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Economic Impact of Elminating the Line-of-Business Restrictions on the Bell Companies [report]

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Economic Impact of Eliminating The Line-of-Business Restrictions on the Bell Companies

Executive Summary

Prepared by

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July 1993

ECONOMIC IMPACT
OF
ELIMINATING
THE LINE-OF-BUSINESS RESTRICTIONS
ON
THE BELL COMPANIES

EXECUTIVE SUMMARY

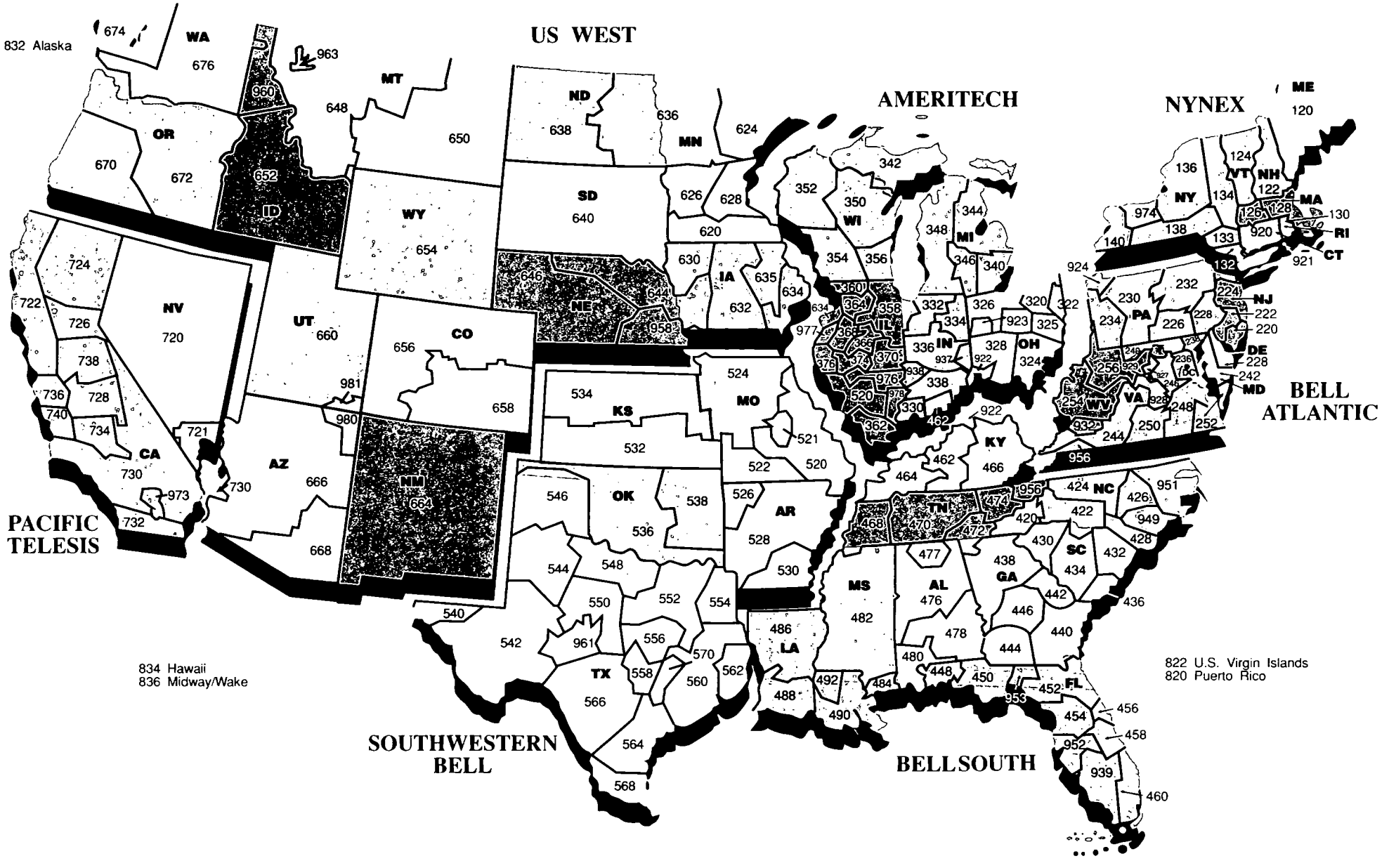
SUMMARY

Nearly ten years ago, the former Bell System was broken up. As part of the Modification of Final Judgment (MFJ) in *United States v. AT&T*, the decree that governs the breakup, the seven Bell companies were barred from providing long distance telephone services between court-approved geographic areas known as Local Access and Transport Areas, or LATAs (Figure 1). The MFJ further barred the Bell companies from providing information services and from manufacturing telecommunications equipment, which the court subsequently found to include design and development. In 1984, Congress also enacted legislation that prohibits local telephone companies, including the Bell companies, from providing video programming to subscribers in their respective telephone service areas in competition with local cable television systems.

