Banks for Beginners

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A Note From the Author: I'm not a financial analyst or CFA. I'm an investor and a volunteer NAIC educator. Neither knowledgeable nor confident in bank stock analysis, I felt there were some good investment opportunities passing me by.

With this motivation to learn more about analyzing banks, I did some research and put together a program on how to analyze bank stocks for the Southeastern Michigan NAIC Computer Group. My goal was to make analyzing banks understandable for the average NAIC investor and to present an analysis process that would be easy for most investors to follow. This article presents a "simplified" view of bank analysis from an investor's point of view.

Bank stocks are often avoided by NAIC investors because they don't feel confident with the analysis process. Until recently I fell into this category.

But many banks qualify as high-quality growth companies, and I believe most investors should have a bank stock or two in a well-diversified portfolio. Unfortunately,

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The three-story crystal palace conservatory in Faust Park in St. Louis, host of CompuFest 2004, is filled with lush tropical plantings that provide a natural environment for more than 2,000 colorful butterflies living there in free flight. For more information on CompuFest, see the schedule and registration form inside this issue or go to www.compufest2004.com.

many NAIC investors shy away from financial stocks because they just don't understand how to analyze them.

Financial stock analysis isn't really difficult — just different. And it's really not all that different. I find more similarities than differences when comparing the analysis of a financial firm with that of a manufacturing company.

How a Bank Makes Money
To understand the banking industry, it's helpful to understand how a bank makes

money. The banking industry uses a somewhat different language from that of manufacturing or industrial companies, so it's necessary to learn a few new terms.

A bank's main product is money. Banks borrow money from their depositors, paying them the lowest possible interest rate that competition and current market conditions will allow. This is an example of what bankers call **interest expense.**

Continued on next page

Banks for Beginners, continued from page 1

Banks also loan money to customers, charging them the highest possible interest rate that competition and current market conditions will allow. This is an example of **interest income.** Interest income minus interest expense is known as the **net interest income**, and this tends to make up the majority of net earnings for most banks.

The difference between the interest rates that a bank charges its loan customers and the interest rate that a bank pays its depositors is known as the **interest rate spread**, or **net interest margin**. It's this "spread" that generates much of a bank's income, and banks with the highest spread are generally the most profitable.

Banks also make money from collecting all kinds of fees from customers. As banks offer more and more services, they have more opportunities to charge fees, such as for ATM usage, online bill payment, and trust and brokerage services. Any income that's not related to lending is known as **noninterest income.**

Noninterest income can also include gains or losses on a bank's investments. In the banking industry noninterest income has been growing faster than net interest income has, so this component has become quite important to the future growth of many banks.

A bank's operating expenses include personnel, occupancy, equipment and marketing costs. All expenses not related to interest paid to depositors and for other borrowed funds are known as **noninterest expenses**.

Think Like a Banker
When I started learning about bank stocks, I was getting confused about what were assets and what were liabilities. The source of my confusion was that I was considering these terms from the bank customer's point of view, rather than from the bank's perspective.

Commerce Bancorp, Inc. and Subsidiaries
Consolidated Statements of Income

| (dollars in thousands, except per share amounts) | Year Ended December 31, | | |
	2002	2001	2000
Interest Income			
Interest and fees on loans	$ 354,315	$ 326,723	$ 292,066
Interest on investment securities	400,191	271,707	208,769
Other interest	865	5,937	4,465
Total interest income	755,371	604,367	505,300
Interest Expense			
Interest on deposits:			
Demand	55,413	63,554	72,975
Savings	30,232	32,647	36,935
Time	81,567	98,084	75,046
Total interest on deposits	167,212	194,285	184,956
Interest on other borrowed money	1,839	3,508	16,943
Interest on long-term debt	13,565	5,248	6,471
Total interest expense	182,616	203,041	208,370
Net interest income	572,755	401,326	296,930
Provision for loan losses	33,150	26,384	13,931
Net interest income after provision for loan losses	539,605	374,942	282,999
Noninterest Income			
Deposit charges and service fees	130,993	100,912	74,685
Other operating income	126,473	94,913	72,862
Net investment securities gains	0	980	3,213
Total noninterest income	257,466	196,805	150,760
Noninterest Expense			
Salaries and benefits	276,933	198,034	148,799
Occupancy	56,498	39,152	31,419
Furniture and equipment	66,700	50,724	40,436
Office	31,186	26,808	23,548
Marketing	23,733	18,378	11,706
Other	124,118	86,940	59,449
Total noninterest expenses	579,168	420,036	315,357
Income before income taxes	217,903	151,711	118,402
Provision for federal and state income taxes	73,088	48,689	38,355
Net income	$ 144,815	$ 103,022	$ 80,047
Net income per common and common equivalent share:			
Basic	$ 2.16	$ 1.59	$ 1.30
Diluted	$ 2.04	$ 1.51	$ 1.25
Average common and common equivalent shares outstanding:			
Basic	66,795	64,666	61,755
Diluted	70,903	68,102	64,223
Cash dividends, common stock	$ 0.60	$ 0.55	$ 0.48

