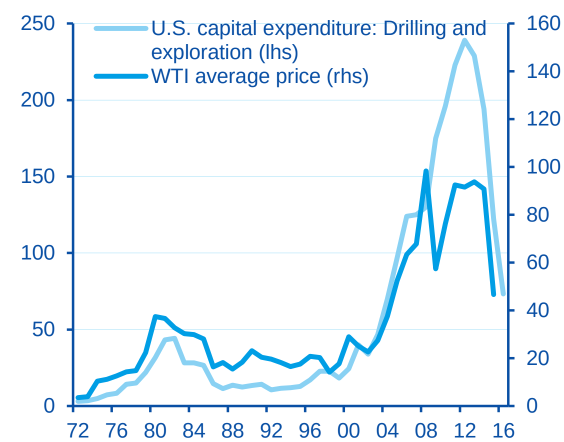
Although oil prices have been climbing since mid-February, they are still significantly below their 2014 levels. Based on our forecasts (see Oil price outlook), they are likely to remain below pre-2014 levels in the foreseeable future. In this new price environment, some of the projects that were undertaken during the oil boom are no longer cash-flow positive, resulting in financial difficulties and bankruptcies in the oil and gas (O&G) sector. The struggles of the industry are spilling over to other sectors in O&G-exposed states (see Regional economic watch). This brief analyzes the effects of the O&G downturn on the big, large regional and small regional commercial banks in the U.S. Despite mounting pressures that less diversified banks face, the risks remain contained and are unlikely to become systemic.

## Banks' exposure to O&G exploration and production

Driven by increasing oil prices, investment in O&G drilling and exploration in the U.S. boomed after 2003 (Chart 1), to a large degree due to the advances in fracking technology. Investment peaked in 2012, but following the severe oil price correction from around \$100 per barrel of WTI in mid-2014 to around \$30 in 1Q16, it is now back in line with what it was 12 years ago. Most of the investment has been financed through securities markets (bonds, mezzanine finance & equity), which is the preferred way for O&G companies to meet long-term financing needs. Banks have been traditionally used for shorter-term financing through revolving lines of credit.

As a result of this, the exposure of the banking sector to O&G production and exploration (E&P), the most at-risk segment of the industry, is relatively small. In the most recent Senior Loan Officer Survey, 86.6% of the respondents reported that the share of C&I loans to E&P and support services firms was less than 10%, while 71.6% of the respondents reported that it was less than 5% (Chart 2). The Federal Reserve's Shared National Credits Program 2015 Review (SNC) showed that the commodities section of the portfolio—where most of the E&P commitments fall—increased in line with the overall portfolio during the shale boom (Chart 3). Even though not all O&G-affected loans fall in the commodities category (for example, loans to supporting industries), this, together with the finding in the same review that O&G commitments to E&P companies and services sectors represent 7.1% of the

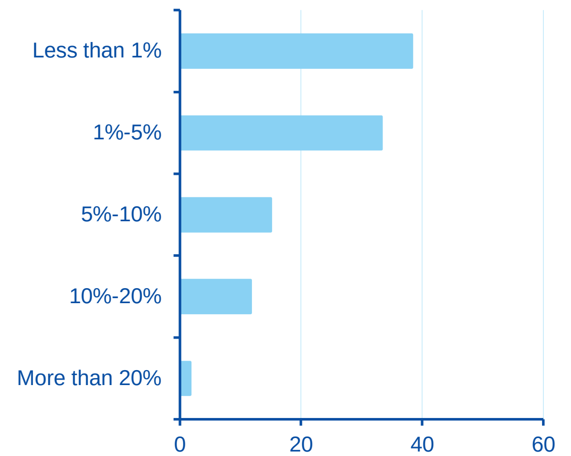
Chart 1
**Capital expenditure budgets for drilling/exploration and oil prices** (\$)




