Case Study: Asset and Liability Management at Cumberland Valley National Bank & Trust

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Asset and liability management is the financial risk management practiced at financial institutions. The goal of asset and liability management is to maximize the risk-adjusted returns to shareholders over the long run. Credit risk is a very important risk category in banking because bankers usually manage credit risk on daily basis. How credit administration and asset and liability management should be coordinated to insure proper returns to shareholders is a critical issue to examine. This issue involves both the loan origination process and loan portfolio diversification. The loan origination process establishes policies and procedures to guide lenders within a banking atmosphere. These policies and procedures outline the type of loans and borrowers a bank wants to attract and those loans and borrowers a bank wants to avoid. Also among these guidelines are checks and balances to ensure compliance and accuracy. Loan portfolio diversification is important for the financial welfare of banks and for stability purposes. The goal of this paper is to identify how poor loan origination processes and poorly managed loan portfolios can negatively affect bank performance. The impact of such negative implications can result in configurations that stray from the norm, or peer group average. This paper also looks at one bank that recognized their difficulties and the actions they took to turn their company around.

Background

Cumberland Valley National Bank & Trust (CVNB) opened on October 1, 1904, with capital stock of $15,000. Since then, they have developed into one of the largest locally owned banks in Southeastern Kentucky. CVNB currently has 19 locations, 12 full-service ATMs, and several cash-dispensing ATMs located throughout Southeastern Kentucky. The current Board of Directors consists of Chairman Elmo Lee Greer, Rex Greer, Jerry Greer, CEO James Tatum, COO Tim Edwards, Ross Halbleib, G.W. Griffin, and Winston Griffin. As of 12/21/05, assets totaled $436,236,000 and liabilities totaled $403,067,000. Total equity at this time was $33,169,000.

In 2001 and 2002, the federal examiners ridiculed CVNB for their poor underwriting methods and their poorly managed loan portfolio. Not only were they ridiculed; their net income was negative. In 2001, CVNB had a net income of -$244,000. In 2002, the net income was -$1,101,000. These figures were extremely poor compared to their peer average. In 2001, net income was -0.77% of CVNB's average total equity, which was 14% less than peer at 13.23%. In 2002, the net income of the average total equity for CVNB declined 2.86% from 2001. The peer average for 2002 was 14.03%, which was 17.66% more than CVNB's net income.

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The net income was not the only thing affected by the poor underwriting and poorly managed loan portfolio. Dividends were drastically affected. In 2001, dividends were $881,000. Then in 2002, and again in 2003, and 2004 there were no dividends. Throughout these four years, the peer average ranged from 5.28% of the total equity to 5.97% of the total equity.

In 2001 and 2002, CVNB was making loans to any and everyone that walked in the door. These poor underwriting techniques can be seen in the net loss to average total loans and leases. In 2001, the net loss to average total loans and leases was 1.80%, and in 2002 it was 1.78%. This was well beyond the average for peer group 3 that consists of 895 banks with assets ranging from $300 million to $1 billion. The average for 2001 was 0.26% and it was 0.24% for 2002.

General Guidelines for Loan Origination

Several aspects must be considered before a loan request can be accepted. Issues such as income, collateral, credit scores, and debt all must be analyzed before a credit decision can be made. Different banks will all have different guidelines for what these standards must be. Different types of loans will also have varying standards.

Typically, the main concern for any loan request is how the loan will be repaid. For instance, borrowers may plan to repay the loan with wages received from an employer or rents received from a tenant. In addition, banks are concerned with how borrowers will repay debt with other creditors. For these two reasons, banks need to verify borrowers' income. Verification of income enables lenders to determine an available amount of income to service debt. In addition, credit reports and financial statements are usually required. Credit reports provide lenders with borrowers' credit history. Information such as credit card debts, fraud alerts, loans, leases, and bankruptcies can be found on credit reports. Credit reports also indicate the timeliness of borrowers to repay their debts. Lenders may proceed with much more caution if credit reports show that borrowers have been late on 3 of his last 4 payments for a loan at another bank. Credit report agencies also provide a credit rating based on all these factors. A high rating is a good indicator that borrowers can be trusted to repay their debts. On the other hand, a low score indicates that borrowers have had trouble in the past and may not be able to repay their debts.