Investors who are studying a banking firm should consider entries on the income statement (Commerce Bancorp's shown) such as total interest income, total interest expense, net interest income, provision for loan losses, total noninterest income and total noninterest expenses.

A bank customer might consider deposits "assets," but to a bank deposits are liabilities — debt that needs to be serviced and, eventually, repaid. Conversely, to a customer a loan is debt or a liability. But on the other side of the table, the loan is considered an asset (similar to accounts receivable), and that asset is used to generate interest income for the bank.

Loans Gone Bad
A manufacturing company may sell goods to a customer that goes out of business; consequently, any receivables due from the bankrupt company will likely go uncollected. A manufacturing firm also may misjudge demand for a particular product and as a result end up with more inventory than can be sold. Both of these situations result in the manufacturer taking some kind of charge to account for the lost value of these assets.

Similarly, some of the loans made by banks will end up being uncollected. Instead of taking a charge after the fact, financial companies set aside an amount they believe is sufficient to cover these bad debts. The money is set aside in an account known as the **loan loss reserve.** If a loan is deemed uncollectible, the loan loss reserve is reduced by the amount of the bad loan.

Every quarter banks add to the loan loss reserve. This amount is known as the **loan loss provision,** or **provision for loan loss,** and is reported on the income statement.

It's often helpful to see new terms and concepts put in context. A sample income statement for Commerce Bancorp is on this page, and several of the data items that have been described are accompanied by arrows. A bank's income statement looks a little different from that of a manufacturing company, but now that some of the terms have been explained, it should be a little easier to understand.

Bank Revenue
One of the biggest sources of confusion comes from trying to define a bank's "revenue." Banks don't have a line for revenue or sales on their income statements. But we need this data to complete a Stock Selection Guide.

The solution is to use a substitute, or proxy, for revenue. In my bank analysis study I found several proxies for bank revenue. I feel that the lack of a definitive standard for calculating bank revenue is the cause of much investor uncertainty and confusion.

The table below describes two proxies for bank revenues: NAIC recommended and OPS (Online Premium Services) data. The first column lists the various revenue "components." The next two columns indicated whether a component should be added (+), subtracted (-), or isn't used (shaded) in the associated revenue calculation. For example, the revenue calculation used in the OPS data files is interest income plus noninterest income.

		NAIC Rec.	OPS
Net Interest Income	Interest Income	+	+
	Interest Expense	-	
	Loan Loss Provision	-	
	Noninterest Income	+	+

A Note About TEA: The "pure" form of the NAIC recommended method adds TEA (Tax Equivalent Adjustment) to the formula. This is because some of

a bank's interest income will come from tax-exempt sources. The TEA adjusts the bank's tax-exempt interest income to equivalent "pre-tax" dollars. The TEA is typically a small number (less than 1 or 2 percent of revenue).

I found that TEA is a confusing component of an already confusing calculation. For most bank stocks, it has little effect on the results of the analysis. For this introduction to analyzing bank stocks we will disregard TEA and leave it for future advanced study.

The NAIC recommended method uses net interest income for calculating a bank's revenue. Using net interest income tends to smooth out increases or

decreases because of changes in the interest rates. As interest rates rise, both interest income and interest expense tend to go up.

