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Research Bulletin

North Dakota Bank Performance Forecast

by David T. Flynn, Ph.D.

Introduction

Banking and financial services issues dominate many business headlines lately, due in part or in full to concerns about mortgage credit quality and the potential risks to overall economic growth in the United States. This *Research Bulletin* forecasts performance of the banking sector in North Dakota using data gathered from the Federal Deposit Insurance Corporation's (FDIC) *Statistics on Depository Institutions* database. The data are available on a quarterly basis from March of 2002 through June of 2007 with year-end data available for earlier years.

The forecast shows the North Dakota banking sector, while strong currently, is likely to see robust improvement over the next six quarters due to a strong overall banking environment. The Federal Reserve rate cut in fact only strengthens the trends already inherent in the state banking sector.

The model forecasts out six quarters into the future and starts with the current quarter, which ends September 30, 2007 (Q3-2007). It is our expectation that Federal Reserve policy changes will exert little substantive impact on performance measures for this quarter, but will likely alter the forecast for future quarters necessitating some adjustment to the results. These are included in each section as a narrative.

At the end we conclude with an assessment of overall performance and the overall outlook based on the forecast models.

Definitions for the different performance measures are included at the end of the report. These are also taken from the FDIC's *Statistics on Depository Institutions* database. It should be noted that there exists the potential for discrepancies between FDIC's individual data reporting and their aggregate reports for state level groups. All data from the FDIC are publicly available on the Web at http://www.fdic.gov .

Table 1. Forecast values for key North Dakota bank performance measures .

Date	ROE (%)	ROA (%)	NIM (%)	NCO2L (%)	NCL2L(%)	EFFR (%)
Q3-2007	15.80	1.46	3.21	0.65	0.67	66.88
Q4-2007	12.15	1.06	3.29	0.52	0.78	65.27
Q1-2008	10.75	1.02	3.25	0.43	0.96	67.80
Q2-2008	14.74	1.51	3.20	0.54	1.077	66.25
Q3-2008	14.67	1.28	3.04	0.57	1.16	61.10
Q4-2008	10.60	0.85	2.91	0.65	1.09	53.54

Abbreviations

ROE = Return on Equity
ROA = Return on Assets
NIM = Net interest margin
NCO2L = Net charge-offs to loans
NCL2L = Noncurrent loans to loans
EFFR = Efficiency Ratio

General Model Performance

At the end of this report you will find graphs displaying the actual data and the predicted values from the forecast model developed by BBER for the data series in Table 1 over several quarters ranging from Q4 of 2002 to Q2 of 2007. With very few exceptions, the forecast model does extremely well at predicting turning points in the data series as well as the actual value of the data series. When differences do exist between the actual and predicted values the model learns and the differences do not persist. The accuracy of our models gives us a high degree of confidence in their predictive ability, assuming of course that conditions remain stable. As the Federal Reserve's interest rate change indicates, this is almost never the case. BBER will continue to monitor these variables over time to make sure our model remains as accurate as possible.

Return on Equity (ROE)

Table 1 shows the forecast for ROE fluctuates up and down over the next six quarters with a high value of 15.8% expected in Q3 of 2007 and a low of just over 10% forecast for Q4 of 2008.

Despite the variability in these numbers there is reason to believe the overall forecast is stronger than indicated. Farm policy is still being debated while most farm products are doing quite well. This translates into good times for agriculture lenders, usually. There is also some reason to cheer due to the current changes in monetary policy. Our model indicates that a reduction in the fed funds rate at this time would lead to small decreases in ROE over the next few quarters, but generate a significantly larger increase in ROE starting at the beginning of next year. If the current rate environment remains in place for a significant period of time there is an excellent chance that our forecast in fact represents a lower bound on the performance of banks, and would require us to raise our forecast significantly. Given these conditions and the structure of our forecasting model we give an upward bias to this indicator.

Return on Assets (ROA)

Table 1 shows that ROA is forecast to continue an overall downward drift with some fluctuations around that trend over the next six quarters. The range of values extends from a high of 1.51% in Q2 of 2008 to a low of 0.85% in Q4 of 2008. Obviously, the prediction error grows with the forecast horizon, though our model is once again very accurate within the sample period.

The changed interest rate environment will once again require some discussion of the strength of the forecast. The overall effect of the interest rate change should be to increase the return on assets for the North Dakota banking sector, likely as early as Q4 of 2007. The model also indicates some potential reductions early next year, but once again the aggregate change as a result of a lower federal funds rate should be an increase in ROA. Once again the situation indicates that our forecast values can be thought of as a lower bound value, giving an upward bias to the results.

