



# Yale SCHOOL of MANAGEMENT

## Bank of America (BAC)

John S. Beekman, CFA  
john.beekman@yale.edu

Thomas J. Darnowski III  
thomas.darnowski@yale.edu



## Customer Focus Drives Growth

*Short-Term Valuation: Overweight*  
*Long-Term Valuation: Overweight*

- With Merger activity completed, focus is now on organic growth to sustain record earnings.
- Improved economy and high customer satisfaction continue to help loan growth, while management efficiency will continue to be strong.
- We initiate coverage with an Overweight rating.

**Target Price:**  
**\$ 50.55**

**Closing Price**  
**(3/18/05):**  
**\$ 44.94**

**Upside**  
**Potential:**  
**12.5 %**

**Market Cap:**  
**\$182.17 B**



Please see the disclaimer at back of this report for important information.

© 2005 John Beekman Thomas Darnowski

# *Table of Contents*

Company Overview..... 3

Interest Rates and Exposure..... 4

Consumer Demand and Growth Prospects ..... 7

Commercial Demand..... 9

Investment Banking and Capital Markets..... 10

Investment Management..... 11

Competition..... 13

Valuation ..... 14

Important Disclaimer..... 23

## Company Overview

In 1998, a merger between California-based BankAmerica and North Carolina based NationsBank formed Bank of America, and created the first truly coast-to-coast nationwide bank. Bank of America, headquartered in Charlotte, North Carolina, today has a footprint in 29 states and the District of Columbia with 5,885 banking centers, has offices in 43 foreign countries, and has over 176,000 employees worldwide.

Bank of America provides a diversified range of financial services through four main business segments, which were recently renamed to better align with company goals and objectives. The current segments are *Global Consumer and Small Business Banking*, *Global Business and Financial Services*, *Global Capital Markets and Investment Banking*, and *Global Wealth and Investment Management*. As you can see in the exhibit below, Global Consumer and Small Business Banking contributes almost half of the earnings of the bank, and is therefore the most important driver for the business. We will touch on the major drivers of each of these business segments throughout the report.

### Exhibit 1

#### BANK OF AMERICA CORP

#### Segment Performance Overview

(Dollars in millions)	2004			
	<u>Total Revenue</u>	<u>% of Total</u>	<u>Net Income</u>	<u>% of Total</u>
Global Consumer and Small Business Banking	\$ 26,857	54%	\$ 6,548	46%
Global Business and Financial Services	6,722	14%	2,833	20%
Global Capital Markets and Investment Banking	9,049	18%	1,950	14%
Global Wealth and Investment Management	5,918	12%	1,584	11%
All Other	1,064	2%	1,228	9%
<b>Total</b>	<b>49,610</b>		<b>14,143</b>	

Source: Company reports

The company has continued to grow recently through acquisitions. On April 1, 2004, Bank of America acquired FleetBoston Financial Corporation in order to increase its presence in the Northeast region of the U.S. This merger has boosted Bank of America to the 2<sup>nd</sup> or 3<sup>rd</sup> largest U.S. banking institution depending on either 2004 Earnings, Assets, Equity, or Market Cap, and has created the 9<sup>th</sup> largest corporation (not just commercial banks) worldwide in Market Cap and 5<sup>th</sup> in worldwide Earnings.<sup>1</sup> The company's planned merger integration has continued on schedule according to management and all FleetBoston retail locations have successfully been re-branded. The remaining steps left for full integration are just a few system conversions which have

<sup>1</sup> Company Reports.

already commenced, and therefore we believe any more merger and restructuring costs relating to this acquisition should be minimized in 2005 (below \$100MM).

In October 2004, Bank of America made another acquisition of National Processing Inc. (NPC), creating the second largest merchant processor in the United States which will continue to improve their credit card business.

Although we do not foresee any major merger or acquisition activity from the company in the near future, we do feel that their current strong national presence has positioned Bank of America for competitive organic growth (7.82% annual five-year earnings growth). With the addition of FleetBoston in 2004, Bank of America had record earnings of over \$14 Billion, and we believe they will continue to be one of the most profitable companies in the world through their ‘higher standards’ values in all aspects of their business.

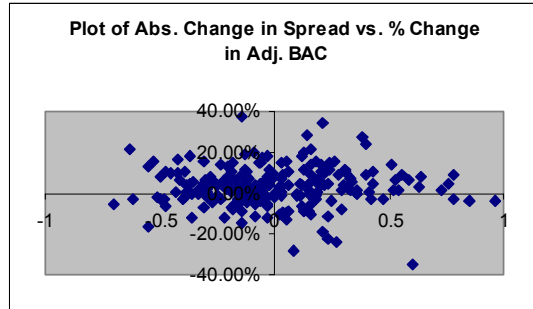
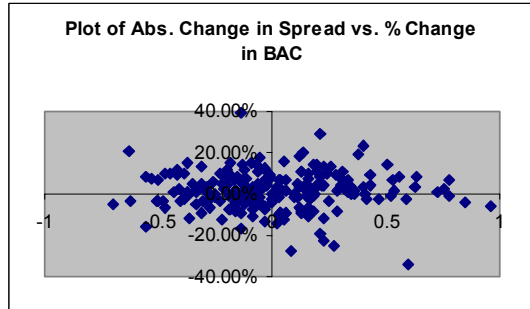
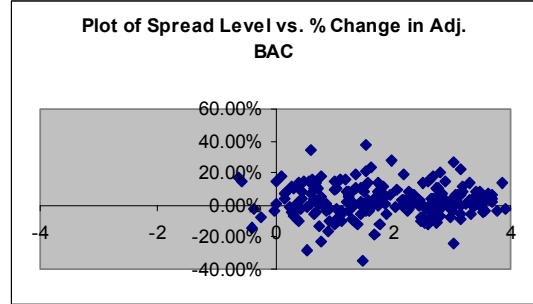
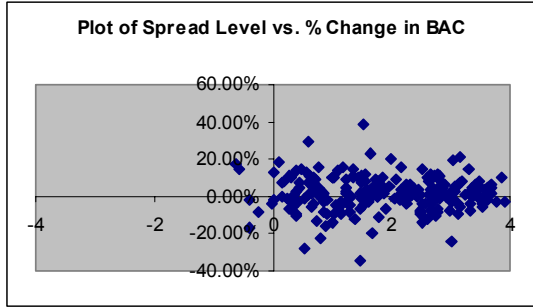
## **Interest Rates and Exposure**

In our report on the Commercial Banking Industry, we explored the relationship, or actually the lack of a relationship between the Treasury spread and stock performance. Defining the Treasury spread as the difference between the 10-year Treasury Note and the 3-month Treasury Bill, we showed very little correlation between both the level of this spread, as well as the absolute change in the spread and the returns of the Commercial Banking Index.