OPS uses gross interest income (not net) to calculate bank revenue. This method results in revenue numbers that are more heavily influenced by changes in interest rates. In times of rising rates, the calculated revenue may be skewed higher, and in times of decreasing rates, lower.
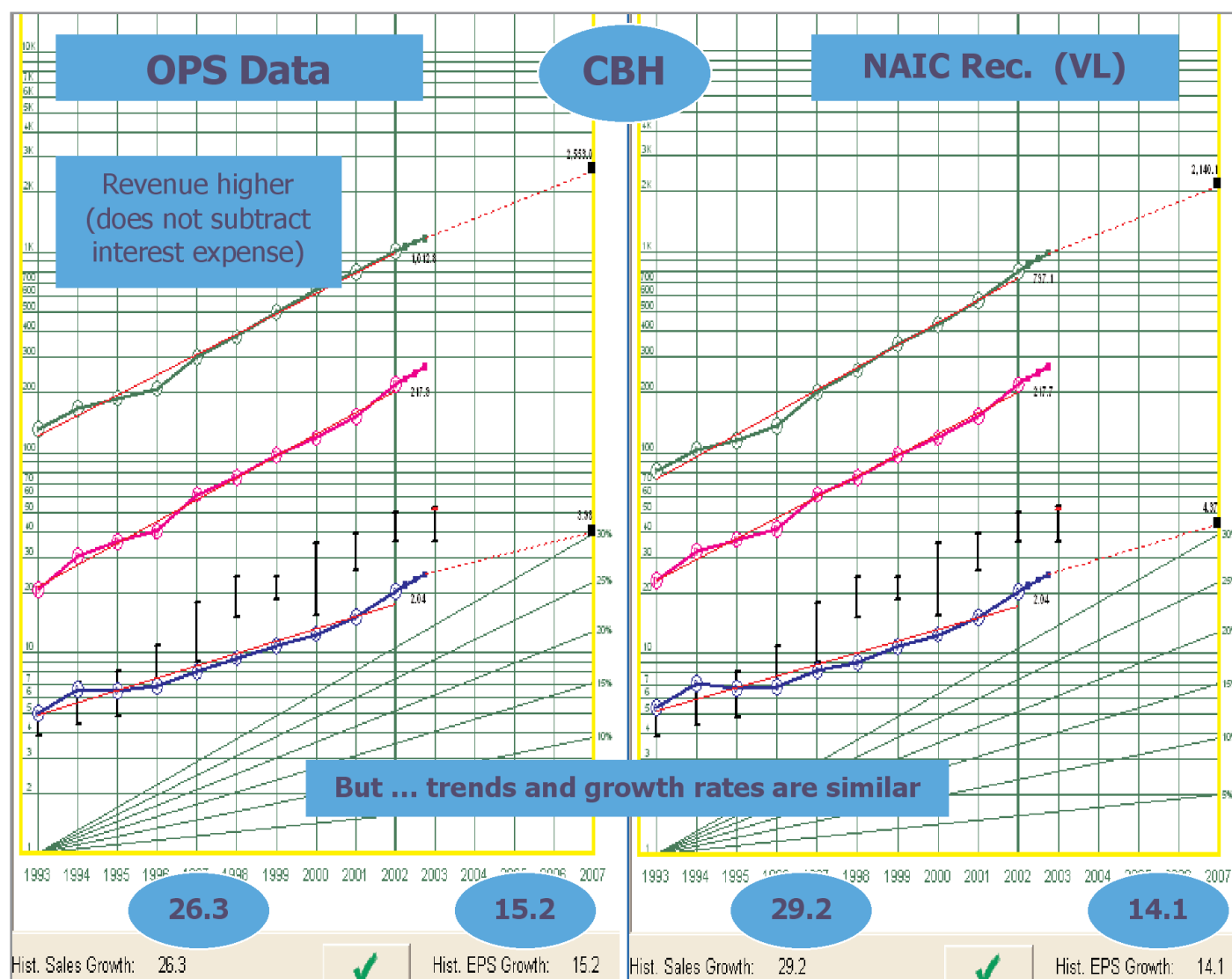
NAIC (Using Value Line Data) vs. OPS
Each revenue proxy has its advantages and disadvantages. The advantages of OPS are that it's relatively easy to

use — SSG data is imported directly into any of the NAIC stock analysis computer programs — and includes up to 10 years of annual data and 20 quarters of revenues, earnings per share, pre-tax profits and tax data. Its disadvantage is that the revenue calculation employs gross, as opposed to net, interest income.

The advantages of the NAIC method, assuming Value Line data is used, are that you'll have all the data needed to calculate annual revenue by this method, and you'll have access to the Value Line analyst's projections for the next three to five years. The disadvantages of this method are that you'll have to calculate

the revenue, obtain quarterly revenue from another source and enter the data manually.