Net interest margin (NIM)

NIM for North Dakota banks is under pressure (evident from Figure 3), much as it is in the banking sector at large. Bank's face increased competition for sources of funds as well as competition for assets in the current environment creating significant downward pressure on their NIM performance. Over the sample period NIM declined from approximately 4.5% to roughly 3.2%. The forecast results indicate NIM will continue to decrease unabated, though once again the change in monetary policy requires a modification of these results.

The reduction in interest rates has an unambiguous effect on North Dakota banks' NIM, it will increase. The results should be visible in the data for Q4 of 2007 and continue through next year, depending on how long the new policy regime endures. This should be a welcome reversal of trend for banks as the competitive pressures of the last decade have forced many institutions to diversify service offerings in pursuit of alternative income sources. Now such efforts could reap large rewards as new services are in place, but older ones can be more profitable.

Net charge-offs to loans (NCO2L)

The forecast indicates a general decline in NCO2L, a rough measure of loan quality, over the next six quarters with some fluctuation around that trend. 0.65% is the high end of our forecast range and the low end is 0.43%. These numbers indicate an improving situation as ND banks will not be charging off as many loans as a share of the total loan portfolio.

The outlook can be broken into near term and long term. The near term outlook, given a decline in rates, is for this measure to increase, because banks typically use declining rates as an opportunity to get their balance sheets in order. The long term outlook is for NCO2L to fall. Credit terms are easier and the bank loan customers have an easier time with repaying at lower rates so fewer loans get into trouble. As a result by early next year, given the current Federal Reserve policy action, the model predicts further declines in NCO2L and the forecast is likely best viewed as an upper bound.

Noncurrent loans to loans (NCL2L)

Noncurrent loans, another rough measure of loan quality, are well under 1% of overall loans for North Dakota banks.

The forecast indicates a the expectation of an increase over the next six quarters with some fluctuation around that trend. This would not be surprising given the low current values for this ratio though there is reason to expect our forecast not to be met.

The overall effect of an interest rate decline is expected to be a decline in NCL2L which should be evident in the data starting early next year. There may be some increases in the near term though it is highly unlikely that the effects would be a large increase in NCL2L, nor would the increase be of any significant duration.

Efficiency Ratio (EFFR)

The last measure of bank performance we examine is the efficiency ratio (EFFR). The general trend (from Figure 6) has been an increase in EFFR in the last few years, evident in the data and the model predictions.

The forecast indicates this measure is likely peaking in ND at this time, a high of 67.8% reached in Q1 of 2007 followed by significant declines in the following quarters, below 55% by year-end 2008.

Current Federal Reserve policy actions reinforce this view as the model indicates a positive association between Fed rate policy and EFFR in North Dakota. As a result of declining rates the model predicts declining EFFR as well.

Conclusion

The included performance measures indicate a strong banking sector in North Dakota with some room for improvement. The forecast models indicate, almost uniformly, robust strengthening of all performance measures over the next six quarters. When we factor in recent Federal Reserve rate cuts, expectations are that all measures would exhibit further improvement and the conclusion one is left with is for a strong performance from North Dakota banks over the next year.

The recent credit concerns from the broader financial market do not appear to impact the performance of banks in North Dakota at this time. The longer-term risk is that inflation concerns resulting from the Fed's current 50-basis point cut dominate the impact of the relaxed rate environment. Such a situation would likely require rate increases from the Fed next year and could exert significant negative pressure on the banking sector nationwide and in North Dakota.

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Definitions (from FDIC *Statistics on Depository Institutions* database):
Return on equity (ROE) is annualized net income as a percent of average equity on a consolidated basis.

Return on assets (ROA) is net income after taxes and extraordinary items (annualized) as a percent of average total assets.

Net interest margin (NIM) is total interest income less total interest expense (annualized) as a percent of average earning assets.

Net charge-offs to loans (NCO2L) can be calculated gross loan and lease financing receivable charge-offs, less gross recoveries, (annualized) as a percent of average total loans and lease financing receivables.

Noncurrent loans to loans (NCL2L) is total noncurrent loans and leases, Loans and leases 90 days or more past due plus loans in nonaccrual status, as a percent of gross loans and leases.

Efficiency ratio (EFFR) is noninterest expense, less the amortization expense of intangible assets, as a percent of the sum of net interest income and noninterest income.

Figure 1. Return on equity for ND banks.