Since there is still a fair amount of belief that the spread has predictive power with individual bank securities, we applied the same methodology to just the returns of Bank of America. To make sure we fully incorporated all possibilities, we used the returns of Bank of America without dividends, and also an adjusted return number which includes the impact of dividends.

The below plots show no visible correlation between the spread and returns, and the following correlation plots and regression output confirm this belief.

**Exhibit 2**



Data Source: Company Reports & Yahoo Finance

**Exhibit 3**

	<i>Spread Level</i>
Spread Level	
% Change in BAC	-0.00526
	<i>Abs. Change in Spread</i>
Abs. Change in Spread	
% Change in BAC	0.006966

Data Source: Company Reports & Yahoo Finance

	<i>Spread Level</i>
Spread Level	
% Change in Adj. BAC	0.009912
	<i>Abs. Change in Spread</i>
Abs. Change in Spread	
% Change in Adj. BAC	-0.00292

**Exhibit 4**

## SUMMARY OUTPUT

## Spread Level vs. % Change in BAC

<i>Regression Statistics</i>	
Multiple R	0.005255
R Square	2.76E-05
Adjusted R Square	-0.00446
Standard Error	0.090469
Observations	225

## Abs. Change in Spread vs. % Change in BAC

<i>Regression Statistics</i>	
Multiple R	0.006966
R Square	4.85E-05
Adjusted R Square	-0.00444
Standard Error	0.090468
Observations	225

*Data Source: Company Reports & Yahoo Finance*

## SUMMARY OUTPUT

## Spread Level vs. % Change in Adj. BAC

<i>Regression Statistics</i>	
Multiple R	0.009912
R Square	9.82E-05
Adjusted R Square	-0.00439
Standard Error	0.096717
Observations	225

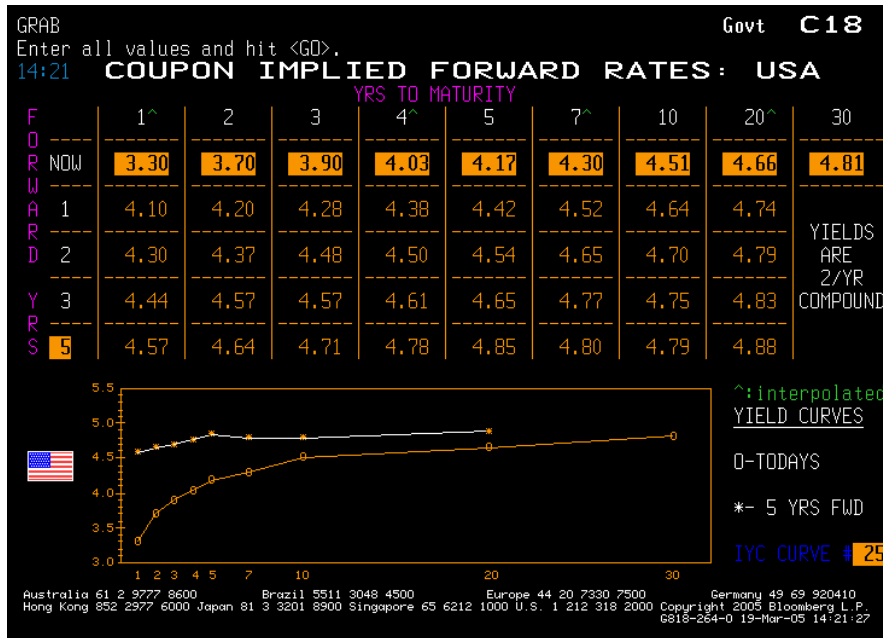
## Abs. Change in Spread vs. % Change in Adj. BAC

<i>Regression Statistics</i>	
Multiple R	0.002921
R Square	8.53E-06
Adjusted R Square	-0.00448
Standard Error	0.096721
Observations	225

Further exploring the impact of interest rate changes on the profitability of Bank of America, we look at the stability of Net Interest Income. Their Balance Sheet Management group maintains a Net Interest Income forecast utilizing different rate scenarios based on the forward market curve. Through the use of various instruments, securities, loans and borrowings, B of A is positioned for stable Net Interest Income growth to the extent implied from the forward curve.

According to Bank of America management, for unanticipated deviations from the forward curve, a 100 basis point gradual parallel increase in rates would decrease Net Interest Income by 1.5%, where a 100 basis point gradual parallel decrease in rates would raise Net Interest Income by .5%. These sensitivities also assume that management would not make any other changes while the rates were changing. A chart of the current forward curve is presented below.

**Exhibit 5**



Source: Bloomberg

This forward curve is used as our basis for the valuation of Net Interest Income at the end of this report.

## Consumer Demand and Growth Prospects

Given the somewhat commoditized business of lending, Bank of America has chosen to focus on customer satisfaction. With the majority of 2004 Net Interest Income growth coming from consumer loans and leases, and almost a third coming from card services, Bank of America’s customer satisfaction is very important.

The 2004 J.D. Power survey of home mortgage providers<sup>2</sup> shows that compared to the other large commercial banks, Bank of America is better when combining all the factors of satisfaction, which include Overall Service Experience, Origination Experience, Day-to-Day Account Administration, and Contact Experience. Given their high ratings, Bank of America is likely to keep its ranks of 6<sup>th</sup> in Mortgage Servicing, and 5<sup>th</sup> in First Mortgage Production (across all mortgage providers, not limited to commercial banks)<sup>3</sup>.

Our industry report detailed why we feel given a stable long-term rate and an improving economy, that loan demand should remain strong. Additionally, even if there is a housing bubble which can be difficult to predict, there is little sign of any potential burst given that housing prices are still rising with strength, and thus the value of

<sup>2</sup> [http://www.jdpower.com/cc/homes/mortgage\\_ratings/index.jsp](http://www.jdpower.com/cc/homes/mortgage_ratings/index.jsp)

<sup>3</sup> Bank of America Fourth Quarter Investor Fact Book

mortgages will continue to increase. Somewhat mitigating this is the fact that fixed-rate mortgages (which are tied to the 10-year rate) only make up 64% of mortgages compared to 80% in 2003. Thus, we expect an increase in loan growth, but only moderate increases.