When I started this study, I had hoped to conclude that OPS data could indeed be used to analyze bank stocks. While many NAIC investors have no qualms about setting up spreadsheets to do special calculations, the majority just don't have the time or inclination to do this. Using OPS data is fast and easy and is a giant leap in helping to bring effective stock analysis to all investors. To study how OPS presents bank revenues, I did side-by-side comparisons of SSGs for Commerce Bancorp (CBH) using the two methods. The results are shown below.

The two SSG graphs illustrate the differences and similarities of calculating bank revenue by using the OPS data vs. using Value Line data and NAIC recommended methodology. The first thing I noticed was how similar the two graphs appear. The trends on both graphs look quite good, and the resulting 10-year growth rates are pretty close.

I went through the same exercise for five other bank stocks that were being analyzed at the Computer Group meeting in January. The following table summarizes the historical sales growth rates when computed using OPS data and when using Value Line data combined with the NAIC recommended method.

Date of Study 12/5/03	Most Recent Q	Hist. Sales Growth	
		OPS	NAIC (VL)
Commerce Bancorp	9/30/2003	26.3	29.2
Fifth Third Bank	9/30/2003	24.9	25.9
Synovus Financial	9/30/2003	15.9	17.2
National City	9/30/2003	16.6	15.5
Popular	9/30/2003	24.3	25.0
Wells Fargo	9/30/2003	13.3	12.0

In all six examples the resulting sales growth rates were close enough to not cause concern. The OPS data resulted in generally lower historical sales growth rates, but this is likely because of the current low interest rate environment. The OPS sales growth rates would likely be higher in a high interest rate climate.

Again, the important concept here is not that one growth rate is higher or lower than another, but rather that the historical sales growth rates were pretty close regardless of which proxy for sales was used. The SSG paints a picture with a pretty broad brush, and it's up to each of us to apply a generous dose of judgment.

As always, it's important to pick one data source to complete an SSG and stick with that data source when updating the guide. You should always avoid mixing data

sources. Also, when comparing two or more banks, it would probably be best to use the same revenue calculation for each one.

No matter what revenue method or data you use, remember that it's a Stock Selection *Guide*, and in all cases you must apply judgment.

Estimating Future EPS

As with any type of company, there are several methods for estimating future earnings. These include evaluating historical trends, considering analyst projections and using the Preferred Procedure to generate a revenue-based earnings projection. In addition to these, my research uncovered two additional techniques: the "Ralph Seger" method and projecting future earnings based on total assets. Again, I went through an exercise that involved estimating future earnings by using each method.

Revenue-Based EPS: I started by calculating a revenue-based EPS (Preferred Procedure) for Commerce Bancorp, using the NAIC recommended method of calculating bank revenue and data from Value Line. I find it helpful to reference Value

Line's estimates for the next three to five years, especially when I'm beginning to study a company with which I'm not familiar. I use these estimates as guidelines only; they provide one more data point to consider in my analysis.

The historical "sales" growth of CBH has been strong at 29 percent, with no indication of a slowdown. Based on this strong historical growth and my personal cap, I estimated future sales growth to be 20 percent, or $2.14 billion in 2007. I compared this to Value Line's estimate for operating revenue: net interest income of $1.72 billion – loan loss provision of $75 million + non-interest income of $680 million, which came out to $2.325 billion. My estimated sales was close to the Value Line estimate, and this gave me confidence that I was in the ballpark. *(Editor's note: The report used here was dated Nov. 28, 2003 — to see it, go to www.better-investing.org/articles/bi/1032/8292 and click the VL Company Report headline in the Related Files section.)*

Next I considered the trend of the pre-tax profit margin. I observed that it was down and that VL was projecting 25.9 percent for PTPM: net profit of $400 million ÷ oper-

ating revenue of $2.325 billion, which is then divided by the result of 1 - income tax rate (0.335) and multiplied by 100. Based on these two observations, I estimated the future pre-tax profit margin to be 25.5 percent.

Note: Many analysts who are much more educated and experienced in this area than I am feel that pre-tax profit margin is not a valuable measure for bank stocks. But old habits die hard, and I figure that PTPM for a bank will provide at least a small indication of how costs are being managed. So I continue to consider this measure as presented on the SSG a useful part of my analysis.

For the projected tax rate, I used Value Line's figure of 33.5 percent.