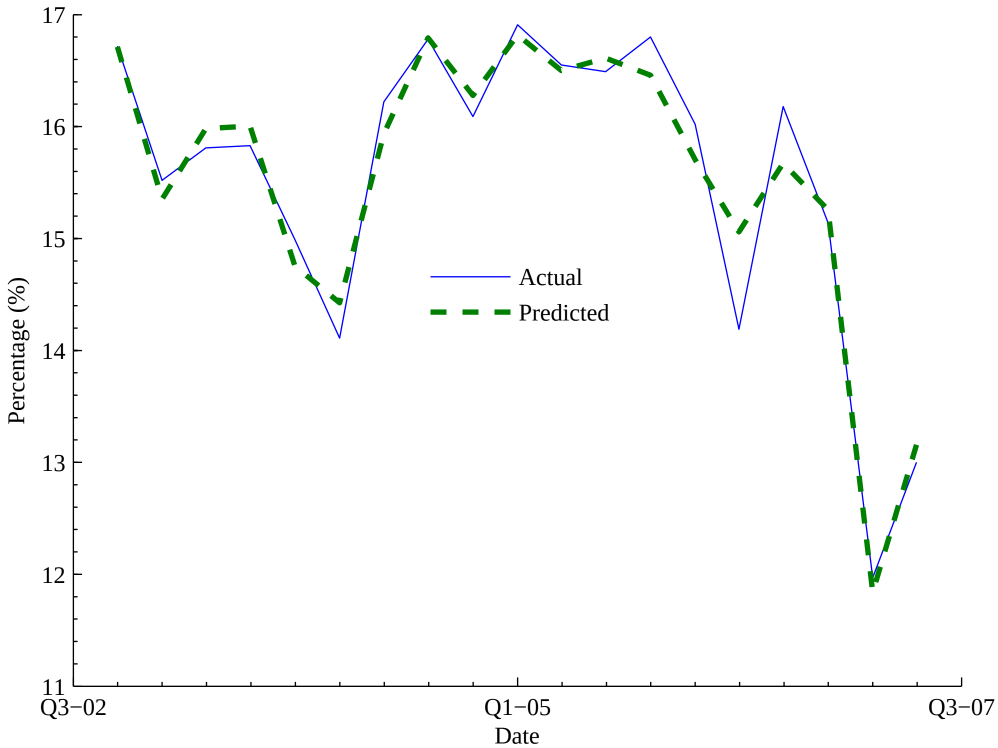

Figure 2. Return on assets for ND banks.