Financial statements provide lenders with borrowers' asset and liability numbers. Given this information, a debt to worth ratio (D/W), defined as total debt divided by total equity, can be calculated. A D/W below 1 is a good indicator of financial stability and a D/W above 1 can be a reason for financial concern. After gathering all borrowers' income and debt information, a debt to income ratio can be calculated. Most banks set guidelines for what is an acceptable debt to income ratio. Usually banks prefer a debt to income ratio below 50%.

Collateral is also an important factor in a credit decision. The guideline to evaluate the collateral value is consistent no matter what type of the loan request is. For instance, real estate and vehicles retain their values over time much differently. Loans can be secured with land, commercial buildings, residences, vehicles, livestock, crops, assets, equipment, inventory, deposit accounts, accounts receivable, stocks, and so on. Once a credible valuation on the collateral is conducted, a loan to value ratio can be determined.

A combination of all these variables determines the worthiness of a credit decision. At times the strength of one variable can mitigate the weakness of another, but skepticism and caution

should be used in these instances. When strong loan origination practices are not in place, such as demonstrated at CVNB before 2001, problems and financial difficulties start to appear.

Transformation at Cumberland Valley National Bank & Trust

In 2001, CVNB turned itself up side down in order to compensate for the poor performance. New management was hired, the risk management department was re-structured, and loan underwriting was re-examined. The drastic changes over the past four years appear to be working. Their net income as of 9/30/2005 has increased to $997,000. Dividends have also increased to $224,000. Many factors such as policy changes, personnel changes, stricter loan guidelines, professional trainings, updated software, and procedure changes have contributed to this improvement, but the area that has experienced the most improvement is the loan portfolio.

The cause leading to CVNB's trouble is not due to the inexistence of the guidelines but due to the fact strict procedures were not in place to ensure that the proper guidelines were followed. CVNB's habit of giving loans to everyone greatly affected the quality of loans in their portfolio. Moving forward, they were left with no choice but to compensate their behavior with tight guidelines and strict underwriting. This also meant a reduction in the loan volume.

Checks and balances were developed to ensure the quality of loans that were being originated, which consisted of a pre and post closing review. Throughout these reviews selected individuals, outside the loan decision process, would make sure that the proper guidelines were followed. The review conducted prior to closing would report any findings to management that strayed from the norm. Then it was management's responsibility to decide whether the loan was still desirable or not. The post closing review checked for any items that may have previously been missed, but more importantly reviewed the decisions of management and reported their findings to the Board of Directors. This behavior has reflected positively on the bank, as seen in the financial statements, but they are still far from their peer group. It could possibly take several more years before CVNB reaches their peer group average.

After analyzing the loan portfolio over the past few years, definite changes can be seen. Looking at the total assets of CVNB, they have gradually decreased since 2002. In 2002, total assets were $470,505,000. Then in 2003 they decreased to $460,601,000. Currently, they have decreased a total of $36,092,000 making them $434,413,000. This decrease was mainly in part to the total decrease in the gross number of loans and leases, which was a direct result of their new policies and guidelines. Table I shows a break down of the loans and leases from 2001 to 2005.

The gross loans and leases have declined approximately $88,096,000 over the past five years. The loan volume declined steadily until 2005. In the year 2005 we see a slight increase. The increase in the loan volume is due to the re-built confidence entrusted in the restructured policies and procedures. The change in policies and procedures affected all types of loans. General categories, such as cashflows and credit scores, are applied to all loan types. However, each loan type also has its specific guidelines. For example, the loan-to-value (LTV) guidelines are based specifically on the type of collateral. Another example would be consumer loans versus business loans. Business loans require more financial documentation than consumer loans. CVNB focused their loan decisions more on actual information, such as tax return, than reputation and word of mouth. Since the quality of loans had increased drastically, CVNB felt comfortable to aggressively pursuing new market areas again.