Next, I observed that CBH has been in the habit of issuing new shares at a fairly high rate. Value Line projected 85 million diluted shares in '06 – '08: projected net profit (400 million) ÷ projected diluted EPS (4.70) = about 85 million. I used 85 million, as that seemed to verify the trend I saw in the numbers.

This all resulted in a future EPS of $4.27, or a 13.7-percent earnings growth rate *(see graphic on this page).*

The Ralph Seger Method

In a "Repair Shop" column in *BI's* July 1987 issue that discussed analyzing bank stocks, Ralph Seger wrote, "I forecast the growth of future earnings per share at the rate of growth of earnings per share, book value, or dividends, whichever is the lowest." In this same article he recommended plotting book value per share and dividends per share on the front of the SSG. So I did. Using Toolkit, I simply put the book value data in the column marked Sales and the dividend data in the column marked EPS.

Toolkit calculated the 10-year growth rates for book value to be 13.9 percent and for dividends to be 18.2 percent *(see graphic below)*. Comparing these numbers with the historical earnings growth rate of 14.1 percent indicates that a future growth rate of 14 percent may be reasonable (actually, 13.9 percent — I rounded up a little).

Prepare an SSG Using Total Assets Instead of Sales

Another method I discovered in my research suggests preparing an SSG based on total assets instead of sales. The logic here is that asset growth is critical to any bank, since assets (like loans to customers) generate earnings. Return on assets (ROA) is

considered an important measure of a bank's performance and profitability. In Toolkit's annual data entry screen, substitute total assets (found on Value Line) in the data column marked Sales. This will result in an SSG that measures asset growth on the front and reports ROA (pre-tax ROA) in Section 2A instead of pre-tax profit on sales *(see graphics at right)*.

Toolkit plotted the data for total assets and reported that the historical rate of growth has been 26.6 percent. I found it interesting (and somewhat comforting) that Commerce's assets have been growing at nearly the same rate as operating revenues.

Flipping to the back, I noted that 2A indicates a downward trend in return on assets.

Next, I thought I would try to use the Preferred Procedure to come up with an earnings estimate based on asset growth. Using much of the same logic that I used for the "sales-based" earnings projection, I projected future asset growth at 20 percent and completed the Preferred Procedure. The resulting EPS projection was $4.35, or 14.3 percent *(see graphic, page 6)*.

EPS Summary

The following table presents a

Substituting Total Assets for Sales

Total Assets Growth = 26.6 % ✓ Hist. EPS Growth: 14.1
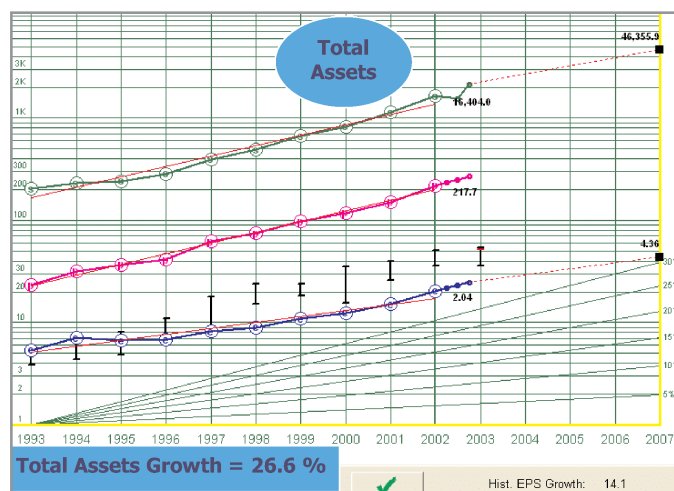
EVALUATING MANAGEMENT		Company	CBH Assets		(CBH)				
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	LAST 5 YEAR AVG.
% PTP on Assets	1.1	1.4	1.5	1.4	1.6	1.5	1.5	1.4	1.3	1.3	1.4
B % Earned on Equity (E/S ÷ Book Value)	13.8	19.1	14.9	15.3	15.8	15.9	19.1	16.1	15.6	15.1	16.3

summary of several estimates for future earnings.

The first two are analysts' estimates, included for reference. The last four summarize the estimates I made using four methods. All came very close to 14 percent.