The WEFA Group has completed a study of the economic impact of entirely and permanently eliminating the MFJ restrictions as well as the video programming prohibition (hereafter collectively referred to as the line-of-business or LOB restrictions). The study utilizes WEFA's integrated and consistent large-scale econometric models of U.S. macroeconomic, industry, and regional economic activity. The analysis incorporates carefully researched assumptions regarding the expected future course of the telecommunications services, telecommunications equipment, information services, and cable TV industries, with and without LOB relief, to simulate the impacts throughout the economy over the next ten years.

Based on our understanding of the American economy and the challenges it faces, we conclude that removing the LOB restrictions holds substantial promise for stimulating the economy. As shown below, LOB relief demonstrably yields significant new jobs, investment, and public service dividends at virtually no cost to taxpayers. It has no appreciable adverse effects, but rather lowers prices and expands choices for American consumers.

NATIONAL LATA MAP™



LATA - Local Access and Transport Area

FIGURE 1

WEFA's enhanced models yield two sets of forecasts through the year 2003. The first forecast, which is referred to as the Baseline forecast, represents WEFA's standard long-term forecast of economic activity in the United States. In WEFA's Baseline forecast, the current economic recovery does not falter, and the economy grows an average of 2.9% per year in real terms through 2003. Total real Gross Domestic Product (GDP) reaches almost $6.8 trillion in constant 1987 dollars by 2003.

The second forecast, which is referred to as the LOB Relief simulation, quantifies the impact on the national and state economies of unfettered competition throughout the telecommunications, information services, and cable TV industries. In the LOB Relief simulation, the economy grows faster than in the Baseline forecast. Total real GDP reaches $7.0 trillion in constant 1987 dollars by 2003. This is an increase of $247 billion -- a 3.6% total improvement -- over the Baseline forecast.

The key results of the LOB Relief simulation relative to the Baseline forecast are summarized below:

Employment

- The economy gains **3.6 million** additional jobs over the next ten years, increasing total employment to 135.7 million by 2003. These jobs are spread across all states and all major industry groups.

- Manufacturing output alone grows 0.5 of one percent faster per year over the coming decade, creating **977,000** additional manufacturing jobs.

- The unemployment rate falls an additional half a point to **5.1%** by 2003. This improvement is especially noteworthy since it occurs even while more telecommuters and remote site workers expand the labor force.

Gross Domestic Product

- **$247 billion** is added to total real GDP by 2003, a total gain of **3.6%** over the ten-year interval.

- Consumer spending gains an extra **$137 billion** by 2003, growing 0.3 of one percent faster per year.

- Total investment increases an additional **$72 billion**, as lower interest rates help boost productive capital formation.

- The balance of trade improves an extra **$33 billion** as a result of lower domestic inflation and more favorable currency exchange rates.

- The Federal budget deficit improves an additional **$150 billion** by 2003.

Other Economic Factors

- The aggregate annual inflation rate slows nearly a full percentage point more on average over the coming decade. Inflation is low enough relative to the nation's major trading partners (even our most successful competitors in the world market) to stimulate exports and significantly improve the balance of trade.

- Long term interest rates are more than a full point lower by 2003.

Consumer Benefits

- Average telecommunications services prices decline 22% over the next ten years in the LOB Relief simulation versus a 20% increase in the Baseline forecast. These lower rates will include: inter- and intraLATA toll call rate decreases of 50% as compared to Baseline, saving consumers over $490 billion by 2003; local rates increase less than one-half the amount of Baseline, saving more than $30 billion over the ten-year period; and, cellular rate decreases of 15% (including toll charges) over five years, saving more than $25 billion by 2003.