Observations can also be seen throughout the individual loan types. The real estate loans decreased steadily until 2005, where a slight increase can be observed. The same pattern can also be seen in the commercial loans. The individual loan area experienced the most drastic change. Loans decreased from $54,493,000 to $14,499,000, for a total decrease of $39,994,000. This is approximately a 73% decrease. Agricultural loans have nearly decreased by half. The domestic loans decreased by almost 60%. Overall, decreases can be observed in each loan category.

In addition to decreasing their loan volume to improve the quality of loans, CVNB altered their loan mixture to resemble other banks their size. CVNB still has a long way to go in comparison to the peer average, but gigantic steps have been made over the past five years.

Real estate loans make up the largest portion of the loan portfolio for CVNB. On 9/30/2005 real estate loans made up 80.08% of the total loan volume. This category included: construction and development loans, one-to-four family residential loans, farmland loans, multi-family loans, and non-farm non-residential loans. The following graphs break down the real estate loans into these categories and compares CVNB to their peer average.

Figure I demonstrates the construction and development portion of the loan portfolio. CVNB is well below the peer average in this area. However, they have significantly closed the gap over the past five years. On 12/31/2001 the gap was 3.58%, and now the gap is 1.4%.

Figure II demonstrates the one-to-four family residential loans. CVNB is considerably above the norm in this loan area. The gap has slightly closed over the past few years. The most notable change has happened over the past year. From the end of 2004 to the current quarter in 2005, the gap closed 2.6%.

Figure III demonstrates the farmland portion of the real estate loans. The farmland loans have taken a completely different stance over the past five years. In 2002, CVNB was below the norm, and they are currently above the norm. This area of the real estate loans appears to be straying from the norm. From the end of 2004 to the current quarter in 2005, the gap has expanded .21%.

Figure IV shows the multi-family loans. CVNB has performed notably below the average over the past five years. However, the gap has closed considerably. The bank appears to be in the right transition. Currently, CVNB only varies .49% away from peer.

Figure V shows the non-farm non-residential portion of the real estate loans. The bank has historically been below the norm, but the trend is gradually moving closer and closer towards the norm. In 2001, the bank varied 10.69%. This percentage has nearly been cut in half to 5.57%.

Overall, the bank is making progress in the real estate portion of loans. There are still a few areas that need improvement, but CVNB appears to be closing the gap between themselves and peer. The only area moving away from peer seems to be farmland. This area certainly needs attention. In addition, the one-to-four family residential loans are significantly different than peer.

Other areas, such as agricultural loans, commercial and industrial loans, and loans to individuals make up the remaining 19.92% of the loan portfolio. These areas have also made progress in narrowing the gap between CVNB and the peer group. The agricultural loans have been below peer for the past five years. However, from 2001 to the current quarter the gap has closed from .82% to .71%, or approximately 13.5%. The commercial and industrial loan area has also been considerably lower than the peer average. In 2001, the gap was 4.4% and now the gap is 2.31%. The gap has almost been cut in half. The portion of loans to individuals has consistently been above peer. This area has shown the most improvement over the past five years. In 2001, the gap was 8.23%. In 2002 the gap was 6.11%. In 2003, it narrowed to 3.6%. In 2004, the gap was cut in half to 1.05%. At the current quarter the difference is 0.82%. Over the past five years the gap has closed approximately 90%. This is a drastic improvement for CVNB. The bank is striving to meet peer, and the changes and procedures put in place after the 2001 and 2002 dilemma appears to be working. Overall, CVNB is making positive progress.

The positive progress throughout CVNB can also be seen in the non-current loans and leases. The loans and leases 90 days and over past due have significantly dropped. The non-accrual loans and leases have also made considerable strides.

Figure VI shows the portion of the non-current loans and leases 90 days and over past due. A drastic improvement has occurred over the past five years. In 2001, the 90 days and over past due were at $2,203,000. Now, they have shrunk to $11,000. This is a 99.5% decrease.

Figure VII demonstrates the portion of the non-current loans and leases that are considered non-accrual. As seen by the graph, non-accruals reached their peak in 2002 at $14,073,000. Since 2002, they have been more than cut in half. As of 9/30/05, the non-accruals had decreased to $5,899,000, which is a 58% decrease.