	EPS	Growth Rate
Analyst Consensus (Yahoo)	??	18.5%
Value Line	$ 4.70	16.3%
Historical (10 year)	$ 4.33	14.1%
Revenue based EPS	$ 4.27	13.8%
Ralph Seger Method	$ 4.31	14.0%
Total Assets based EPS	$ 4.35	14.3%

Based on this study, I would be confident that a projected EPS growth rate of 14 percent is reasonable.

At this point I'm not able to draw any conclusion about method might be the best. I don't know whether these results are typical. I plan to go through this same process with several more bank stocks and continue to learn.

Complete the SSG

The valuation portion of a bank stock SSG is the same as any other. Two judgments that still need to be made are for projected high and low

P/Es. During the course of my research, I learned that P/Es for financial stocks tend to have an inverse relationship with the outlook for interest rates. P/Es tend to rise when interest rates are anticipated to go down, and P/Es tend to fall when interest rates are expected to rise.

Since I feel that interest rates are likely to go up in the next five years, I lowered the projected P/Es to an average high of 22 and average low of 13, or near the lowest values from the past five years.
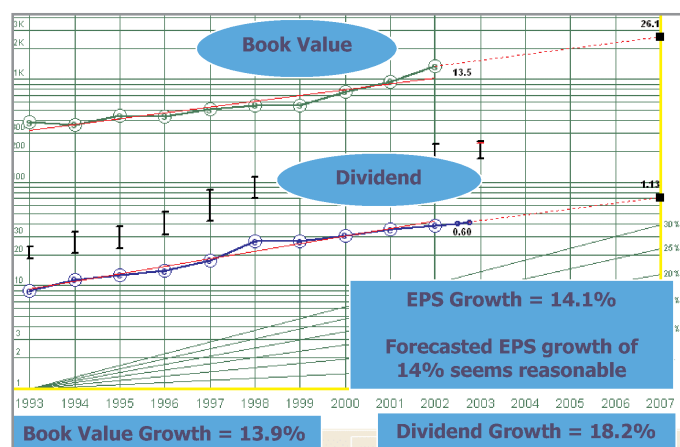
For the estimated low price, I selected the estimated low price calculated in Section 4Ba. My resulting buy zone was $32.10 to $47.80, with CBH currently priced in the hold zone.

Conclusion

I learned that bank stocks weren't really that difficult to analyze — just a little different from others.

In a perfect world OPS data would calculate bank "revenues" following the NAIC recommended method, and let's hope this will be true soon. Meanwhile, some

The Ralph Seger Method

Book Value Growth = 13.9% **Dividend Growth = 18.2%**

EPS Growth = 14.1%
Forecasted EPS growth of 14% seems reasonable

Preferred Procedure Using Total Assets

NAIC practitioners say the OPS data is "wrong" and choose not to use OPS data for any bank stock analysis.

I think it's important to understand what OPS is presenting as bank revenue and decide for yourself whether to use this data for any part of your bank stock analysis. Personally, I'll continue to use OPS data to prepare an *initial* Stock Selection Guide. Using OPS allows me to quickly screen for quality bank stocks because the data is highly accessible and because OPS makes short work of the data entry process. Once I find a viable bank stock candidate, I plan to complete several additional SSGs on the same company following the steps outlined in this article.

To summarize, when preparing a bank stock analysis, I'll follow these steps:

1. Prepare a Stock Selection Guide using OPS data. If the trends and growth rates look good, continue to the next step.

2. Prepare a second SSG using Value Line data and the NAIC recommended method to calculate the bank's revenues.

3. Plot book value and dividends on the SSG graph to measure the historical growth of these two parameters.

4. Prepare another SSG, substituting total assets in place of sales.

5. Evaluate all the data and consolidate the judgments in a "final" SSG, using the NAIC recommended method of calculating bank revenue and data from Value Line.

This may seem like a lot of work, but using one of NAIC's stock analysis computer programs makes SSG preparation a fairly quick process.

There are lots more financial ratios to calculate and consider when analyzing bank stocks, and the more you read, the more you'll learn. It was my goal to keep the analysis of bank stocks fairly simple, so I decided to present all the methods within the context of the SSG.

And I believe that the majority of what an investor needs to know can be found on the SSG (or multiple SSGs, as demonstrated in this article).

Finally, I would encourage all interested investors to continue to research and learn about analyzing bank stocks. There are lots of resources out there. Here's a list of some of them, many of which I referenced:

Available at the Web Site:

Better Investing:

"Repair Shop," Ralph Seger, *BI,* July 1987: www.better-investing.org/ articles/bi/238/5484.