Regarding card services, Bank of America is already 1<sup>st</sup> in organic consumer card growth, expense ratio of non-interest expenses per average outstanding balances, and debit card issuance. They are also the second largest acquirer and processor of merchant services. Thus, their strategy is just to continue growing their card accounts at the roughly 5% annual rate of the past through a focus on customer services. With credit cards having low switching costs, a focus on the customer will help Bank of America keep below industry attrition rates. Additionally, with the large network of debit cards (80% of Bank of America depositors have a debit card) there are circular retention benefits with deposits. One area of growth for card services is in the U.S. Hispanic population, which is addressed later in this section.

An alternative area of growth is in Bank of America's foreign operations, and domestic focus on Hispanics. As for foreign operations, only 6% of revenues were generated from foreign sources. Within the foreign segment as can be seen below, Europe makes up 69% of exposure, with Latin America and Asia both representing about 12%.

### Exhibit 6

	December 31		FleetBoston April 1, 2004
	2004	2003	
	(Dollars in millions)		
Europe	\$62,428	\$39,496	\$ 5,003
Latin America	10,823	5,791	7,568
Asia Pacific	10,736	9,547	443
Middle East	527	584	82
Africa	238	108	41
Other	5,327	4,374	865
<b>Total</b>	<b>\$90,079</b>	<b>\$59,900</b>	<b>\$ 14,002</b>

Source: Bank of America 2004 10-K

With only 6% of revenues coming from foreign sources, this is obviously an area of growth for the company. While 2004 growth in Europe was strong due to the banking sector across Western Europe, with the economies in Europe still struggling management does not see a large growth opportunity here for 2005 and we see little reason to disagree. However, with Latin American economies improving, this could be a good growth opportunity for Bank of America. The recent acquisition of FleetBoston substantially improved their presence in Latin America, and caused a slightly negative organic growth



within the legacy Bank of America due to the merger integration. Bank of America should be poised to compete with Citigroup in Brazil (where Bank of America also has its largest book of business) in the credit card business, and continue their loan growth through their largest Latin American branch network in Argentina. Bank of America mitigates their foreign risks by securitizing a majority of their loans. Thus, the growth opportunity we see for Latin America is reflected in our valuation assumptions by contributing to growth in the Non-Interest Income segment.

A final growth opportunity for Bank of America is in their focus on the U.S. Hispanic population. With the Hispanic population growth rate five times that of the general population, and Hispanic Disposable income growing at twice that of the general population, Bank of America sees this consumer segment as an important part of their growth strategy. At Bank of America, 46% of all new hires are bi-lingual with 66% of those speaking Spanish. They are currently the market leader for the Hispanic population, serving 44% of Hispanic households. There is tremendous room for growth within this segment as 93% of Hispanic households are covered by the Bank of America footprint, and currently 40% of Hispanic deposits are not banked. Additionally, Bank of America only represents 14% of the “credit wallet” of Hispanic households, which represents loans and credit cards. Thus, we have taken into account for our valuation the growth of this segment in terms of growth in deposits (and fees on deposits) as well as growth in Loans (Net Interest Income) and Credit Cards (Net Interest Income and Non-Interest Income from fees).

## **Commercial Demand**

As you saw in the company overview section, commercial activities within Bank of America are the most profitable business segment according to profit margin (42%). Making up about 20% of the whole company’s Net Income, commercial banking is the second biggest earnings driver for the bank.

We believe that the economy will continue to be strong and in line with economists estimates, and therefore we foresee a pickup in commercial loan demand and in the overall commercial banking business. Corporate credit quality improved in 2004 as Provisions for credit losses (0.48% of Commercial Loans) declined just under \$700MM and net charge-offs decreased about 59 percent, and we predict this improved credit quality in the corporate loan world to continue with the strong economy. This will help the commercial segment continue to contribute nicely to the bottom line.

Commercial banking is also a very efficient business for Bank of America, and this trend should continue in the future as the company is committed to expense control. Their efficiency ratio in this segment is 36.84% (non-interest expense / total revenues) versus an overall company efficiency ratio just over 51%.

Management of Bank of America predicts around a 5% increase in commercial loans in 2005 due to an increase in commercial lending. However, reflected in our valuation we expect a slightly higher growth rate due to our slightly more positive outlook, including economical conditions, improved credit quality and stable long term rates as we discussed in our industry report on commercial banks.

## Investment Banking and Capital Markets

The largest portion of revenue in the Global Capital Markets and Investment Banking segment was from trading related revenues which totaled just over \$3B in 2004. Fixed Income revenues made up about half of that number, but we expect this portion to decrease in coming years due to the increased focus on equities within capital markets. People are getting back into the stock markets after several years of favoring bonds, especially with bond prices poised to decrease with the increasing interest rates. We expect the money in trading to shift focus from fixed income to equities.