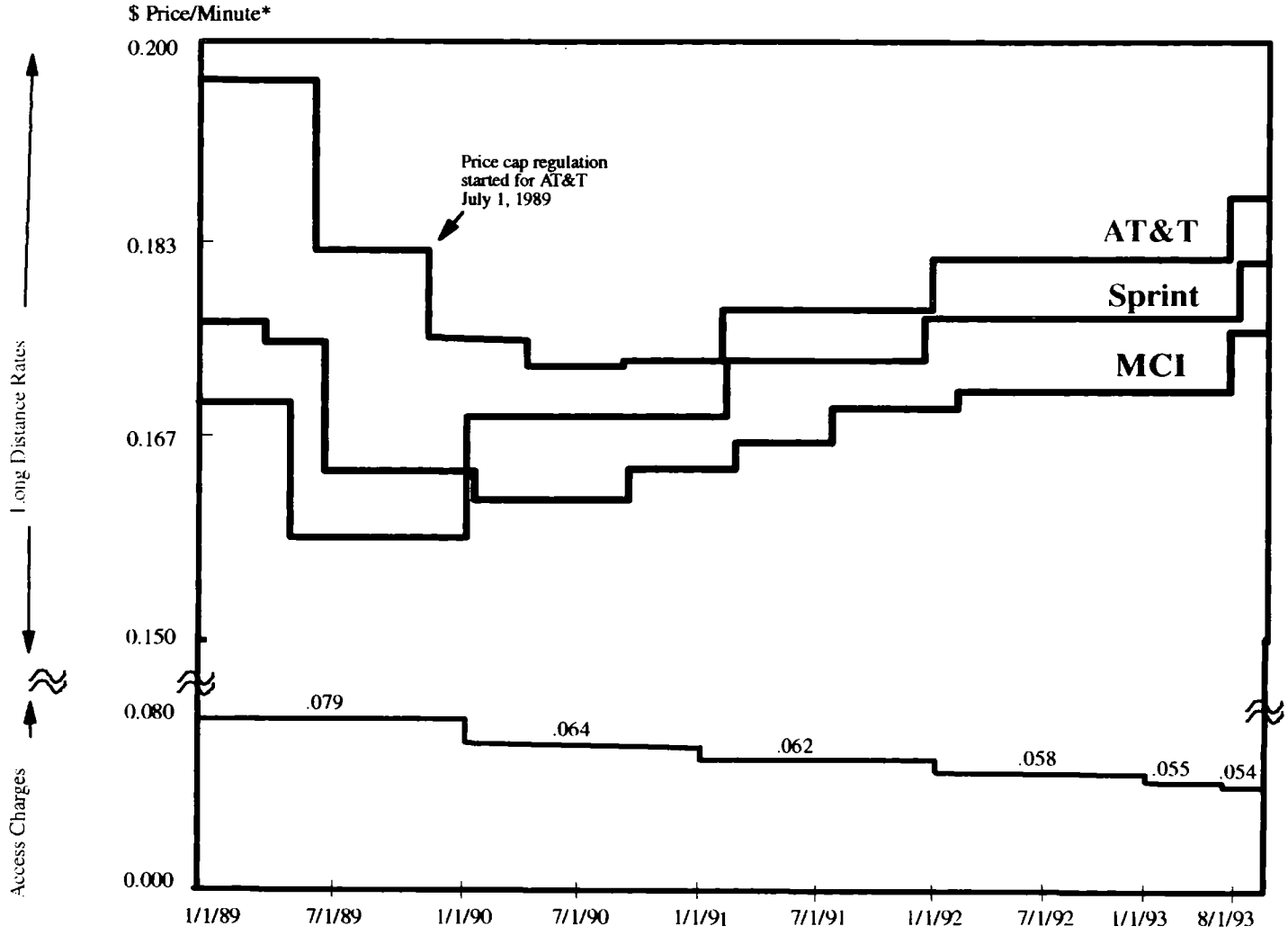
- Average cable TV prices decrease almost **5%** when LOB relief is granted, versus an increase of 27% in the WEFA's Baseline forecast for the ten-year period, saving consumers nearly $75 billion by 2003.

- Gains to consumers that result from lower telecommunications and cable TV rates average **$63 billion** per year over the forecast period, freeing a comparable amount of disposable income for the purchase of other products and services.

- Lower telecommunications rates, higher quality, and greater value accelerate the use of the public telephone network to deliver a variety of health care, education, and other public services to more people at lower prices.

Achieving these benefits is predicated on two critical requirements. First, the LOB restrictions are removed immediately; and, second, corresponding changes are made to Federal and state regulatory policies that enable all telecommunications providers, including the Bell companies, to compete under equal terms and conditions. The second requirement is no less important than the first. If regulation does not permit regulated telecommunications carriers to compete fully and fairly, e.g., to lower rates in response to competition from unregulated vendors, prices will remain higher than they would otherwise and the economic benefits of removing the LOB restrictions will be less than those forecasted.

Figure 2
Trends in Long Distance Rates and Exchange Access Charges



*Long distance rates based on the average price per minute for basic service.
Sources: Business Communications Review, February 1993 for long distance rates; Bellcore for interstate exchange access rates.