Figure VIII shows the total non-current loans and leases. They too reached their peak in 2002, and have since drastically reduced. They currently stand at $1,315,000, which is down $9,630,000 from 2002. This is approximately an 88% decrease.

From the progress noted in the non-current loans and leases, it is apparent that the quality of loans has drastically improved. CVNB is on the right path to recovery. This progress can also be observed in the net loss to average total loans and leases in Figure IX.

As stated above, the net loss to average total loans and leases in 2001 and 2002 was well above the peer average. However, major improvements can be observed in 2003, 2004, and 2005. The following graph depicts this progress.

The net loss to average total loans and leases has decreased approximately 91%. Currently, CVNB is just 0.05% above peer. This is a huge improvement from 2001, when they were 1.54% above peer.

When the net loss to average total loans and leases is broken down by type of loan, the most drastic improvements can be seen in construction loans. CVNB went from 1.10% in 2001 to 0.12% in 2005, which is approximately an 89% decrease. Notable changes can also be seen in

real estate loans and commercial and industrial loans. Real estate loans decreased from 0.60% to 0.11% over the past five years. Commercial and industrial loans went from 3.89% in 2001 to 0.77% in 2005, which is approximately an 80% decrease.

Conclusion

Loan portfolio diversification is a key concept for the financial stability and profitability of a bank. Focusing on the loan portfolio, CVNB altered their loan portfolio to be more consistent with their peer group. Some types of loans are generally more risky than others; thereby straying from the norm posed a significant risk.

Loan origination practices are also an important component of the financial welfare of a bank. Poor underwriting guidelines and the lack of a review process result in poorly performing loans. This is an extremely sensitive area of banking, since the effects of such guidelines may not be observable for some time. In addition, altering such behavior can be an exhausting process.

CVNB's weaknesses in loan concentration, combined with their poor loan origination practices led to the troubling performance demonstrated in 2001. Altering the type and quality of loan performance has drastically influenced the progress of CVNB. Improvements can be seen through the decrease in non-current loans and leases and the positive alterations in the loan mixture to meet peer.

Providing detailed loan origination guidelines and procedures, while ensuring compliance, can drastically increase the profitability of a bank. Managing and diversifying the loan portfolio will also aid in the financial welfare of a bank, by minimizing risk. These are two very important aspects of banking that cannot be overlooked.

Table I. Dollar Amount (in thousands) Breakdown of the Loans and Leases from 2001 to 2005

Loan Type	12/31/2001	12/31/2002	12/31/2003	12/31/2004	9/30/2005
Real Estate	$234,900	$222,714	$201,108	$197,941	$206,070
Commercial	$50,570	$36,205	$38,454	$32,265	$32,935
Individual	$54,493	$36,520	$21,739	$15,701	$14,499
Agricultural	$1,626	$1,626	$1,306	$1,514	$891
Domestic	$1,529	$934	$533	$473	$627
Total	$343,118	$297,999	$263,894	$247,894	$255,022

Figure I. Percentage of Construction and Development Loan in the Overall Loan Portfolio

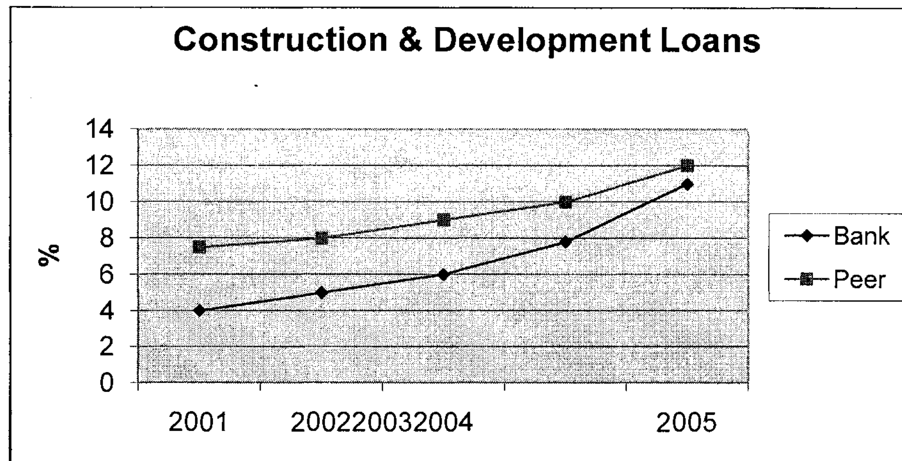

Figure II. Percentages of 1-4 Family Residential Loan in the Overall Loan Portfolio