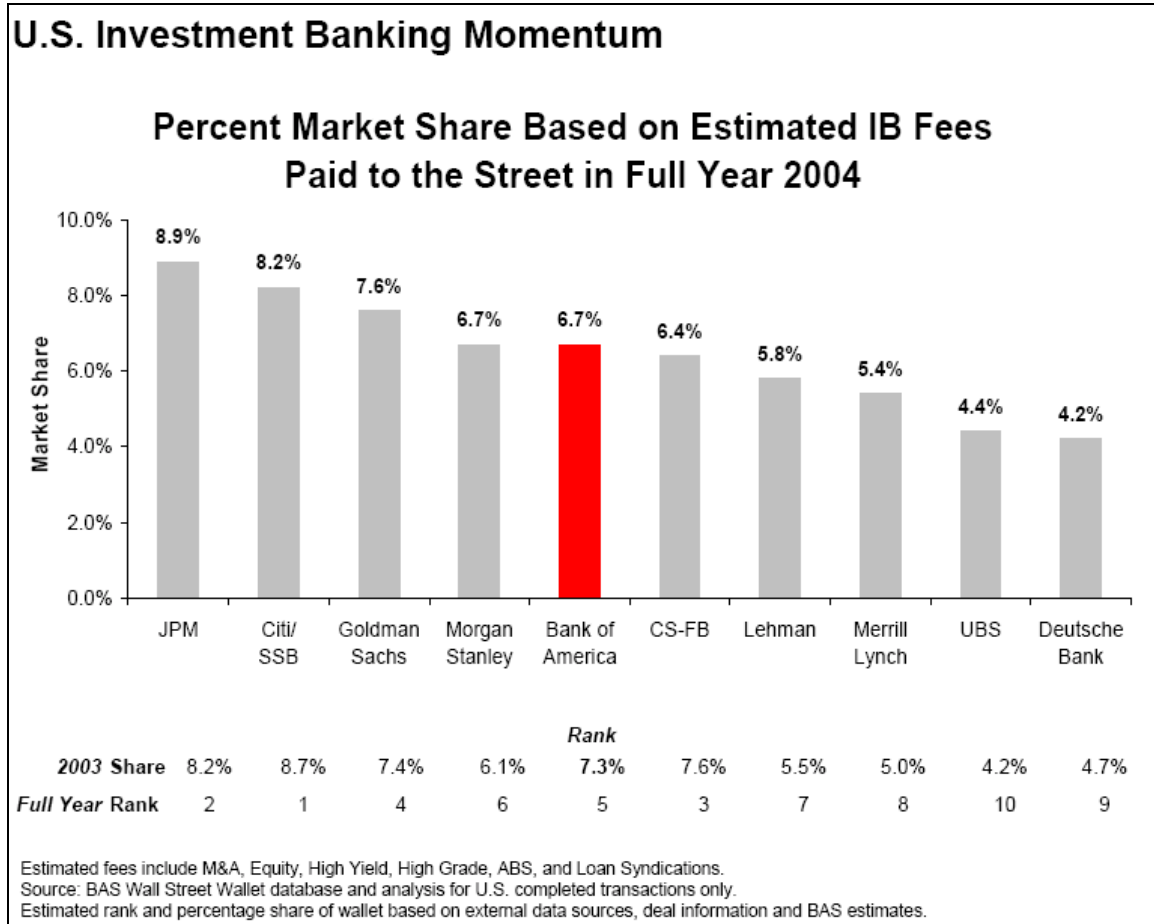
Total revenue from Bank of America's Investment Banking activity was about \$1.9B in 2004, which makes up about 20% of this segments revenue and 3.5% of the company's total revenue numbers. In our commercial banking industry report, we predicted that overall M&A activity would increase in the next few years as the economy continues to improve and consolidation becomes a main driver again in many industries, especially high-growth ones. This should bode well for the investment banking industry as a whole, and we foresee an increase in income for Bank of America along these lines as well for a couple of reasons.

First, as the industry rises so will Bank of America. Second, many top tier investment banks have been targeted in litigation suits, such as the Worldcom settlement recently, that we feel will hurt the top investment banks' reputations more than Bank of America's. Although Bank of America is in the top 15 rankings for Global M&A Transactions and Global Underwriting in 2004<sup>4</sup>, the Goldmans and JPMorgan Chase's of the world are taking on much more of the risk and also settlements in these cases. We believe there is a possibility of losing interest in these top banks which would lead to an increase in activity for Bank of America. Offsetting this will be that because of the risks associated with these cases, we don't expect Bank of America to aggressively push for increased investment banking activities, at least not in the short term. As you can see from the following chart, Bank of America's U.S. rank and share have remained largely unchanged over the past year, and we expect this trend to continue for the above reasons.

---

<sup>4</sup> Investment Dealer's Digest 2004 Global League Tables

Exhibit 7



Source: Bank of America Fourth Quarter Investor Factbook

A side note to this argument is that Bank of America does have to pay a \$460.5MM fine in the Worldcom settlement, but it will be taken out of their reserves that they have set aside and will therefore not hurt earnings. Another litigation that Bank of America is named in is the Parmalat case which has the potential to be a substantial amount (latest figure was a general \$10B over all companies named in suit). However, it's our view that management has good controls set in place for these types of settlements.

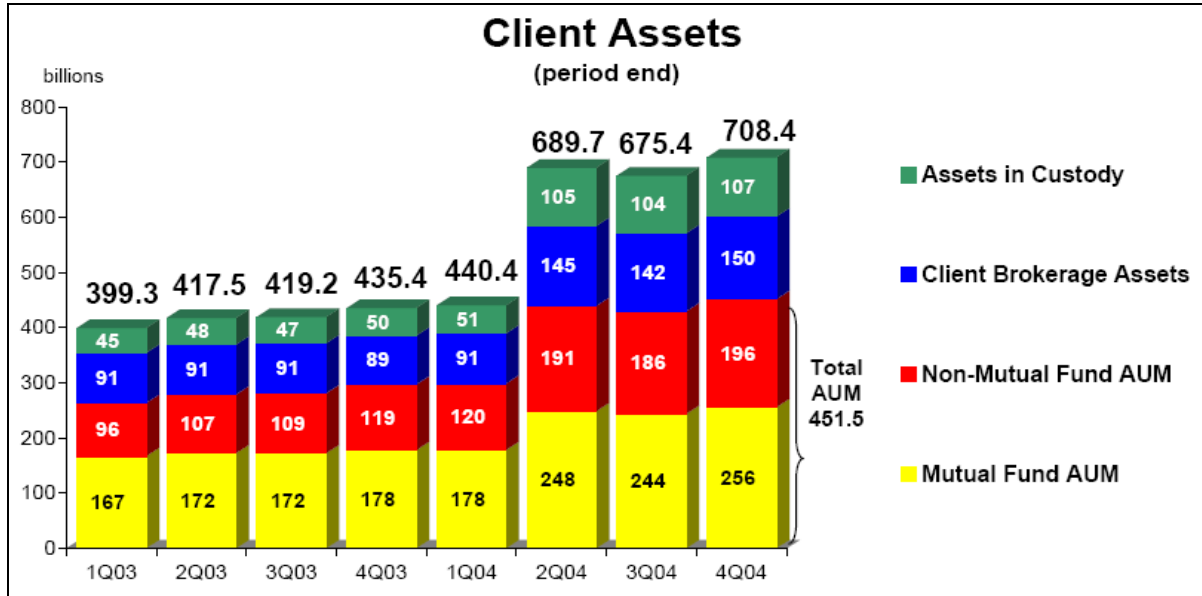
These beliefs were all taken into account in our revenue growth projections in valuation, which we will discuss more in the valuation section.