Present Status of Price Competition in InterLATA Long Distance Market

The average price per minute of basic long distance service is about $.18. While consumers have benefitted from earlier substantial reductions in interstate toll rates, it appears that price competition in the interstate toll market is not responsible for those benefits. In a recent publication, *The Geodesic Network II: 1993 Report on Competition in the Telephone Industry,* the authors conclude that meaningful price competition in the long distance market has not and will not occur in the current environment because MCI, Sprint and other smaller competitors are unable to effectively and realistically compete with AT&T. They offer several reasons for their conclusion:

- Of the hundreds of long distance companies, all but three are to some extent resellers. Forced to obtain capacity from major facilities-based carriers, AT&T, MCI, and Sprint, resellers cannot fully compete with them in the end user retail market.

- Because of the FCC's equal charge rule regarding carrier access charges, AT&T subsidizes its competitors. Due to AT&T's size, it costs less per minute of use for a local exchange company to serve AT&T than a smaller carrier such as MCI or Sprint. One study found that to compete effectively with AT&T, a carrier must serve at least 25% of the market before it could even approach the lower switched transport cost of AT&T. A market share of 25% is equivalent to the combined MCI and Sprint shares.

- The increasing economies of fiber-optic transmission affect competition by constantly reducing the incremental cost of transporting long distance traffic. In 1989, an FCC study stated that the facilities of all IXCs other than AT&T had enough capacity to meet 146% of the total demand existing at that time. While technological advances continually increase the capacity of existing fiber optic transmission facilities, thereby lowering incremental costs, those cost savings are not being passed on to customers by the IXCs.

- The recent pricing behavior of the three major carriers indicates that upside price leadership has been adopted by all players. The high market concentration and AT&T's dominant market share enable it to hold a pricing umbrella over its competitors. In late July, for instance, the "Big Three" long distance carriers (AT&T, MCI, and Sprint) announced rate increases of an average of 3.9% despite a 1.8% reduction in local access charges. (See Figure 2)

APPROACH

WEFA's models make it possible to develop a comprehensive, consistent, and accurate view of changes in economic conditions, industry structure, and aggregate price changes by industry resulting from changes in exogenous factors. In this particular study, the exogenous factor is the elimination of the LOB restrictions on the Bell companies. For comparison purposes, WEFA's Baseline forecast provides a long-term view of economic activity over the next ten years under normal conditions. The Baseline forecast includes a view of the U.S. economy at the national level, an integrated view of business activity for selected industries and a linked view of economic activity for each state.

Models and Analysis

Three of WEFA's large-scale econometric models are used to consistently and comprehensively quantify the economic impacts of LOB Relief.

- WEFA's U.S. Economic Model is a quarterly econometric model of the national economy. It is designed for forecasting, policy analysis, and simulation studies. The model is used every month by economists at WEFA to generate a baseline forecast of the U.S. economy and to provide alternative forecasts based on varying assumptions of government policies and other exogenous factors. Many of WEFA's clients, including many federal government departments and agencies, use this model in their own planning and forecasting activities.

- WEFA's Industry Analysis Model is directly linked to the U.S. Economic Model to provide a more robust environment in which to estimate and forecast the impacts of changes in specific industries on other industries, and on the economy in general. The Industry Analysis Model quantifies the size, growth, and relationships of 117 industries in the U.S. economy. It enables careful estimation of the contributions of each industry to the economy and the effects on each industry from changes in key economic factors. Thus, it provides both a supply-side view and a demand-side view of each industry, and it translates macroeconomic forecasts into demand for goods and services by industry.

- WEFA's Regional Forecasting Model is linked to the U.S. Economic and Industry Analysis models. The linkages allow simulations from the U.S. Economic and Industry Analysis models to be factored into the regional forecast to determine the regional economic impacts for every state and metropolitan area in the United States.

General Assumptions

The analysis presented in this report builds on two recent WEFA studies: *The Economic Impact of BOC Participation in the Information Services Industry* and *The Economic Impact of BOC Participation in the Telecommunications Equipment Manufacturing Industry.* The research and analysis undertaken for this study encompass a number of general expectations and assumptions about the future course of the telecommunications services, telecommunications equipment, information services, and cable TV industries resulting from LOB relief. These include:

- All LOB restrictions on the Bell companies are completely eliminated. The MFJ manufacturing and interLATA restrictions are lifted immediately and permanently, as is the video programming prohibition. The recent removal of the MFJ information services restriction is permanent.

- Network access requirements on local telephone companies give long distance carriers like AT&T, MCI, and Sprint equivalent access to intraLATA markets.

- Competition in telecommunications services, telecommunications equipment, information services, and cable TV markets increases significantly, driving down prices, elevating quality, and accelerating the availability of new services and equipment to all customers.

- The price of "bandwidth" -- transmission capacity -- declines more rapidly in the future, enabling and facilitating the development, testing, and implementation of new telecommunications and information service applications.