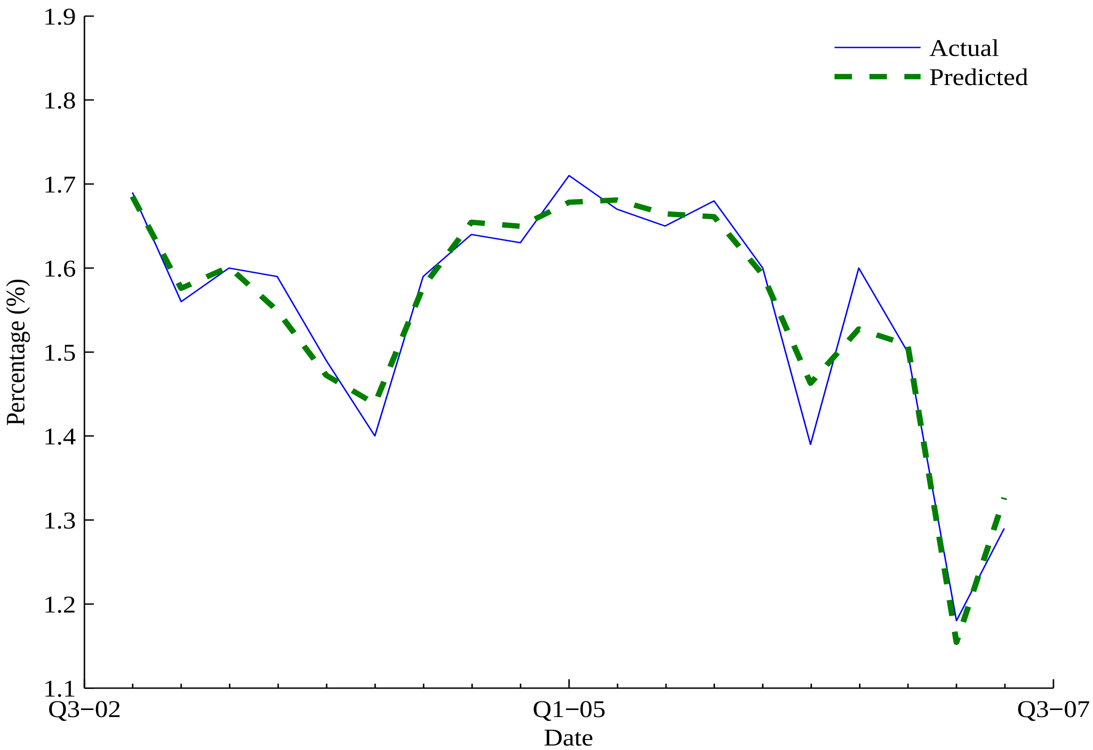

Figure 3. Net interest margin for ND banks.

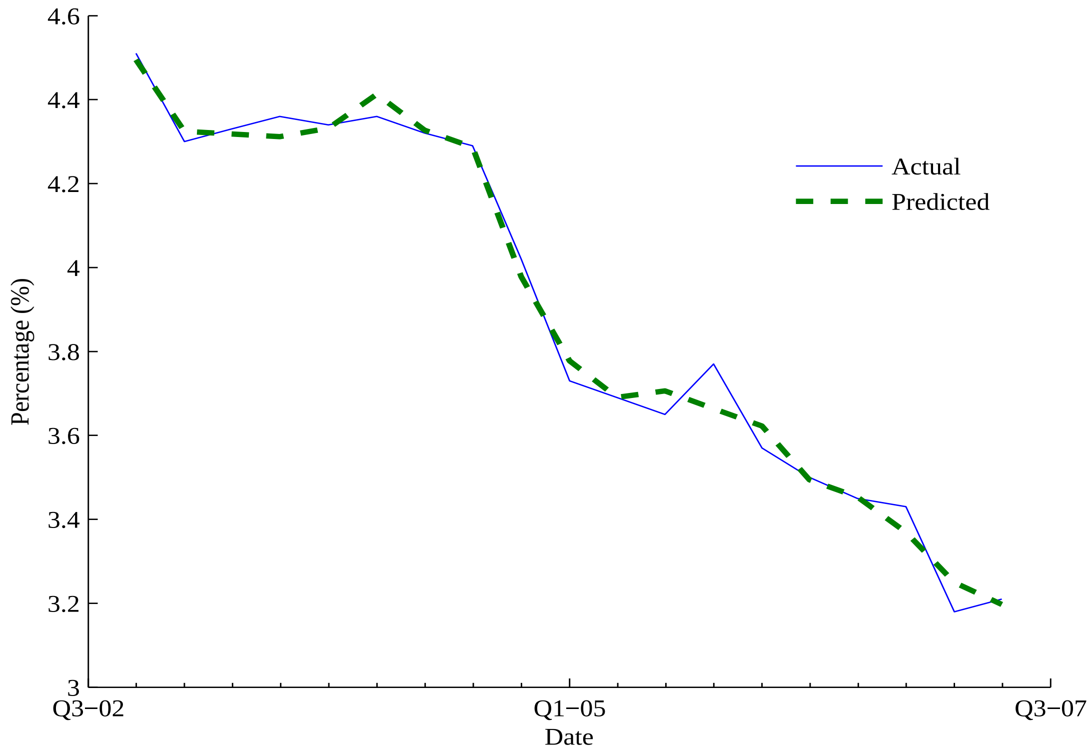

Figure 4. Net charge offs to loans for ND banks.