"Learning More About Bank Stocks," *BI,* February 1994: www.better-investing.org/ articles/bi/239/5619.

"Stock to Study: Commerce Bancorp, Inc.," *BI,* March 2004 (includes Value Line report and partially completed SSG): www.better-investing.org/ articles/bi/1032/8292.

BITS:

"A Common Sense Approach to Analyzing Bank Stocks," adapted from a Miami Computer Group Workshop, *BITS,* Winter 1995: www.better-investing.org/ articles/bits/221/2721.

"Analyzing Finova Group and Other Financial Stocks,"

Amy B. Crane, *BITS,* February 2000: www.better-investing.org/ articles/bits/220/3040.

"Studying a Bank's Revenues and Expenses," Scott D. Horsburgh, *BITS,* October 2001: www.better-investing.org/ articles/bits/91/588.

"Doral Corporation: Finding Possible Gold in Unfamiliar Territory," Cy Lynch, *BITS,* June 2002: www.better-investing.org/ articles/bits/231/3073 and www.better-investing.org/ articles/bits/231/3074.

Other Web Resources:

"Analyzing Bank Stocks," Joe Smith, 2004. This PowerPoint presentation is available at the NAIC Forum on CompuServe in File Section 8: (http://forums.compuserve. com/vlforums/default.asp? SRV=NAIC).

You'll need to log in either by using your AOL screen name or by signing up for a free ID and password. The spreadsheet used by Joe Smith to track bank stocks is also available at the NAIC Forum.

Bob Adams' spreadsheet to analyze bank stocks, complete with example data: www.bobadams.homestead. com/bobsite.html.

A spreadsheet developed by Paul Schneider and Dan Hess that allows side-by-side comparison of many financial ratios from several different banks: www.bivio.com/bullrun/ files/AnnualReports.

Other Resources:

Standard & Poor's industry survey for banking companies is updated twice a year. These reports are available at many libraries.

Stock Selection Guide ®

The most widely used aid to good investment judgment

NATIONAL ASSOCIATION OF INVESTORS CORPORATION
INVESTMENT EDUCATION FOR INDIVIDUALS AND CLUBS
SINCE 1951

Company	CBH Final	Date	01/07/04
Prepared by	AC	Data taken from	Value Lin
Where traded	NYSE	Major product/service	Regional Ba

CAPITALIZATION --- Outstanding Amounts — Reference _____

		% Insiders	% Institution
Preferred ($M)	0.0		
Common (M Shares)	75.8	13.0	67.7
Debt ($M)	356.0	% to Tot.Cap. 25.8	% Potential Dil. None

1 VISUAL ANALYSIS of Sales, Earnings and Price

FY 2003 Q3 (Ended 9/30/03)
RECENT QUARTERLY FIGURES

	SALES ($M)	EARNINGS PER SHARE ($)
Latest Quarter	272.0	0.67
Year Ago Quarter	212.2	0.53
Percentage Change	28.2%	26.4%

See Chapters 8, 9, and 10 of the NAIC Official Guide for complete instructions.
Use this Guide as working section of NAIC Stock Selection Guide & Report.

CBH

2,140.1
797.1
217.7
4.31
2.04

(1) Historical Sales Growth	29.2 %	(3) Historical Earnings Per Share Growth	14.1 %
(2) Estimated Future Sales Growth	20.0 %	(4) Estimated Future Earnings Per Share Growth	14.0 %

Printed: 02/27/04 07:37 AM Prepared by: AC Using The NAIC Investor's Toolkit

		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	LAST 5 YEAR AVG.	TREND UP	TREND DOWN
A	% Pre-tax Profit on Sales (Net Before Taxes ÷ Sales)	28.6	30.9	32.2	30.6	31.0	29.2	27.8	27.3	26.5	27.3	27.6		EVEN
B	% Earned on Equity (E/S ÷ Book Value)	13.8	19.1	14.9	15.3	15.8	15.9	19.1	16.1	15.6	15.1	16.3		DOWN

3 PRICE-EARNINGS HISTORY as an indicator of the future

This shows how stock prices have fluctuated with earnings and dividends. It is a building block for translating earnings into future stock prices.