- The "time value of information" coupled with lower prices accelerate the adoption of enhanced services and equipment by more and more businesses and consumers.

- Lifting the LOB restrictions provides incentives for the Bell companies and other communications companies to speed their deployment of an intelligent, public network infrastructure.

- Other major barriers to competition -- such as artificial regulatory constraints and technical constraints (e.g., lack of inter-operability standards and lack of end-to-end digital service capability) -- are removed, which also pressures telecommunications vendors to upgrade their networks.

- Productivity in the usage of information services improves due to the increased utilization of a more efficient and more capable network and related services.

- Tremendous increases in network capacity associated with new digital technologies represent a genuine paradigm shift from past bandwidth-limited technologies.

- Lifting the LOB restrictions provides incentives for the Bell companies, other service providers, equipment manufacturers, software developers, and entrepreneurs to develop jointly the linkages between the public telecommunications network, private networks, and virtually all business activities throughout the economy.

Modeling Assumptions

These general expectations and assumptions lead to several specific modeling assumptions:

- First, based on much higher levels of competition in all telecommunications and related markets and on increased utilization of an efficient, intelligent network, average telecommunications services prices decline 22% by 2003 in the LOB Relief simulation versus a 20% increase in the Baseline forecast. In addition, cable TV prices decrease almost 5% in the LOB Relief simulation versus an increase of 27% in the Baseline forecast for the ten-year period.

- Second, driven by enhancements in the public network, information services, and hardware and software technologies, productivity gains and quality improvements in the usage of information services average 2% more per year in the LOB Relief simulation than in the Baseline forecast from 1994 through 2003.

- Third, real telecommunications equipment prices are 0.9% lower per year from 1994 through 2003. On a cumulative basis, real prices end the forecast period 9% lower than in the Baseline forecast. Half of the decrease is due to improvements in telecommunications equipment quality.

- Fourth, the labor force participation rate averages nearly 0.2% higher per year from 1994 through 2003 as employers and employees take advantage of new, lower-priced technologies and services that enhance the viability of telecommuting.

- Fifth, the rate of technological change and technology implementation increases slowly from 1994 through 2003, gaining 0.2% by the end of the ten-year period. As competition improves information technology products and lowers prices, more businesses and households implement enhanced technologies.

These assumptions are believed to be conservative given all of the possibilities that lie ahead. The rapid reduction in the cost of bandwidth, the continuing improvements in the price-performance ratios of computer hardware and software, and further advances in communications technologies could easily accelerate the development of enhanced services and equipment. This accelerated development resulting from LOB relief would, in turn, yield more rapid increases in productivity among telecommunications service, equipment, and information service users than are assumed in this study.

FORECAST COMPARISON

In the LOB Relief simulation, the economy expands faster than in the Baseline forecast, creating new jobs, generating additional income, and stimulating increased spending across most segments of the economy. Total real GDP grows from $5.1 trillion in 1993 to $7.0 trillion in 2003. This yields a compound annual growth rate of 3.3% over the ten-year interval.

Total non-agricultural employment increases from 109.9 million workers in 1993 to 135.7 million workers in 2003. Employment growth averages 2.1% per year over the same time period. Thus, the LOB Relief simulation depicts an economy that performs robustly over the next ten years, putting behind us the declines and slow growth experienced over the last few years.

The figures and tables on the following pages compare the LOB Relief simulation to the Baseline forecast for a variety of key variables.

Figure 2 summarizes the national employment outlook. The bars represent the number of new jobs created in each year from 1994 through 2003 due to elimination of the LOB restrictions. The benefits of more competition in the telecommunications sector, enhanced information services, new telecommunications infrastructure, and new user interfaces combine to boost business activity and incomes and, ultimately, to add 3.6 million jobs throughout the economy. As Figure 3 illustrates, the increased activity yields a lower unemployment rate which improves gradually over the decade.

Table 1 presents the employment gains across major industry groups in the United States. As shown, all industries benefit from the increase in economic activity, with the broad service sector gaining the most jobs -- well over a million. Manufacturing gains nearly a million jobs, while the other major sectors (except for mining) each gain several hundred thousand jobs over the next ten years. The mining industry gains 74,000 jobs. This results from the economic linkages between and among industries and the final demand sectors. As noted above, WEFA's modeling system represents the dynamic linkages that exist throughout the U.S. economy.

