MOODY'S INVESTORS SERVICE

Credit Opinion: BOK Financial Corporation

Global Credit Research - 19 Feb 2016

Tulsa, Oklahoma, United States

Ratings

Category	Moody's Rating
Outlook	Rating(s) Under Review
Issuer Rating	*A2
Lead Bank: BOKF, NA	
Outlook	Rating(s) Under Review
Bank Deposits	**Aa2/P-1
Baseline Credit Assessment	*a1
Adjusted Baseline Credit Assessment	*a1
Counterparty Risk Assessment	**Aa3(cr)/P-1(cr)
Issuer Rating	*A2
Subordinate	*A2

* Placed under review for possible downgrade on February 16, 2016
** Rating(s) within this class was/were placed on review on February 16, 2016

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Key Indicators

BOK Financial Corporation (Consolidated Financials)[1]

	[2]9-15	[3]12-14	[3]12-13	[3]12-12	[3]12-11	Avg.
Total Assets (USD billion)	30.6	29.1	27.0	28.1	25.5	[4]4.7
Tangible Common Equity (USD billion)	2.9	2.8	2.7	2.4	2.3	[4]6.0
Problem Loans / Gross Loans (%)	0.8	0.7	0.9	1.2	1.9	[5]1.1
Tangible Common Equity / Risk Weighted Assets (%)	12.6	13.3	13.7	12.7	13.1	[6]12.6
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	4.1	3.5	4.3	5.8	8.8	[5]5.3
Net Interest Margin (%)	2.5	2.5	2.6	2.8	3.0	[5]2.7
PPI / Average RWA (%)	2.1	2.1	2.4	3.0	2.8	[6]2.1
Net Income / Tangible Assets (%)	1.0	1.0	1.2	1.3	1.2	[5]1.1
Cost / Income Ratio (%)	64.9	66.1	65.0	60.5	61.5	[5]63.6
Market Funds / Tangible Banking Assets (%)	17.9	13.0	10.7	10.3	10.2	[5]12.4
Liquid Banking Assets / Tangible Banking Assets (%)	39.1	41.9	43.4	47.4	47.8	[5]43.9
Gross loans / Due to customers (%)	76.2	68.6	64.0	59.4	61.0	[5]65.9

Source: Moody's

[1] All figures and ratios are adjusted using Moody's standard adjustments [2] Basel III - fully-loaded or transitional phase-in; US GAAP [3] Basel I; US GAAP [4] Compound Annual Growth Rate based on US GAAP reporting periods [5] US GAAP reporting periods have been used for average calculation [6] Basel III - fully-loaded or transitional phase-in & US GAAP reporting periods have been used for average calculation

Opinion

SUMMARY RATING RATIONALE

Moody's assigns a standalone baseline credit assessment (BCA) of a1 to BOKF, NA, the lead bank of BOK Financial Corporation (collectively "BOK"). The bank's deposit rating is Aa2/Prime-1 and its issuer rating is A2. The holding company's issuer rating is also A2. The bank's Counterparty Risk (CR) Assessment is Aa3(cr)/Prime-1(cr).

On 16 February, we placed BOK's long-term ratings, BCA, adjusted BCA and long-term CR Assessment on review for downgrade. The rating action was driven by three broad factors. First, the bank has a comparatively large energy-lending concentration at about 100% of its tangible common equity (TCE). Second, the prolonged period of low oil prices and our expectation that prices will remain low for an extended period undermine the quality of the bank's energy-related loans. Third, the bank BOK has significant operations in Oklahoma and Texas, two states in which the energy sector contributes more to the local economy than the national average, exposing the bank to deterioration in its non-energy loan portfolios.

In the review, we will focus on the risk of the current stressful environment to the bank's financial performance. Our revised moderate and severe stress assumptions on US banks' energy exposures and energy-dependent economies will also be a consideration. The revised assumptions, which include a prolonged period of low oil prices, result in both a higher probability of default and loss given default for the bank's energy borrowers. In addition, we will focus on the mitigating strengths the bank possesses and whether they are sufficient to protect the bank's credit profile against this further stress. We believe the main mitigating elements supporting the bank's creditworthiness are its capital levels and its strong liquidity profile, which are anchored by its deposit base.

BOK's deposit and issuer ratings are the result of its a1 BCA and our advanced Loss Given Failure (LGF) analysis. Because BOK is a regional US bank, we assume that it is subject to Title I resolution if it fails, and we therefore use our standard loss assumptions for US Title I banks. Because of these loss assumptions, together with depositor preference in resolution and the relative thinness of the bank's debt structure, we see the loss severity of debt to be comparatively high. We therefore rate BOK's debt at both the bank and the holding company one notch below the BCA at A2. We rate deposits two notches higher than the BCA at Aa2 because we see the loss severity of deposits to be relatively modest given depositor preference over unsecured debt and the large volume of the bank's deposits relative to our assumed losses.