Source: O&G Journal & BBVA Research

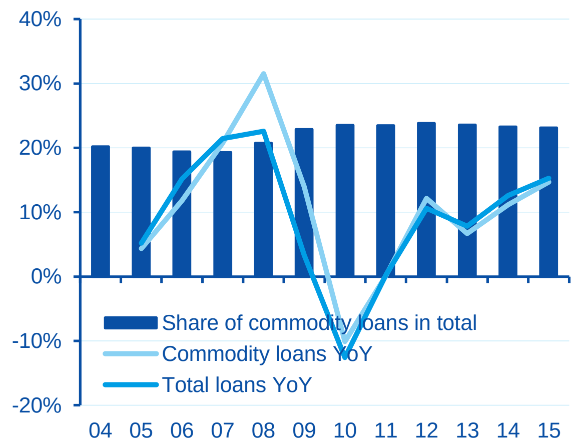
SNC portfolio, confirms that the exposure of the banking sector to the first round effects[1] of the downturn in the O&G sector is limited. Therefore, it is logical to assume that the risks are not systemic and the downturn will not result in a major dislocation of financial markets. That said, there are differences from bank to bank, depending on which geographies and market segments they serve.

Chart 2
**Fraction of C&I loans made to firms in O&G drilling/extraction and support services** (%)




Source: Federal Reserve & BBVA Research

Chart 3
**Commodities loans and total loans in SNC portfolio** (% share and YoY change)




Source: Federal Reserve & BBVA Research

## Differences between banks by size and geography

In order to analyze the effects of the oil price downturn on different types of commercial banks, we compare three samples—big (nationwide) banks, large regional banks and small regional banks. Large and small regional banks represent institutions that predominantly operate and possess at least 1% market share in one or more of the following O&G-exposed states: Texas, Louisiana, Wyoming, North Dakota, Montana, and Alaska; and have at least $200M in total loans and leases. The large regional banks have assets above $1 billion, while the small regional banks have total assets of less than $1 billion.

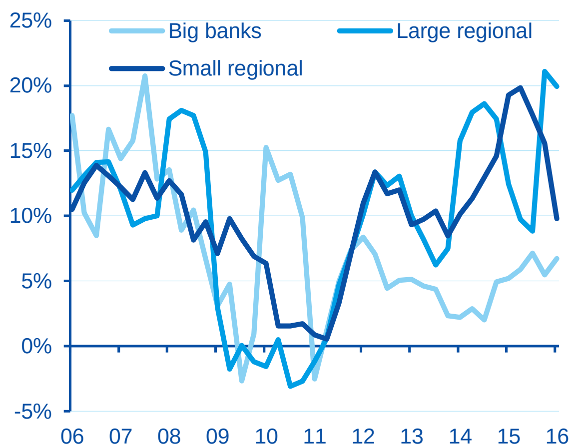
There are four main differences among the bank samples. First, regional banks have been growing significantly faster than big banks since 2011 (Chart 4), likely due to the above average economic growth in O&G-exposed states during the shale boom, as well as to the relatively lower exposure of these states to the subprime mortgage crisis. Lending by large regional banks slowed down in mid-2014, as oil prices started declining, while smaller banks continued to expand lending until mid-2015, when the second round effects of low oil prices likely emerged due to a lagged effect—the time it took for the downturn in O&G to be reflected in loan quality deterioration in residential and commercial real estate, small business and consumer lending. Because of their size, small banks are likely not involved in financing of E&P companies.

Second, C&I loans on average represented a larger share of total loans at large regional banks until 2015, compared to big banks and small regional banks (Chart 5). The share of C&I loans at large regional banks peaked in mid-2014, coinciding with the peak in oil prices. On the other hand, the share of C&I loans at big

[1] First round effects represent effects from deteriorating quality of loans that have been extended to O&G firms. Second round effects represent effects from deteriorating quality of loans made to households, small businesses of various kind, etc.

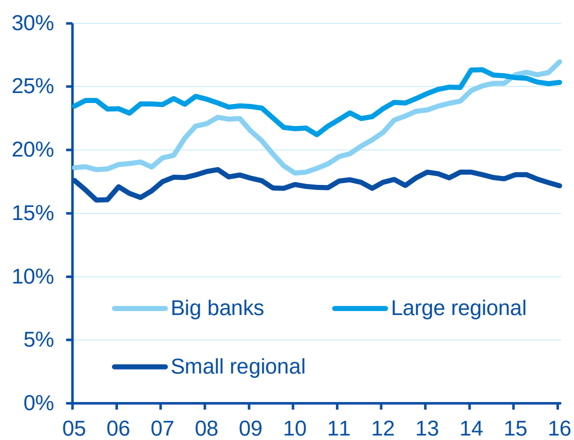
banks has not slowed down significantly, indicating that their C&I portfolio is less exposed to the O&G downturn. The share of C&I loans at small regional banks is both lower and more stable than at the other groups of banks.