## Investment Management

Bank of America moved the Wealth and Asset Management headquarters to Boston, MA, showing the importance of the FleetBoston merger in this segment. As you

can see in Exhibit 8 below, the merger greatly increased total client assets for the bank, and since the integration client asset levels have remained pretty strong even though skeptic analysts predicted a shift of legacy Fleet customers away from Bank of America.

**Exhibit 8**

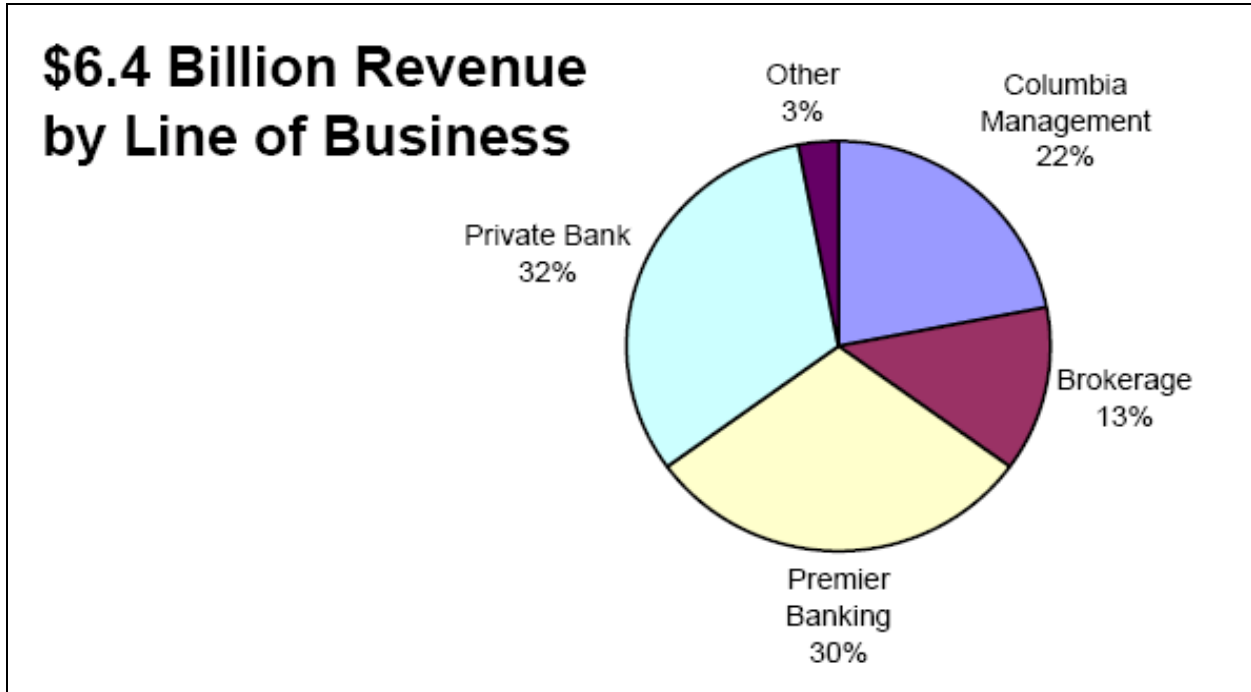


Source: Bank of America Fourth Quarter Investor Factbook

In 2004, expenses grew slightly more than revenues (about 1% more) for this segment most likely due to the increased employee incentives. This led to an efficiency ratio over 58%, but we do not predict this trend to continue as management continues to drive down the overall efficiency of the bank.

As you can see from the breakout of the segments within investment management in the following exhibit, Premier Banking makes up about 30% of the overall revenues and Private Banking makes up 32%.

Exhibit 9



Source: Bank of America Fourth Quarter Investor Factbook

Obviously, this segment’s revenues are very dependent upon the outlook of the market in general to get private investors. As we see a turnaround in the market and an increased interest in personal retirement accounts and savings, we expect this to increase revenues in this segment, which was taken into account in our valuation.

**Competition**

Given the nature of Bank of America’s diversified business model, they really only face their competition from the other large diversified commercial banks. These competitors would include JPMorgan Chase, Citigroup, Wells Fargo and Wachovia.

In our industry report, we concluded that the largest companies will have the greatest benefits from their economies of scale. In this group, all companies represent some of the top companies in the world, however only Citigroup stands with Bank of America in the top ten in the world in terms of market capitalization and earnings.

What Bank of America has done to separate itself in this category is to become a truly national bank. With the recent acquisition of FleetBoston, Bank of America now has a large presence all across the country. Thus, the biggest threat to their currently strong position would be another large merger.

Given that there is not currently any merger talks in place, and Citigroup has actually been barred from acquisitions by the Federal Reserve recently, we have not

considered any immediate dilution of potential earnings, but consider any earnings dilution from competition only for the terminal forecast.

## Valuation

*Risks to estimation.* Before beginning our discussion of our valuation process, we wanted to first address some of the risks that might cause a shift in our valuation. Our target price may change if there is an unexpected change in interest rates, or any unexpected turn in the economy. Although we feel that management is efficient, there is also a possibility that expenses might not be kept as low as we (and the company) assumed. Legal battles that we briefly touched upon in one of the above sections are also a huge unknown, even though we assume them not to be material. We believe that management is good at estimating these risks, so unless it is unexpected our valuation should not deviate greatly.

*Valuation.* We used a DCF analysis for our short term valuation and have an estimated fair value for Bank of America stock of \$50.55, which implies about 12.5% upside potential over Friday, March 18, 2005 closing price of \$44.94. Our projections imply a 6% annualized 5 year Revenue Growth translating into a 7.82% 5 year annualized growth in net income.

We list out here our assumptions according to our discussion in the previous sections of this report that draw the basis for the underlying growth rates and projections. Please see detailed valuation tables and historical financial statements in the exhibits after this discussion. As you will see in our historical financials, we drew historical averages and ratios back from 1996 through the present.