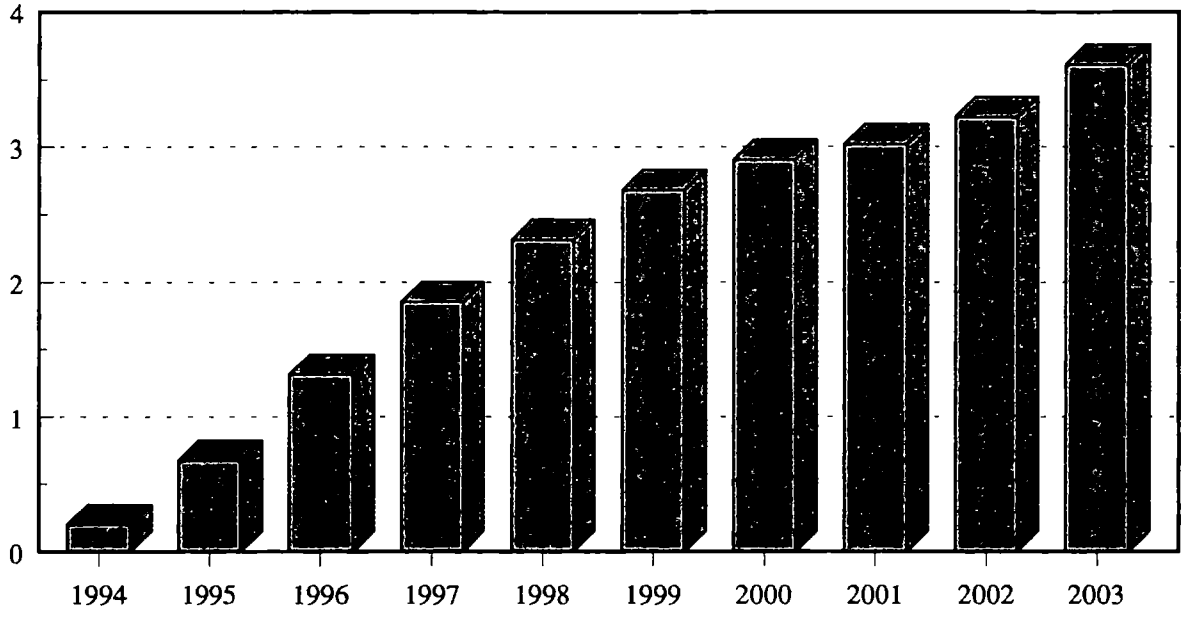
Figures 4 through 8 highlight the improvements in other key economic variables including the Federal budget deficit, the merchandise trade balance, the consumer price index, the prime interest rate, and the gross domestic product.

Table 2 shows that every state benefits from LOB relief, but by different amounts and percentages. The total job gain in each state depends on the industry mix and the expected growth in each state relative to the others. Some states contain more employment in industries that benefit relatively more from LOB relief and, therefore, receive proportionately more of the gain than some of the other states. California gains the most jobs while Arizona, Florida, Kentucky, and Nevada gain the most in percentage terms.

Table 3 provides a comparative look at some of the economic aggregates that characterize the forecasts presented in this report.

Figure 3

Total United States Employment Gains
LOB Relief Simulation vs. Baseline
(Millions of Jobs)