Chart 4
**Loans and leases** (% YoY change)




Source: SNL & BBVA Research

Chart 5
**Average share of C&I loans in total loans** (%)

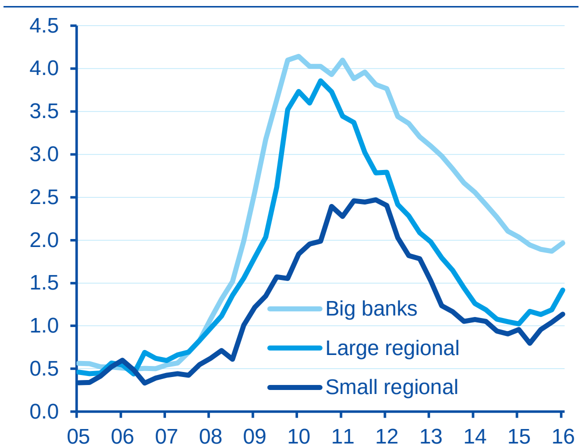



Source: SNL & BBVA Research

Third, non-performing loans (NPLs) also behave differently among the bank samples. The ratio of NPLs to loans started increasing first at large regional banks, in 2Q15 (Chart 6), likely due to their higher direct exposure to the E&P sector. The 4Q15 FDIC quarterly banking profile confirmed that most of the C&I portfolio quality deterioration has been concentrated in banks with assets larger than $1 billion. NPLs to loans at small regional banks went up in 3Q15, likely due to the second round effects kicking in. Lastly, NPLs to loans at big banks started increasing in 1Q16, probably due to their higher geographic diversification and relatively lower direct exposure to the O&G sector.

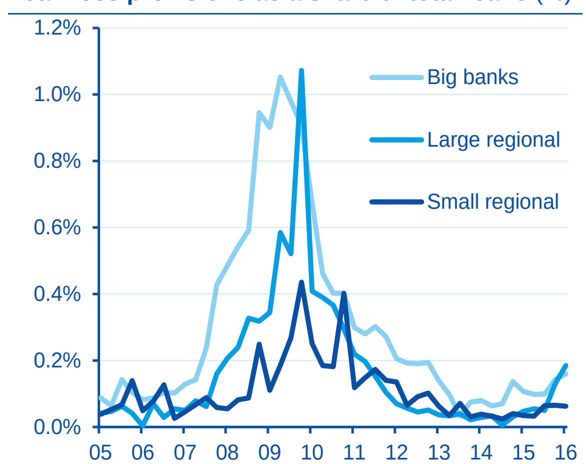
Fourth, not surprisingly, large regional banks have been increasing loan loss provisions at a significantly higher rate than the other types of banks (Chart 7), which has led to the buildup of significant reserves (Chart 8).

Chart 6
**Average share of NPLs in total loans** (%)




Source: SNL & BBVA Research

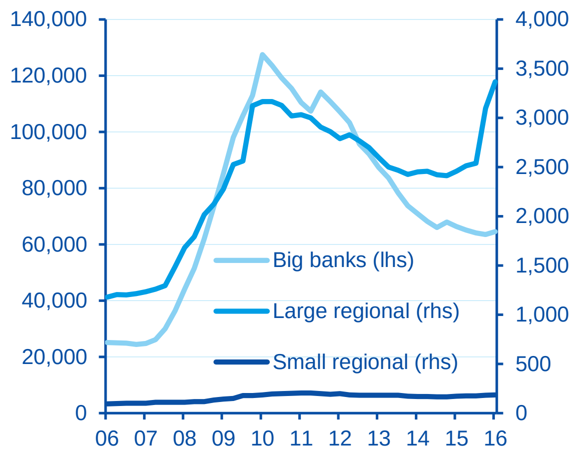
Chart 7
**Loan loss provisions as a share of total loans** (%)