PRESENT PRICE   53.990   HIGH THIS YEAR   54.360   LOW THIS YEAR   36.230

	Year	A PRICE HIGH	B PRICE LOW	C Earnings Per Share	D Price Earnings Ratio HIGH A ÷ C	E Price Earnings Ratio LOW B ÷ C	F Dividend Per Share	G % Payout F ÷ C X 100	H % High Yield F ÷ B X 100
1	1998	24.0	15.1	0.90	26.7	16.8	0.420	46.7	2.8
2	1999	23.8	18.5	1.09	21.9	17.0	0.420	38.7	2.3
3	2000	35.4	15.4	1.25	28.4	12.4	0.480	38.6	3.1
4	2001	39.6	26.0	1.51	26.2	17.2	0.550	36.4	2.1
5	2002	50.5	36.1	2.04	24.8	17.7	0.600	29.4	1.7
6	TOTAL		111.1		128.0	81.1		189.8	
7	AVERAGE		22.2		25.6	16.2		38.0	
8	AVERAGE PRICE EARNINGS RATIO	20.9		9	CURRENT PRICE EARNINGS RATIO	21.9			

Proj. P/E [19.17] Based on Next 4 qtr. EPS [2.82]   Current P/E Based on Last 4 qtr. EPS [2.47]

4 EVALUATING RISK and REWARD over the next 5 years

Assuming one recession and one business boom every 5 years, calculations are made of how high and how low the stock might sell. The upside-downside ratio is the key to evaluating risk and reward.

A HIGH PRICE -- NEXT 5 YEARS

Avg. High P/E ~~25.6~~ 22.0 (3D7 as adj.) X Estimate High Earnings/Share 4.31 = Forecast High Price $ 94.8 (4A1)

B LOW PRICE -- NEXT 5 YEARS

(a) Avg. Low P/E ~~16.2~~ 13.0 (3E7 as adj.) X Estimated Low Earnings/Share ~~2.04~~ 2.47 = $ 32.1

(b) Avg. Low Price of Last 5 Years = 22.2 (3B7)

(c) Recent Severe Market Low Price = 26.0

(d) Price Dividend Will Support   Present Divd. = 0.660 = 21.2   High Yield (H) 0.031

Selected Estimate Low Price = $ 32.1 (4B1)

C ZONING

94.8 (4A1) High Forecast Price Minus 32.1 (4B1) Low Forecast Price Equals 62.7 (C) Range. 1/3 of Range = 15.7 (4CD)

(4C2) Lower 1/3 = (4B1) 32.1 to 47.8 (Buy)   Note: Ranges changed to 25%/50%/25%

(4C3) Middle 1/3 = 47.8 to 79.1 (Maybe)

(4C4) Upper 1/3 = 79.1 to 94.8 (4A1) (Sell)

Present Market Price of 53.990 is in the Hold (4C5) Range

D UP-SIDE DOWN-SIDE RATIO (Potential Gain vs. Risk of Loss)

High Price (4A1) 94.8 Minus Present Price 53.990

Present Price 53.990 Minus Low Price (4B1) 32.1 = $\frac{40.8}{21.9}$ = 1.9 (4D) To 1

E PRICE TARGET (Note: This shows the potential market price appreciation over the next five years in simple interest terms.)

High Price (4A1) 94.8

Present Market Price 53.990 = (1.756) X 100 = (175.6) - 100 = 75.6 (4E) % Appreciation

Relative Value: 104.8%   Proj. Relative Value: 91.7%

5 5-YEAR POTENTIAL

This combines price appreciation with dividend yield to get an estimate of total return. It provides a standard for comparing income and growth stocks.

Note: Results are expressed as a simple rate; use the table below to convert to a compound rate.

A Present Full Year's Dividend $ 0.660

Present Price of Stock $ 53.990 = 0.012 X 100 = 1.2 (5A) Present Yield or % Returned on Purchase Price

B AVERAGE YIELD OVER NEXT 5 YEARS

Avg. Earnings Per Share Next 5 Years 3.32 X Avg. % Payout (3G7) 38.0 = 126.2 = 2.3 (5B) %

Present Price $ 53.990

C ESTIMATED AVERAGE ANNUAL RETURN OVER NEXT FIVE YEARS

5 Year Appreciation Potential (4E) 75.6 / 5 = 15.1 %

Average Yield (5B) = 2.3 %

Average Total Annual Return Over the Next 5 Years (5C) = 17.4 %

	Tot. Ret.
Average Yield	1.7%
Annual Appreciation	15.2%
% Compd Ann Rate of Ret	16.9%