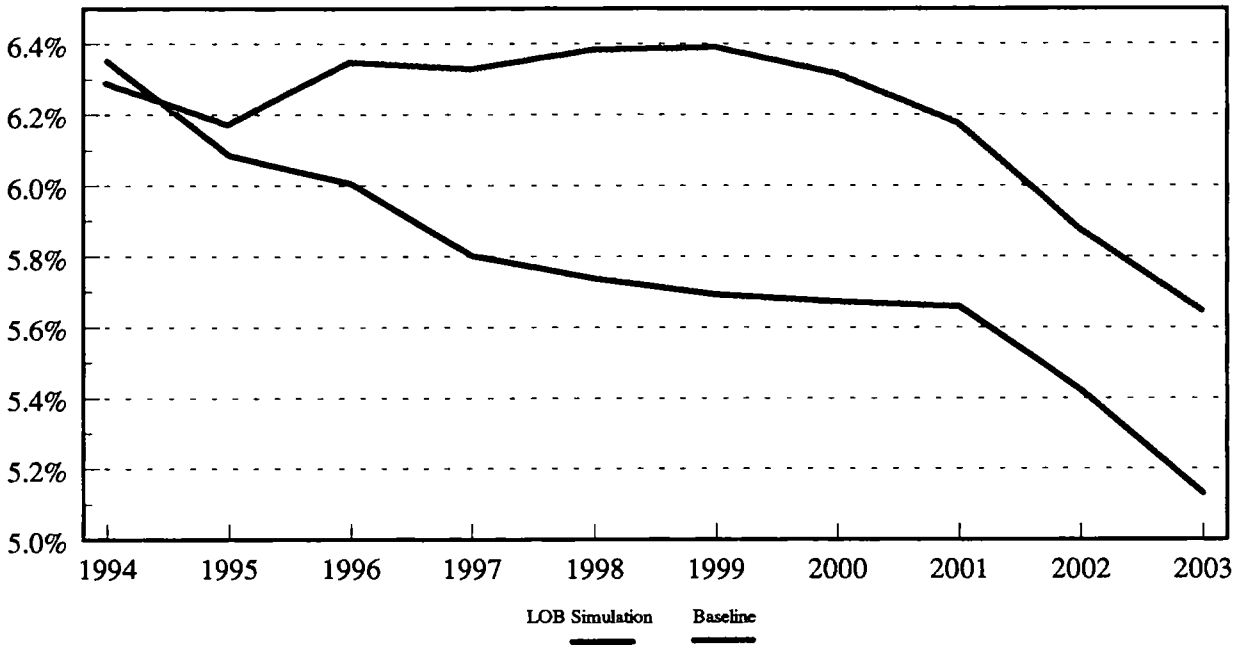


Full competition in the communications and information markets spurs competition, increases economic activity, and creates new jobs throughout the economy.

A total of 3.6 million new jobs are created in ten years.

Figure 4

U.S. Unemployment Rate
LOB Relief Simulation vs. Baseline
(Percent)



With telecommunications service and equipment enhancements and lower rates, businesses and job seekers have more flexibility in their work locations and schedules.

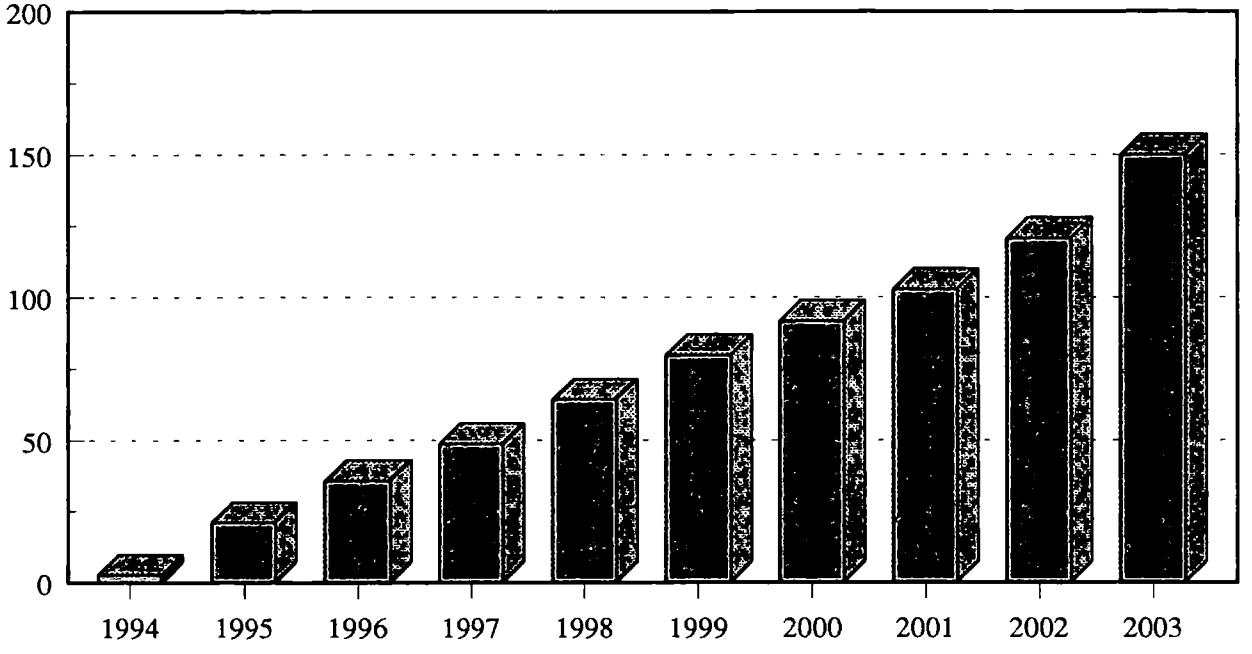
The unemployment rate drops an additional half a point to 5.1% in ten years.