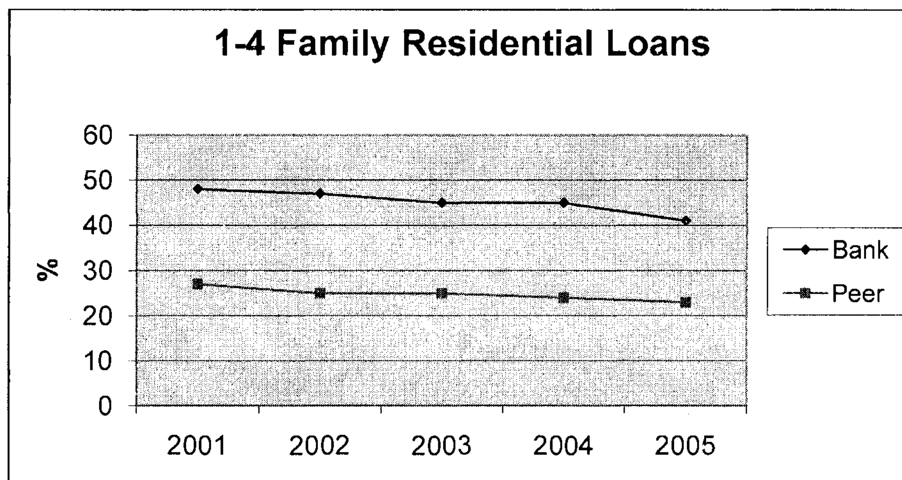

Figure III. Percentages of Farmland Loan in the Overall Loan Portfolio

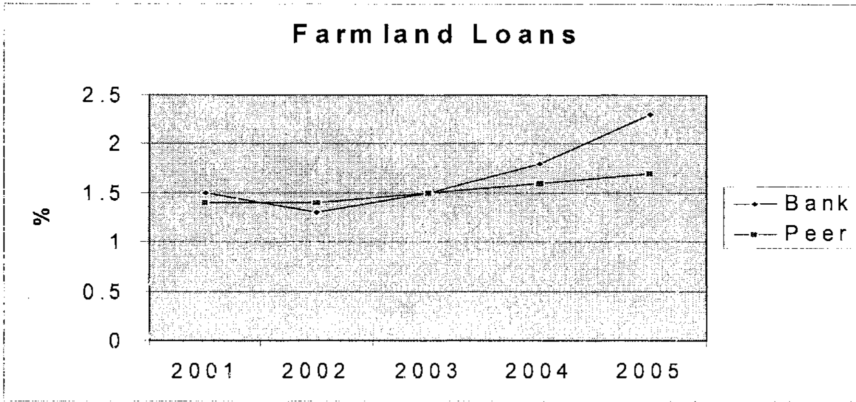

Figure IV. Percentages of Multi-Family Residential Loan in the Overall Loan Portfolio