- Our WACC of 6.2% was based off of the Cost of Debt from Bloomberg and cost of equity utilizing the CAPM.
- Net Interest Income grows dependent upon both the Net Interest Yield between the rates on loans and deposits, and also the growth in loans and deposits. Initially our model takes into account the flattening of the yield curve and is based on the implied forward curve, and Bank of America's hedges on the short rate during this flattening. In the medium term, we anticipate the yield curve returning to a traditional upward slope. Finally, we anticipate in the long run competition will force a contraction of the interest margin. In line with our discussion above, we predict Net Interest Income to continue to slightly rise despite a flattening yield environment.
- We kept Provision for loan losses at historical averages since this is a management decision and target rate, whereas the real provision and loss will depend on specific rates at that time.

- With the tightening of the yield curve, we predict Bank of America to increase their non-interest income more in the next few years particularly from deposit growth since we predict Investment Banking to remain pretty stable. This would therefore bring the gap between net interest and non-interest income closer to 50-50. However, in the long run, when we predict rates to increase again, we foresee a rise in the portion of net interest income.
- Management expects expenses to remain pretty stable in 2005, but we anticipate an increase in line with historical averages continuing into the future. Since expenses are primarily tied to labor, management has some flexibility to expand or contract as needed.
- We assumed a 32% effective tax rate based on historical averages.
- We expect moderate consumer and commercial loan growth as detailed earlier with fairly consistent reserve for loan losses given the high proportion of securitization of loans.
- We expect deposit growth pretty stable over the next few years with a slight increase due to rising rates in the mid-term but tailoring back to a more stable long term rate.
- Short term borrowings are consistently around 20% of assets.
- Other Liabilities was grown consistent with historical averages.
- We tied Other Assets and Short Term Investments as percentage of revenue based upon historical averages and our predicted focus on more fee generating activities flowing through Marketable Securities in the long run.
- Our Growth rate for the final year of our projections is 4.4%, and while we believe this rate could be sustained for a substantial time period, our Terminal Growth projection of 3.25% is used to better match estimated GDP growth. Sensitivities to this Terminal rate are shown in Exhibit 13.

*Long Term.* For our long term outlook, we used a dividend discount model to project an implied long term annual return of 8.29% based upon the following assumptions.

- Current EPS of \$3.44 according to 2004 Net Income divided by Year End 2004 common shares outstanding.
- Annualized 5 year growth rate of earnings of 7.82% according to our income projections.

- Terminal growth rate of 3.25% as discussed above.
- Dividend Payout ratio of 45%.

**Exhibit 10**

**DDM Valuation**

Current P/E Ratio	13.05
Current Earnings (ttm)	3.44
Dividend Payout	45.00%
Growth over next 5 years	7.82%
Growth starting at year 11	3.25%
Implied Long Term Return	<b>8.29%</b>



**Exhibit 11**BANK OF AMERICA CORP  
Consolidated Statement of  
Earnings

Currency: USD

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate
Interest Income	81642.83	78502.72	75483.38	76400.19	76767.41	75013.89	71180.90	60918.79	54329.51	47318.87	43227.00
<b>as % of Loans</b>	<b>9.50%</b>	<b>9.50%</b>	<b>9.50%</b>	<b>10.00%</b>	<b>10.50%</b>	<b>10.75%</b>	<b>10.75%</b>	<b>9.75%</b>	<b>9.25%</b>	<b>8.60%</b>	<b>8.42%</b>
Interest Expenses	36441.68	35124.52	33854.95	32319.77	35261.93	37512.69	35140.70	27432.24	22481.90	18315.86	14430.00
<b>as % of Deposits</b>	<b>3.50%</b>	<b>3.50%</b>	<b>3.50%</b>	<b>3.50%</b>	<b>4.00%</b>	<b>4.50%</b>	<b>4.50%</b>	<b>3.75%</b>	<b>3.25%</b>	<b>2.80%</b>	<b>2.33%</b>
Net Interest Income	45201.14	43378.20	41628.43	44080.42	41505.48	37501.19	36040.20	33486.55	31847.61	29003.01	28797.00
Provision for Loan Losses	6015.79	5784.41	5561.93	5348.01	5117.83	4884.63	4635.04	4373.66	4111.42	3851.54	2769.00
<b>as % of Loans</b>	<b>0.70%</b>	<b>0.70%</b>	<b>0.70%</b>	<b>0.70%</b>	<b>0.70%</b>	<b>0.70%</b>	<b>0.70%</b>	<b>0.70%</b>	<b>0.70%</b>	<b>0.70%</b>	<b>0.54%</b>
Non Interest Income	39407.58	37531.03	35743.84	34041.75	32420.71	30585.58	28854.32	27093.26	25439.68	23775.40	22220.00
<b>YoY Growth</b>	<b>5.00%</b>	<b>5.00%</b>	<b>5.00%</b>	<b>5.00%</b>	<b>6.00%</b>	<b>6.00%</b>	<b>6.50%</b>	<b>6.50%</b>	<b>7.00%</b>	<b>7.00%</b>	<b>27.97%</b>
Non Interest Expense	40860.70	39007.83	37238.98	35550.34	33938.27	32399.30	30930.12	29598.20	28323.64	27168.96	26124.00
<b>YoY Growth</b>	<b>4.75%</b>	<b>4.75%</b>	<b>4.75%</b>	<b>4.75%</b>	<b>4.75%</b>	<b>4.75%</b>	<b>4.50%</b>	<b>4.50%</b>	<b>4.25%</b>	<b>4.00%</b>	<b>29.80%</b>
Operating Income (Losses)	37732.23	36116.99	34571.35	37223.82	34870.09	30802.84	29329.36	26607.95	24852.23	21757.92	22124.00
Net Non-Oper Losses(Gains)	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	903.00
Pretax Income	37232.23	35616.99	34071.35	36723.82	34370.09	30302.84	28829.36	26107.95	24352.23	21257.92	21221.00
Income Tax Expenses (Credits)	11914.31	11397.44	10902.83	11751.62	10998.43	9696.91	9225.40	8354.54	7792.71	6802.53	7078.00
<b>as % of Pretax Income</b>	<b>32%</b>	<b>32%</b>	<b>32%</b>	<b>32%</b>	<b>32%</b>	<b>32%</b>	<b>32%</b>	<b>32%</b>	<b>32%</b>	<b>32%</b>	<b>33.35%</b>
Inc(Loss) bef Extraord Items	25317.92	24219.55	23168.52	24972.20	23371.66	20605.93	19603.96	17753.40	16559.51	14455.38	14143.00
Net Income/Net Profit (Losses)	25317.92	24219.55	23168.52	24972.20	23371.66	20605.93	19603.96	17753.40	16559.51	14455.38	14143.00
<b>YoY Growth</b>	<b>4.54%</b>	<b>4.54%</b>	<b>-7.22%</b>	<b>6.85%</b>	<b>13.42%</b>	<b>5.11%</b>	<b>10.42%</b>	<b>7.21%</b>	<b>14.56%</b>	<b>2.21%</b>	<b>30.83%</b>
Shares Outstanding											4106
Common EPS									4.03	3.52	3.44
Price to Earnings									11.1	12.8	13.0