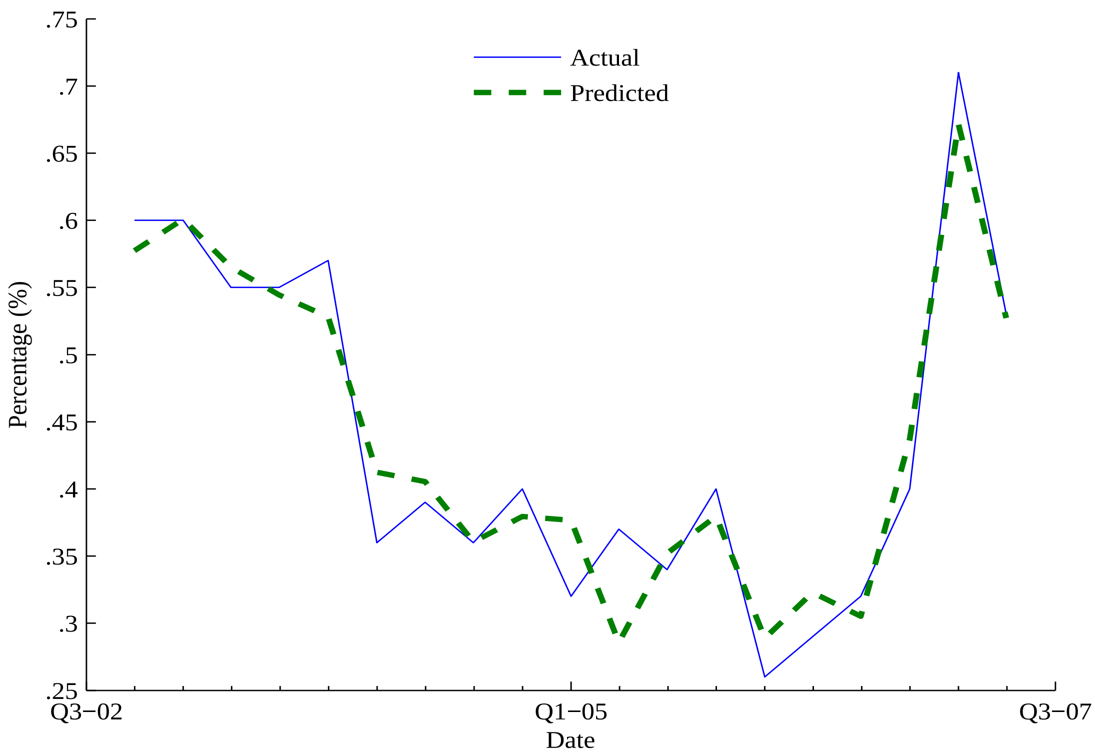

Figure 5. Noncurrent loans to loans for ND banks.

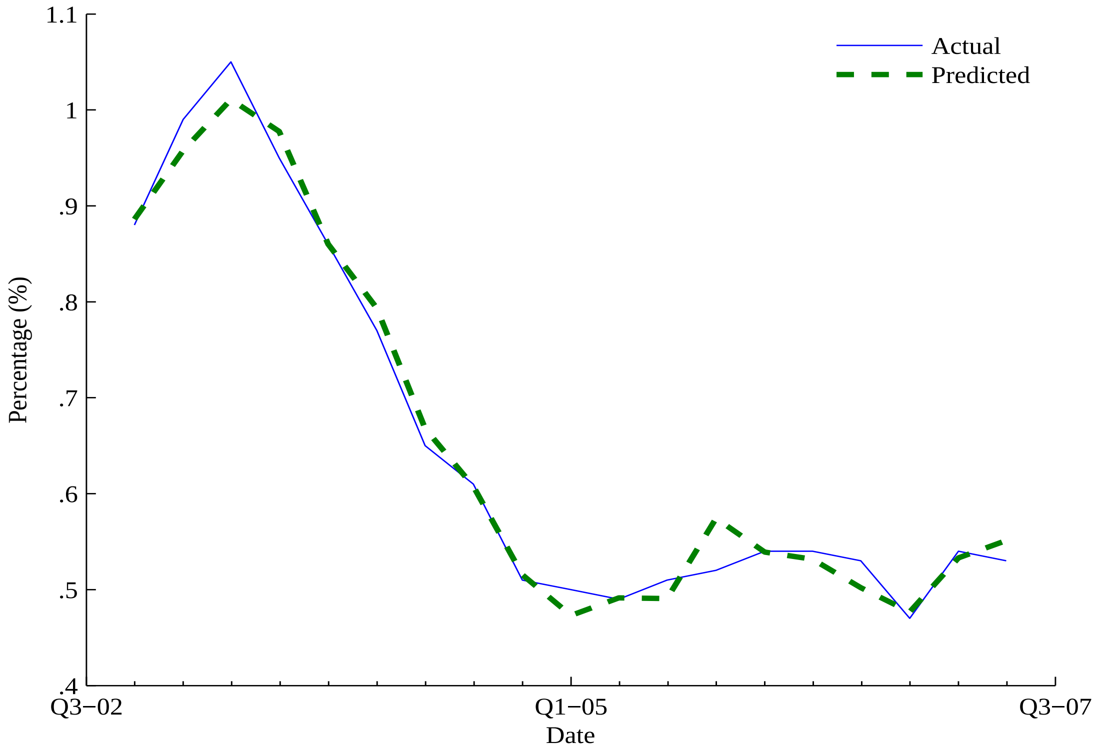

Figure 6. Efficiency ratio for ND banks.