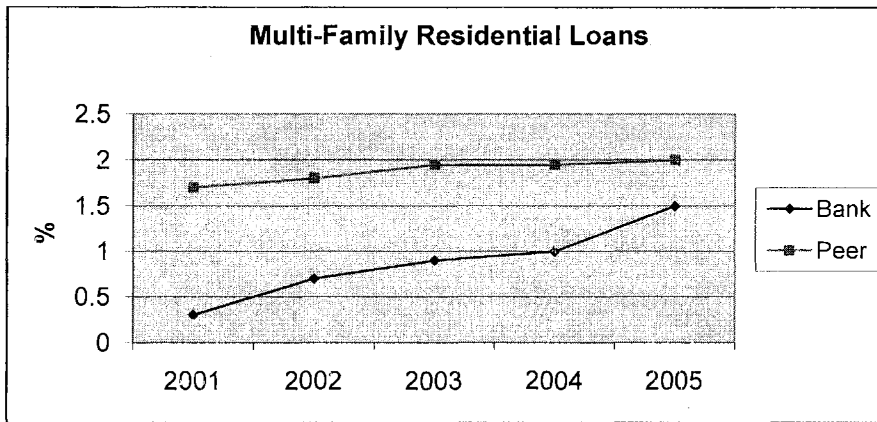

Figure V. Percentages of Non-Farm and Non-Residential Loan in the Overall Loan Portfolio

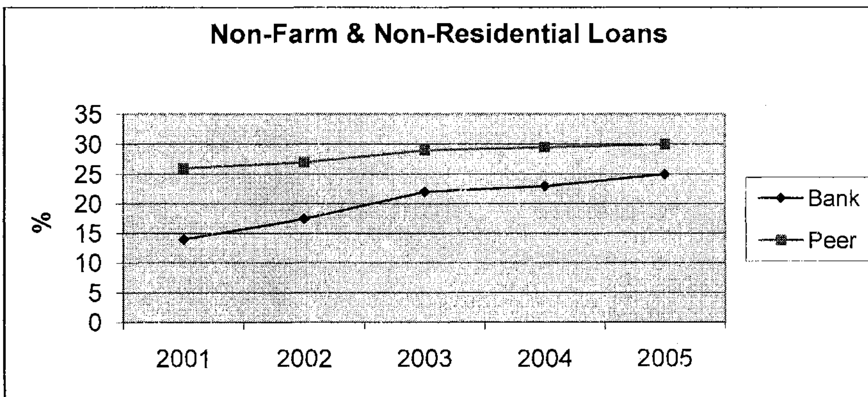

Figure VI. Dollar Amounts of the Non-Current Loans and Leases that are 90 Days and Over Past Due

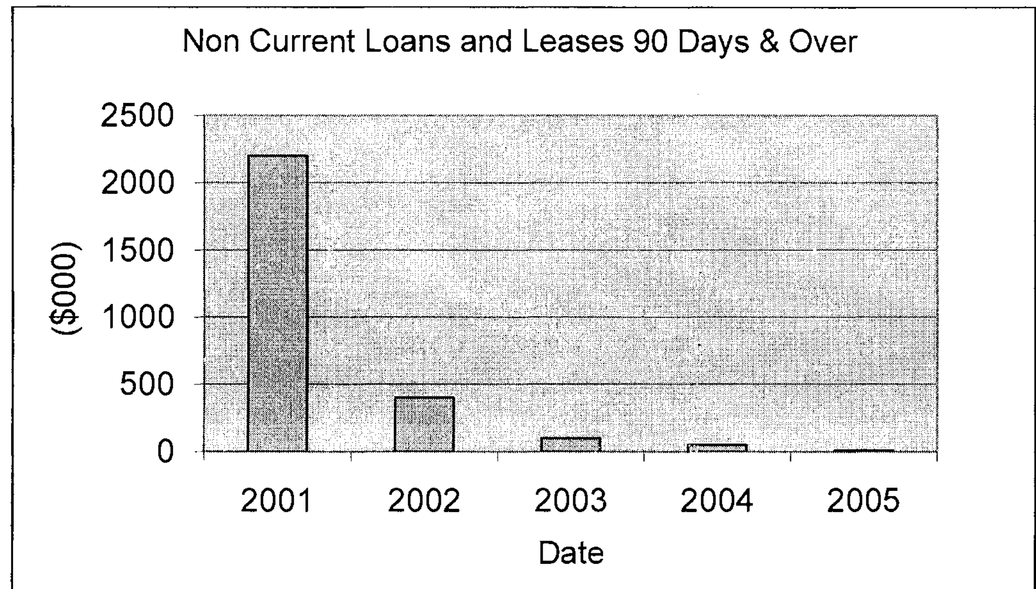

Figure VII. Dollar Amounts of the Non-Current Loans and Leases that are Considered Non-Accrual

