

OIL AND GAS LENDING

Core Analysis Procedures

Examiners are to consider these procedures but are not expected to perform every procedure at every institution. Examiners should complete only the procedures relevant for the institution's activities, business model, risk profile, and complexity. If needed, based on other identified risks, examiners can complete additional procedures not included below. References to laws, regulations, supervisory guidance, and other resources are not all-inclusive.

References

- *Interagency Guidelines Establishing Standards for Safety and Soundness (FRB: [12 CFR 208, Appendix D-1](#); FDIC: [12 CFR 364, Appendix A](#))*
- *FDIC: RMS Manual of Examination Policies, [Section 3.2-Loans](#)*
- *Prudent Risk Management of Oil and Gas Exposures (FDIC: [FIL-49-2016](#))*
- *FRB: Commercial Bank Examination Manual, [Section 2150 Energy Lending](#)*
- *Supervisory Expectations for Risk Management of Reserve-Based Energy Lending Risk (FRB: [SR 16-17](#))*

Considerations and Background

These procedures focus on assessing credit exposures and risk management frameworks involving oil and gas (O&G) loans. O&G loans typically fund activities related to one of the four main O&G industry segments:

- Upstream - exploration and production (E&P) companies (frequently reserve-based loans)
- Midstream - transporting, treating, processing, storing, and marketing to upstream companies
- Downstream - refining and marketing
- Support/Services - equipment, services, or support activities (e.g., drilling, workover units, and water hauling services)

Findings and Conclusions

Document findings and conclusions here, and include a summary of these findings and conclusions in the appropriate Primary or Supplemental modules.

Preliminary Review

1. Review prior examination reports and work papers, examination planning memoranda, internal and external audit reports, and file correspondence for an overview of any previously identified O&G lending findings.

2. Identify exposure levels and trends in O&G industry segments.

3. Determine the scope of the O&G review by considering:

- **Loan types and volumes, problem-loan reports, and watchlists**
- **Prior examination reports, internal/external audits, and loan reviews**
- **Regulatory correspondence**
- **SEC Forms 10-Qs and 10-Ks (for publicly traded institutions)**
- **Internal O&G reports (e.g., concentration or NAICS-code reports)**
- **Loan participations and Shared National Credit exposures**
- **Collateral engineering reports and price deck information**
- **Economic and industry conditions**
- **O&G market trends including commodity price trends and other factors that affect the industry**

4. Discuss with management O&G related issues, such as:

- **The board's risk appetite**
- **Management and board expertise**
- **Internal control and risk management programs and practices**
- **Planned changes in lending strategies, portfolio composition or volumes, and products**

Policy Considerations

5. Review policies related to O&G exposures. Determine whether:

- **Risk limits for reserve-based energy lending are consistent with the board's risk appetite**
- **Policies, including any relevant contingency plans, are periodically reviewed and updated**
- **Policy standards require capital levels commensurate with the level and nature of reserve-based lending exposures**

6. Assess O&G policies and procedures at the O&G lending portfolio level and at the individual segment level, including:

- **Underwriting standards, financial analysis, required covenants, repayment terms, and engineering reports for reserve-based loans**
- **Cash flow analysis and monitoring**
- **Advance rates**
- **Frequency of borrowing base re-determinations**
- **Over-advance cure requirements**
- **Minimum and maximum limits within the borrowing base for each category of proved reserves (proved developed producing, proved developed nonproducing, and proved undeveloped)**
- **Concentration limits by well production location, industry segment, or loan type**
- **Pricing and borrowing-base parameters (price deck process)**
- **Commodity price sensitivity and market condition analysis**
- **Approval authorities**

<ul style="list-style-type: none"> • Policy exception monitoring and reporting • Leveraged lending considerations • Hedging strategy • Specialized O&G equipment lending
<p>7. Determine whether overall policies related to O&G exposures (upstream, midstream, downstream, and support/services) are consistent with prudent practices, risk exposures, and management’s O&G expertise.</p>
<p>8. Assess policies, procedures, and methodologies regarding allowance for credit losses (ACL) allocations for O&G portfolios in accordance with ASC Topic 326. When applicable, ensure that ACL methods sufficiently capture O&G commodity price trends or other factors that could impact expected credit losses.</p>
<p>9. Assess the appropriateness of policies and procedures relating to the use of engineering reports for reserve-based loans. Determine whether loan decisions are based on reports prepared by independent third-party engineers (or borrower-prepared reports reviewed by independent third-party engineers). Determine whether policies and procedures appropriately address:¹</p> <ul style="list-style-type: none"> • Engineers’ qualifications and independence from the loan-origination function • Risk factors and adjustments • Key supporting assumptions
<p>10. Assess policies and procedures relating to the institution’s price deck:</p> <ul style="list-style-type: none"> • Determine whether management frequently monitors factors affecting borrowing base calculations, such as commodity market prices, trends, and volatility; forward prices; and supply and demand trends. • Verify that management appropriately documents key assumptions. • For reserve-based loans, consider whether calculation factors are conservative, responsive to commodity price fluctuations, and address borrowers’ ability to repay under a protracted, low commodity price environment.

¹ Generally, institutions engaged in material levels of E&P lending use highly qualified (external or internal) petroleum engineers to evaluate reserve reports prepared by reputable, third-party engineers. Key elements within engineering reports include decline-curve analysis, pricing assumptions (including appropriate differentials for transportation costs and quality of the commodity), expected timing of production and sales, expenses (e.g. lease operating, production taxes, capital expenditures (CAPEX)), discount rates, and present value calculations of future net revenue.