Credit Strengths

- Good, consistent profitability supported by low credit costs, sound operating efficiency and a diversified revenue mix

- Ample funding/liquidity profile that benefits from BOK's position as the top deposit-taker in Oklahoma

Credit Challenges

- Energy and CRE concentrations increase asset risk, although risk partially mitigated by strong capitalization and conservative risk culture

- Large, though shrinking, AFS securities portfolio exposes BOK to rising long-term interest rates, but strong core deposit base offers protection

Rating Outlook

BOK's long-term ratings, BCA, adjusted BCA and long-term CR Assessment are on review for downgrade.

Factors that Could Lead to an Upgrade

Given the review for downgrade, there is limited upward rating pressure at this time. Nonetheless, a sustained increase in oil prices would be credit positive.

Factors that Could Lead to a Downgrade

An extended period of lower oil prices would be credit negative for BOK and could lead to a downgrade of the bank's BCA if credit costs in the energy and/or non-energy loan portfolios are expected to be significant. Downward pressure on the BCA could also emerge if BOK's capital and/or profitability declined from expected levels.

DETAILED RATING CONSIDERATIONS

ENERGY AND CRE CONCENTRATIONS INCREASE ASSET RISK, ALTHOUGH RISK PARTIALLY MITIGATED BY STRONG CAPITALIZATION AND CONSERVATIVE RISK CULTURE

BOK's primary credit challenge is the company's concentrations in energy and CRE lending, which explain our two notch adjustment to the Asset Risk score to a1. BOK's energy portfolio has been one of the company's better-performing portfolios over the last 20 years, which has included commodity price volatility. We attribute this strong performance to BOK's conservative underwriting practices. For example, the company uses in-house engineers as part of the underwriting process, it lends primarily on proved producing oil and gas reserves with low loan-to-values, and it revalues its borrowing base (collateral) at least twice per year. In addition, BOK stress tests its energy portfolio to oil and gas prices below current levels.

Despite BOK's good track record, the current review for downgrade primarily reflects the bank's energy-lending concentration and our expectation that comparatively low oil prices will continue to undermine the quality of the energy portfolio. We forecast oil prices will remain depressed for some time and that credit risks will increase for even some of the most conservatively underwritten energy-related loans. The review for downgrade also incorporates BOK's significant operations in Oklahoma and Texas, two states in which the energy sector contributes more to the local economy than the national average, exposing the bank to deterioration in its non-energy loan portfolios. Nonetheless, BOK's capital position continues to be a credit strength and is a key element supporting BOK's creditworthiness. At year end, BOK's common equity Tier 1 ratio was 12.1%.

GOOD, CONSISTENT PROFITABILITY SUPPORTED BY LOW CREDIT COSTS, SOUND OPERATING EFFICIENCY, AND A DIVERSIFIED REVENUE MIX

Despite a net interest margin below 3%, BOK's profitability has been consistently good because of low credit costs, sound operating efficiency, and healthy fee-based revenue. BOK's relatively low margin is a function of the company's large AFS securities portfolio and its loan mix, which is skewed towards floating-rate commercial and industrial (C&I) loans that are tied to short-term rates. However, the margin weakness is offset by BOK's low credit costs. The company's net charge-offs are extremely low today and remained relatively low throughout the credit crisis. BOK has sound operating efficiency and boasts a good mix of fee-based revenue, with total fees and commissions accounting for about 50% of total net revenue in 2015. We expect pre-provision profitability to remain under pressure given still-low short-term rates and the competitive lending environment, which constrains BOK's ability to prudently grow the commercial loan portfolio.

AMPLE LIQUIDITY/FUNDING PROFILE THAT BENEFITS FROM BOK'S POSITION AS THE TOP DEPOSIT-TAKER IN OKLAHOMA

BOK's strong deposit market share in Oklahoma underpins its funding/liquidity profile. According to FDIC data as of 30 June 2015, over half of BOK's deposits are located in Oklahoma, where the bank enjoys a strong brand name and has a leading deposit market share of approximately 15%, about twice that of the next bank. In the state's two largest markets, Tulsa and Oklahoma City, BOK ranks first in each. BOK's strong presence in these markets helps support the bank's healthy funding profile, in which core deposits comfortably fund the entire loan portfolio. BOK's core deposits are well in excess of its loans.

LARGE, THOUGH SHRINKING, AFS SECURITIES PORTFOLIO EXPOSES BOK TO RISING LONG-TERM INTEREST RATES, BUT STRONG CORE DEPOSIT BASE OFFERS PROTECTION

BOK has a large, though declining, AFS securities portfolio that represented about 30% of total assets at year end. Approximately 70% of the portfolio is in US government agency residential mortgage-backed securities. The main purpose of this portfolio is to reduce BOK's asset sensitivity, which is a function of the company's large floating-rate commercial loan portfolio and its good core deposit base. However, the size and composition of the securities portfolio exposes BOK to greater unrealized losses when long-term interest rates rise. Nonetheless, we believe that growing unrealized securities losses would be mostly offset - in economic terms - by the increased value of

BOK's core deposits.