**Exhibit 13: Discounted Cash Flow Analysis**

Terminal Growth	3.25%
WACC	6.2%

Risk Free Rate	4.5%
BAC Beta (Yahoo Finance)	0.683
Market Risk Premium	5.5%
Cost of Equity	8%
%Equity	49.7%
Cost of Debt (Bloomberg)	6.0%
After Tax Cost of Debt	4.1%
% Debt	50.3%

Sensitivity to Terminal Growth		
Rate	3%	3.25%
Price	\$ 45.14	\$ 50.55
		\$ 56.98

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate
EBIT (operating inc)	37732.231	36116.989	34571.351	37223.817	34870.091	30802.841	29329.359	26607.947	24852.227	21757.915	22124
Taxes on EBIT & int inc	11914.314	11397.436	10902.832	11751.621	10998.429	9696.909	9225.395	8354.543	7792.7127	6802.5328	7078
Implied Effective tax rate	32%	32%	32%	32%	32%	31%	31%	31%	31%	31%	32%
after-tax EBIT or NOPAT	25817.917	24719.552	23668.519	25472.195	23871.662	21105.932	20103.964	18253.404	17059.514	14955.382	15046
Adjustments											
-Change in Uses	79297.412	75994.557	40716.821	102765.95	103387.64	90186.375	88037.625	76149.133	87467.065	62547.65	374012
+ Change in Sources	67445.104	64155.906	63536.657	72909.239	78139.964	79411.548	74861.214	62165.183	61615.145	43769.805	284742
FCF	13965.609	12880.901	46488.355	-4384.516	-1376.012	10331.104	6927.5542	4269.4536	-8792.406	-3822.463	-74224
Present value factor	1.817535	1.7121212	1.6128212	1.5192805	1.4311649	1.3481599	1.269969	1.196313	1.126929	1.0615691	1
Present value of FCF	7683.8183	7523.3583	28824.246	-2885.916	-961.463	7663.1148	5454.9003	3568.8432	-7802.094	-3600.767	-74224
Terminal Value		496041.47									
PV of Terminal Value		272919.9									
PV of D+E		318387.94									
PV of Debt		100755									
PV of Preferred Stock		10066									
PV of Equity		207566.94									
# of shares		4106									
Price		<b>50.552104</b>									

**Exhibit 14: Selected Ratios**

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate
Projected BV of D+E	338940.46	327088.15	315249.5	338069.34	308212.63	282964.95	272190.13	259013.72	245029.77	219177.85	200400
Projected MV of D+E	496041.47	480427.57	464697.46	481537.94	449479.38	422114.16	407364.21	390263.58	371650.82	341813.27	318387.94
<b>Ratios</b> (based on Market Values)											
MV/next year's NOPAT (a P/E ratio)		18.61	18.80	20.35	17.65	17.68	19.30	19.41	20.36	20.04	21.29
MV/BV of D+E (a M/B ratio)	1.46	1.47	1.47	1.42	1.46	1.49	1.50	1.51	1.52	1.56	1.59
<b>Return on Investment</b>											
ROIC=NOPAT/beg. BV of D+E	7.89%	7.84%	7.00%	8.26%	8.44%	7.75%	7.76%	7.45%	7.78%	7.46%	
<b>Markups &amp; Margins</b>											
Operating Margin (NOPAT/Sales)	30.51%	30.55%	30.59%	32.61%	32.29%	31.00%	30.98%	30.13%	29.78%	28.34%	29.49%
<b>Productivity</b>											
Asset Turnover (Sales/Total Assets)	4.41%	4.40%	4.39%	4.54%	4.57%	4.49%	4.56%	4.53%	4.54%	4.50%	4.59%
<b>Growth</b>											
in Sales	4.57%	4.57%	-0.96%	5.68%	8.58%	4.92%	7.12%	5.75%	8.54%	3.45%	1.27%
in BV of D+E	3.62%	3.76%	-6.75%	9.69%	8.92%	3.96%	5.09%	5.71%	11.79%	9.37%	14.19%
<b>ROA</b>	1.32%	1.32%	1.32%	1.45%	1.44%	1.36%	1.38%	1.33%	1.31%	1.23%	1.27%
<b>ROE</b>	10.91%	11.00%	11.12%	10.81%	11.61%	11.71%	11.86%	11.68%	11.99%	12.88%	14.19%
<b>Efficiency Ratio</b>	48.29%	48.21%	48.13%	45.51%	45.91%	47.59%	47.66%	48.86%	49.44%	51.48%	51.21%