Source: SNL & BBVA Research

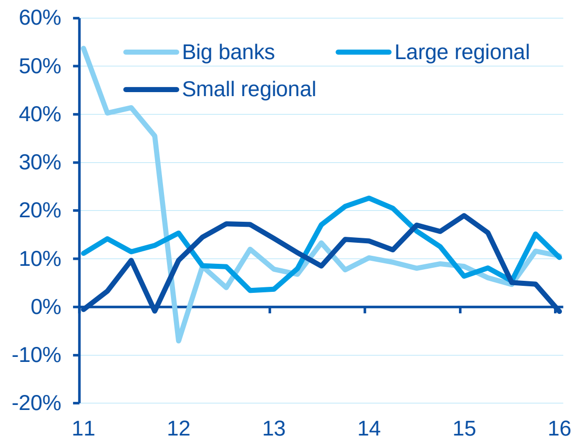
While the short-term debt of O&G companies has increased significantly in the last two quarters, the amount of unused C&I loan commitments at big banks and large regional banks does not seem to have been significantly affected (Chart 9). The potential credit risk arising from unfunded C&I commitments is reflected in the level of provisions, banks typically take into account the risk from possible drawdowns in the case of committed and conditionally committed credit lines. Banks have some control over this exposure through the process of periodic borrowing base redetermination and the use of covenants, but are also sensitive to the needs of their clients who need access to financing to continue operating until oil prices recover.

Chart 8
**Total reserves for banks by sample** ($ Millions)




Source: SNL & BBVA Research

Chart 9
**Unused C&I commitments** (% YoY)




Source: SNL & BBVA Research

## Effect estimations: Profits at risk, but not stability

Banks focused on O&G-intensive regions have enjoyed strong lending growth over the last five years due to the above average economic performance of O&G-exposed states, but the cycle has now turned. Large regional banks are challenged because of a relatively stronger exposure to O&G loans, while small regional banks are affected because of their focus on parts of the country that are experiencing a significant slowdown. Table 1 shows the estimated average adverse effects for each bank group against a hypothetical scenario that assumes no O&G downturn and a number of presented assumptions, informed by the analysis conducted for this brief. The use of assumptions is necessary due to the limited availability of granular data for each financial institution.

Table 1

**Estimated average negative effects of the O&G price downturn on the profits of the three groups of banks in the period 2016-2017 against a hypothetical scenario that assumes no O&G downturn**

| | Big banks | Large regional banks | Small regional banks |
|---|---|---|---|
| **Assumptions:** | - O&G E&P and oilfield services loans represent 2%-4% of C&I portfolio<br>- 25% defaults rate<br>- 50% recovery rate<br>- No material effect from second round effects[2] | - O&G E&P and oilfield services loans represent 7%-13% of C&I portfolio<br>- 25% defaults rate<br>- 50% recovery rate | - No direct O&G E&P and oilfield services exposure |
| **First round negative effects** | 3-7% | 15%-30% | 0% |
| **Second round negative effects** | 0% | 5%-10% | 20%-40%[3] |
| **Total negative effects on profits** | 3%-7% | 20%-40% | 20%-40% |

Source: BBVA Research

Regional banks' profitability will likely be significantly affected by the downturn, making them more cautious when lending going forward; however, if oil prices remain stable or continue edging up, the damage will be short-lived. In any case, the stability of the financial industry is not going to be brought into question. That said, the combination of slower economic activity in energy-rich states and more cautious lending will dampen the growth outlook for the less diversified regional and small banks. This will provide an opportunity for some players to increase their market share by filling any demand left unmet by less diversified banks with heavy O&G exposure. Also, stronger banks could see opportunities for acquisitions, leading to more consolidation of the banking industry in O&G-exposed states.



[2] No material effect is assumed due to geographic diversification to regions whose performance is likely improved by low oil prices

[3] The effect is established using a time series regression between the quarterly growth rate in NPLs and weighted average regional unemployment rates. Our baseline scenario for regional unemployment rates was used to forecast NPLs in 2016-17