BOK'S BCA IS SUPPORTED BY ITS VERY STRONG- MACRO PROFILE

BOK benefits from operating in the US, which has a "Very Strong-" Macro Profile. The score reflects the US' very high degree of economic, institutional, and government financial strength with a low susceptibility to event risk. US banks' funding conditions benefit from the long-established Federal Home Loan Banking system. The US Macro Profile also incorporates the high level of consumer debt and periodic real estate asset bubbles. Additionally, the stability of the banking system is periodically undermined by aggressive underwriting as banks compete with a large, well-entrenched shadow banking system.

Data sources: Unless noted otherwise, data in this report is sourced from company reports or Moody's Banking Financial Metrics.

Notching Considerations

Loss Given Failure

We consider the US to have an Operational Resolution Regime. BOK, a regional US bank, is subject to Title I resolution. As such, we assume residual tangible common equity of 3% and losses post-failure of 13% of tangible banking assets. These are in line with our standard assumptions for US Title I banks.

We believe that BOK's deposits are likely to face very low loss given failure, due to the loss absorption provided by more junior obligations and by the volume of deposits in BOK's liability structure; hence, the long-term deposits are rated Aa2, two notches above the BCA. Furthermore, because of the comparative thinness in its debt structure at the bank, we see possible loss severity in all of its debt classes to be potentially high; hence, its issuer rating at the bank is rated A2, one notch below the BCA, similar to the A2 issuer rating at the holding company.

Counterparty Risk (CR) Assessments

Regarding CR Assessments, they are opinions of how counterparty obligations are likely to be treated if a bank fails and are distinct from debt and deposit ratings in that they (1) consider only the risk of default rather than both the likelihood of default and the expected financial loss suffered in the event of default and (2) apply to counterparty obligations and contractual commitments rather than debt or deposit instruments. The CR Assessment is an opinion of the counterparty risk related to a bank's covered bonds, contractual performance obligations (servicing), derivatives (e.g., swaps), letters of credit, guarantees and liquidity facilities.

The CR Assessment is positioned at Aa3(cr)/Prime-1(cr)

The CR Assessment, prior to government support, is positioned one notch above the Adjusted BCA of a1 based on our view that senior obligations represented by the CR Assessment will be more likely preserved than senior unsecured debt in order to minimize losses, avoid disruption of critical functions and limit contagion. Thus, in our view, these counterparty obligations should rank above senior unsecured debt at the same legal entity, but not above deposits, given the explicit depositor preference in US law.

Rating Methodology and Scorecard Factors

Our Scorecard is designed to capture, express and explain in summary form our Rating Committee's judgment. When read in conjunction with our research, a fulsome presentation of our judgment is expressed. As a result, the output of our Scorecard may materially differ from that suggested by raw data alone (though it has been calibrated to avoid the frequent need for strong divergence). The Scorecard output and the individual scores are discussed in rating committees and may be adjusted up or down to reflect conditions specific to each rated entity.

Rating Factors

BOK Financial Corporation

Macro Factors		
Weighted Macro Profile	**Very Strong -**	**100%**

Financial Profile						
Factor	**Historic Ratio**	**Macro Adjusted Score**	**Credit Trend**	**Assigned Score**	**Key driver #1**	**Key driver #2**
Solvency						
Asset Risk						
Problem Loans / Gross Loans	0.9%	aa2		a1	Long-run loss performance	Sector concentration
Capital						
TCE / RWA	12.6%	a2	←→	a1	Stress capital resilience	
Profitability						
Net Income / Tangible Assets	1.0%	a2		a2	Earnings quality	
Combined Solvency Score		a1		a1		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	13.0%	a1		a1	Deposit quality	
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	41.9%	aa2		aa3	Quality of liquid assets	Expected trend
Combined Liquidity Score		aa3		a1		

Financial Profile	**a1**

Qualitative Adjustments	**Adjustment**
Business Diversification	0
Opacity and Complexity	0
Corporate Behavior	0
Total Qualitative Adjustments	**0**

Soverign or Affiliate constraint:	Aaa
Scorecard Calculated BCA range	**aa3-a2**
Assigned BCA	**a1**
Affiliate Support notching	0
Adjusted BCA	**a1**

Instrument class	Assigned LGF Notching	Additional Notching	Preliminary Rating Assessment	Government Support	Local Currency Rating	Foreign Currency Rating
Counterparty Risk Assessment	0	0	a1 (cr)	0	A1	--
Deposits	2	0	aa2	0	Aa2	Aa2
Dated subordinated bank debt	-1	0	a2	0	A2	A2

- Where dashes are shown for a particular factor (or sub-factor), the score is based on non-public information.