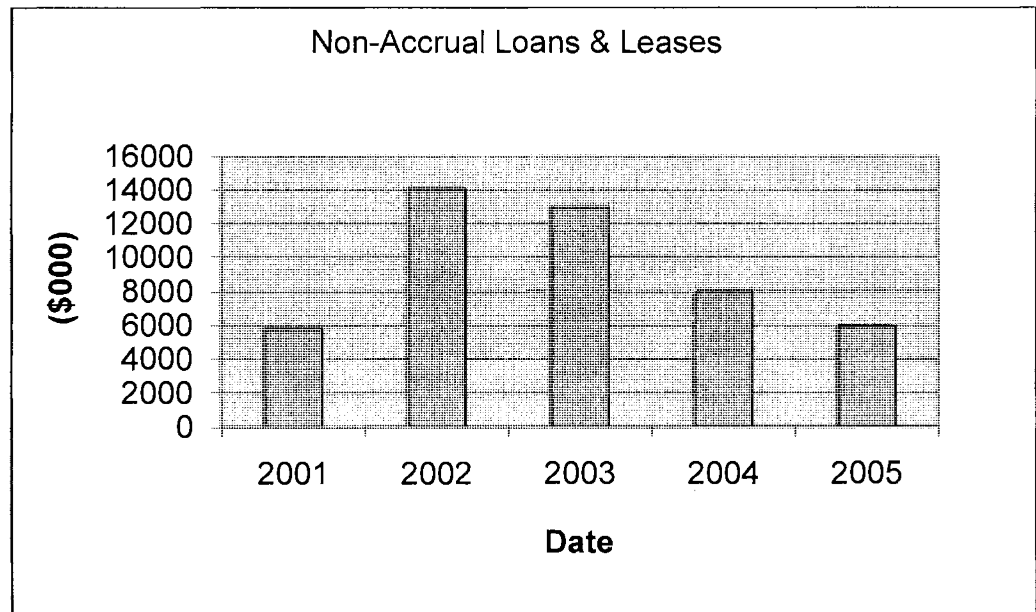

Figure VIII. Dollar Amounts of Total Non-Current Loans and Leases

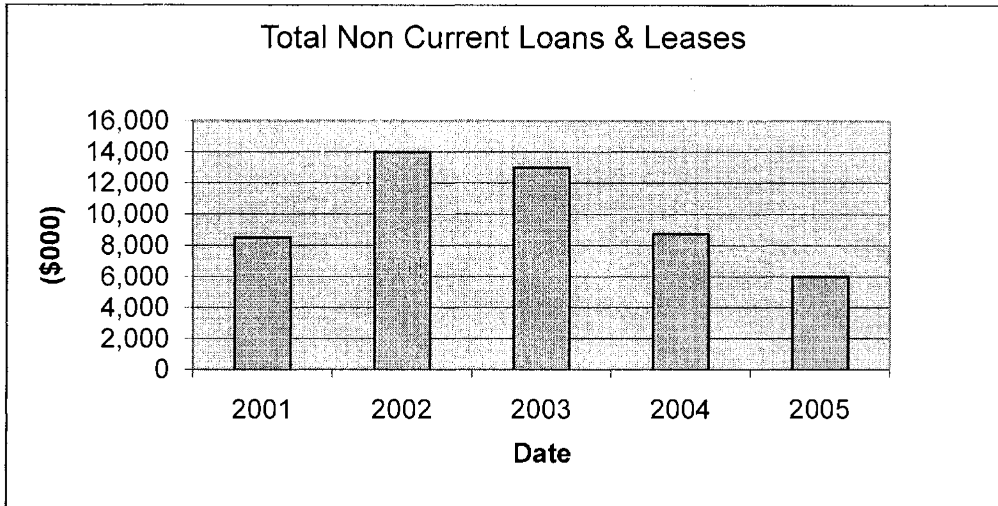

Figure IX. Ratios between Net Loan Losses to Average Total Loans and Leases: CVNB versus Peer