**Exhibit 15: Historical Income Statement**

	<u>2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>	<u>1997</u>	<u>1996</u>
BANK OF AMERICA CORP Consolidated Statement of Earnings Currency: USD									
Interest Income	43227.00	31643.00	32161.00	38293.00	43258.00	37323.00	38588.00	37333.00	33636.00
<b>as % of Loans</b>	<b>8.42%</b>	<b>8.66%</b>	<b>9.56%</b>	<b>11.88%</b>	<b>11.23%</b>	<b>10.26%</b>	<b>11.02%</b>	<b>11.13%</b>	<b>10.80%</b>
Interest Expenses	14430.00	10179.00	11238.00	18003.00	24816.00	19086.00	20290.00	18901.00	16682.00
<b>as % of Deposits</b>	<b>2.33%</b>	<b>2.46%</b>	<b>2.91%</b>	<b>4.82%</b>	<b>6.81%</b>	<b>5.50%</b>	<b>5.68%</b>	<b>5.46%</b>	<b>5.40%</b>
Net Interest Income	28797.00	21464.00	20923.00	20290.00	18442.00	18237.00	18298.00	18432.00	16954.00
Provision for Loan Losses	2769.00	2839.00	3697.00	3892.00	2535.00	1820.00	2920.00	1904.00	1645.00
<b>as % of Loans</b>	<b>0.54%</b>	<b>0.78%</b>	<b>1.10%</b>	<b>1.21%</b>	<b>0.66%</b>	<b>0.50%</b>	<b>0.83%</b>	<b>0.57%</b>	<b>0.53%</b>
Non Interest Income	22220.00	17363.00	14201.00	14823.00	14514.00	14309.00	13206.00	12027.00	9750.00
<b>YoY Growth</b>	<b>27.97%</b>	<b>22.27%</b>	<b>-4.20%</b>	<b>2.13%</b>	<b>1.43%</b>	<b>8.35%</b>	<b>9.80%</b>	<b>23.35%</b>	
Non Interest Expense	26124.00	20127.00	18436.00	19404.00	18083.00	17986.00	18741.00	17625.00	15351.00
<b>YoY Growth</b>	<b>29.80%</b>	<b>9.17%</b>	<b>-4.99%</b>	<b>7.31%</b>	<b>0.54%</b>	<b>-4.03%</b>	<b>6.33%</b>	<b>14.81%</b>	
Operating Income (Losses)	22124.00	15861.00	12991.00	11817.00	12338.00	12740.00	9843.00	10930.00	9708.00
Net Non-Oper Losses(Gains)	903.00	0.00	-488.00	1706.00	550.00	525.00	1795.00	374.00	398.00
Pretax Income	21221.00	15861.00	13479.00	10111.00	11788.00	12215.00	8048.00	10556.00	9310.00
Income Tax Expenses (Credits)	7078.00	5051.00	4230.00	3319.00	4271.00	4333.00	2883.00	4014.00	3497.00
<b>as % of Pretax Income</b>	<b>33.35%</b>	<b>31.85%</b>	<b>31.38%</b>	<b>32.83%</b>	<b>36.23%</b>	<b>35.47%</b>	<b>35.82%</b>	<b>38.03%</b>	<b>37.56%</b>
Inc(Loss) bef Extraord Items	14143.00	10810.00	9249.00	6792.00	7517.00	7882.00	5165.00	6542.00	5813.00
Net Income/Net Profit (Losses)	14143.00	10810.00	9249.00	6792.00	7517.00	7882.00	5165.00	6542.00	5813.00
<b>YoY Growth</b>	<b>30.83%</b>	<b>16.88%</b>	<b>36.17%</b>	<b>-9.64%</b>	<b>-4.63%</b>	<b>52.60%</b>	<b>-21.05%</b>	<b>12.54%</b>	
Shares Outstanding	4106								
Common EPS	3.44								
Current Price	44.94								
Price to Earnings	13.0								

**Exhibit 16: Historical Balance Sheet Data**

Name: BANK OF AMERICA CORP  
 Balance Sheet  
 Currency: USD

	<u>2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>	<u>1997</u>	<u>1996</u>
Mirtable Sec & Other ST Invtis and									
Cash	420987	248167	208782	192671	168708	189862	180365	155175	107950
<b>% Sales</b>	<b>825.19%</b>	<b>639.16%</b>	<b>594.41%</b>	<b>548.72%</b>	<b>511.92%</b>	<b>583.37%</b>	<b>572.51%</b>	<b>509.46%</b>	<b>404.25%</b>
Loans & Mortgages Net of Reserve	513211	365300	336397	322278	385355	363834	350206	335362	311393
<b>YoY Change</b>	<b>40.49%</b>	<b>8.59%</b>	<b>4.38%</b>	<b>-16.37%</b>	<b>5.92%</b>	<b>3.89%</b>	<b>4.43%</b>	<b>7.70%</b>	
Other Assets/Def Chgs&Oth	176259	122978	115772	106815	88128	78878	87108	80446	58359
<b>% Sales</b>	<b>345.49%</b>	<b>316.73%</b>	<b>329.61%</b>	<b>304.20%</b>	<b>267.41%</b>	<b>242.36%</b>	<b>276.50%</b>	<b>264.11%</b>	<b>218.54%</b>
Total Assets	1110457	736445	660951	621764	642191	632574	617679	570983	477702
Tot Deposits/Sec Deposits	618570	414113	386458	373495	364244	347273	357260	346297	309100
<b>YoY Change</b>	<b>49.37%</b>	<b>7.16%</b>	<b>3.47%</b>	<b>2.54%</b>	<b>4.89%</b>	<b>-2.80%</b>	<b>3.17%</b>	<b>12.03%</b>	
ST Borrowings	232316	159561	124106	109888	131809	153488	120523	103515	64577
<b>% of Assets</b>	<b>20.92%</b>	<b>21.67%</b>	<b>18.78%</b>	<b>16.24%</b>	<b>20.52%</b>	<b>24.26%</b>	<b>19.51%</b>	<b>18.13%</b>	<b>13.52%</b>
Other Liabilities	59171	51641	41111	42327	45261	37238	50435	35878	23300
<b>YoY Change</b>	<b>14.58%</b>	<b>25.61%</b>	<b>-2.87%</b>	<b>-6.48%</b>	<b>21.55%</b>	<b>-26.17%</b>	<b>40.57%</b>	<b>53.98%</b>	
Total Liabilities without LT Debt	910057	625315	551675	516810	541314	537999	528218	485690	396977
Total Shareholders' Equity + Debt	200400	111130	109276	104954	100877	94575	89461	85293	80725
Total Liabilities and Equity	1110457	736445	660951	621764	642191	632574	617679	570983	477702

## Important Disclaimer

***Please read this document before reading this report.***

This report has been written by MBA students at Yale's School of Management in partial fulfillment of their course requirements. *The report is a **student and not a professional** report.* It is intended solely to serve as an example of student work at Yale's School of Management. It is not intended as investment advice. It is based on publicly available information and may not be complete analyses of all relevant data.

If you use this report for any purpose, you do so at your own risk. **YALE UNIVERSITY, YALE SCHOOL OF MANAGEMENT, AND YALE UNIVERSITY'S OFFICERS, FELLOWS, FACULTY, STAFF, AND STUDENTS MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, ABOUT THE ACCURACY OR SUITABILITY FOR ANY USE OF THESE REPORTS, AND EXPRESSLY DISCLAIM RESPONSIBILITY FOR ANY LOSS OR DAMAGE, DIRECT OR INDIRECT, CAUSED BY USE OF OR RELIANCE ON THESE REPORTS.**