Loan Administration and Underwriting Standards
<p>11. Assess growth trends and material changes in O&G related exposures, such as concentrations, loan participations, out-of-area lending, and participations in Shared National Credits (SNCs). If the institution participates in SNCs, determine whether management conducts its own analysis, including independent assessments of engineering reports, rather than relying on lead institution underwriting criteria.</p>
<p>12. Assess O&G loan administration procedures. Appropriate procedures generally address items such as:</p> <ul style="list-style-type: none"> • File documentation • Loan-policy exceptions (approval limits and board reporting) • Loan workouts • Risk grading • Troubled debt restructuring and nonaccrual decisions • Prudent practices for working with troubled borrowers
<p>13. Assess management’s analysis and documentation of economic conditions, O&G market trends, and competitive factors when making credit decisions.</p>
<p>14. Determine whether O&G loan administration and underwriting decisions consider the potential or actual impact of regulatory, accounting, technological, environmental, or legislative changes.</p>
<p>15. Assess O&G credit administration and loan documentation standards, relative to:</p> <ul style="list-style-type: none"> • Reserve production (historical and present production levels, price per barrel, comparison with projections, and exception reports) • Depletion and replacement • Capital expenditure requirements (e.g., maintenance vs. discretionary) • New projects • Borrowing base re-determinations and collateral re-evaluations • Collateral documentation • Title verification requirements • Mortgage, UCC filings, assignments of leases, and landlord waivers • Property and liability insurance coverage • Environmental reports
<p>16. Assess credit file documentation. Appropriate documentation generally includes:</p>

- **Credit approval memorandums that address all material considerations**
- **Discussions of the past performance of the borrower/borrower's management team**
- **Financial statement analysis**
- **Evaluation of borrowers' budgets/projections, including break-even and sensitivity analysis**
- **Analysis of primary repayment sources**
- **Analysis of secondary and tertiary repayment sources (such as, collateral, guarantors, other asset sales, and sponsor support)**
- **Loan covenants that require timely information and maintenance of pertinent financial ratios**
- **Evidence that loan officers regularly monitor compliance with established covenants**
- **Cash flow analysis evidencing an ability to service all operational and debt-service requirements (global cash flow) over a reasonable amortization period, (i.e., within the economic half-life)**
- **Current engineering reports, as well as thorough, independent reviews and analysis of the reports**
- **Evaluation of borrowers' management teams**
- **Price deck considerations and borrowing base re-determinations**
- **Hedging requirements (if any) and its effect on the borrowing base, near-term cash flows, or liquidity**
- **Lien documentation, collateral-coverage evaluations, and periodic inspections as applicable on proven reserves, nonproducing reserves, machinery, and equipment**
- **Risk rating analysis and ACL for loans and leases allocations;**
- **Policy exceptions and reporting**

17. For reserve-based loans, review the appropriateness of price deck assumptions, including:

- **Timeliness of reviews and adjustments**
- **Sources of information, expertise used, and supporting documentation**
- **Discount to strip pricing**
- **Historical trends, as well as current and future assumptions**
- **Escalation assumptions**
- **Cost assumptions**
- **Peer or landscape comparisons or analysis**
- **Supporting documentation**

18. For reserve-based loans, assess management's analysis, policies, and procedures for determining when borrowers should be required to hedge production volumes, restrictions on the percentage of production that can be hedged, and the length of time that hedges should remain in place.

19. Determine whether the institution is acting as a counterparty in the hedging transaction, or if another financial institution or private sector entity is acting as the counterparty (counterparty risk). If the institution is engaged as a counterparty in hedging transactions, consider the following:

- **Counterparty risk**

<ul style="list-style-type: none"> • Accounting treatment • Offset strategies • Hedge effectiveness • Policy controls
<p>Oversight and Monitoring Procedures</p>
<p>20. Assess the structure and appropriateness of management and oversight over O&G lending. Consider:</p> <ul style="list-style-type: none"> • Organizational charts and reporting structures • Sufficiency and qualifications of personnel, including engineers, lenders, and credit officers • Staffing changes since the last examination • Use of third-party engineers and third-party information • Board oversight, including the experience and expertise of the board and any committees with oversight of O&G lending
<p>21. Assess the quality of internal and external loan reviews relative to O&G lending. Determine whether internal and external loan reviews reflect appropriate independence and evidence of O&G expertise, and whether risk ratings are appropriate.</p>
<p>22. Determine whether loan review findings are reported to the board. Consider specific findings and recommendations.</p>
<p>23. Assess the overall level and direction of risk relating to O&G lending, and review the effectiveness of internal controls and risk mitigation strategies, such as:</p> <ul style="list-style-type: none"> • Audit processes, including audit independence and expertise • Internal and external audit findings and follow-ups • Internal and external loan reviews
<p>24. Assess portfolio concentration reports, including funded and unfunded exposures, for all O&G areas. Concentration levels and policy limits are generally measured as a percentage of the total loan portfolio, as well as capital-based limits.</p>
<p>25. Assess the overall effect of O&G risks on the institution's risk profile and the overall adequacy of O&G risk management programs.</p>

26. Assess the overall control functions regarding the O&G portfolio. Consider:

- **Management and board reporting and oversight**
- **Policy-exception handling and tracking**
- **Concentration reporting and Management Information Systems;**
- **Segregation of duties**
- **Price deck review procedures**
- **Engineering reports and review processes**

End of Core Analysis.