Table 1
United States Employment Summary
LOB Relief Simulation vs. Baseline Forecast
(Millions of Jobs)

				Percent Growth		
	1993	1998	2003	1993-1998	1998-2003	1993-2003
Total Non-Agriculture						
LOB Simulation	109.942	123.911	135.723	2.4	1.8	2.1
Baseline Forecast	109.942	121.599	132.112	2.0	1.7	1.9
Difference	0.000	2.312	3.611			
Mining						
LOB Simulation	0.603	0.650	0.733	1.5	2.4	2.0
Baseline Forecast	0.603	0.615	0.659	0.4	1.4	0.9
Difference	0.000	0.035	0.074			
Construction						
LOB Simulation	4.665	5.709	6.687	4.1	3.2	3.7
Baseline Forecast	4.665	5.499	6.266	3.3	2.6	3.0
Difference	0.000	0.210	0.421			
Manufacturing						
LOB Simulation	18.227	19.535	19.793	1.4	0.3	0.8
Baseline Forecast	18.227	18.931	18.816	0.8	-0.1	0.3
Difference	0.000	0.604	0.977			
Transportation & Utilities						
LOB Simulation	5.810	6.555	6.804	2.4	0.7	1.6
Baseline Forecast	5.810	6.409	6.587	2.0	0.5	1.3
Difference	0.000	0.146	0.217			
Wholesale & Retail Trade						
LOB Simulation	25.537	28.768	30.822	2.4	1.4	1.9
Baseline Forecast	25.537	28.357	30.466	2.1	1.4	1.8
Difference	0.000	0.411	0.356			
Financial Services						
LOB Simulation	6.684	6.919	7.535	0.7	1.7	1.2
Baseline Forecast	6.684	6.793	7.277	0.3	1.4	0.9
Difference	0.000	0.126	0.258			
Other Services						
LOB Simulation	29.674	35.734	42.371	3.8	3.5	3.6
Baseline Forecast	29.674	34.952	41.063	3.3	3.3	3.3
Difference	0.000	0.782	1.308			

Figure 5

Federal Budget Deficit Improvement
LOB Relief Simulation vs. Baseline
Billions of Dollars

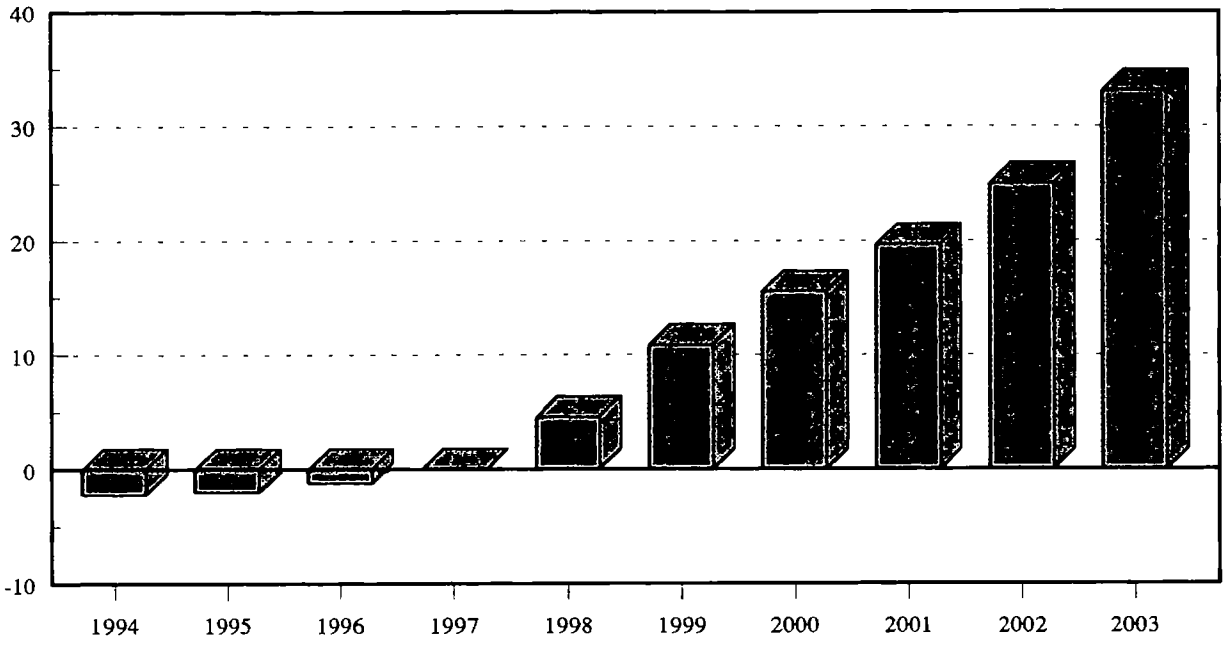


As business activity accelerates, employment increases and incomes rise, boosting tax revenues at all levels of government.

The federal budget deficit improves by an additional $150 billion by 2003.

Figure 6

Merchandise Trade Balance Improvement
LOB Relief Simulation vs. Baseline
(Billions of 1987 Dollars)

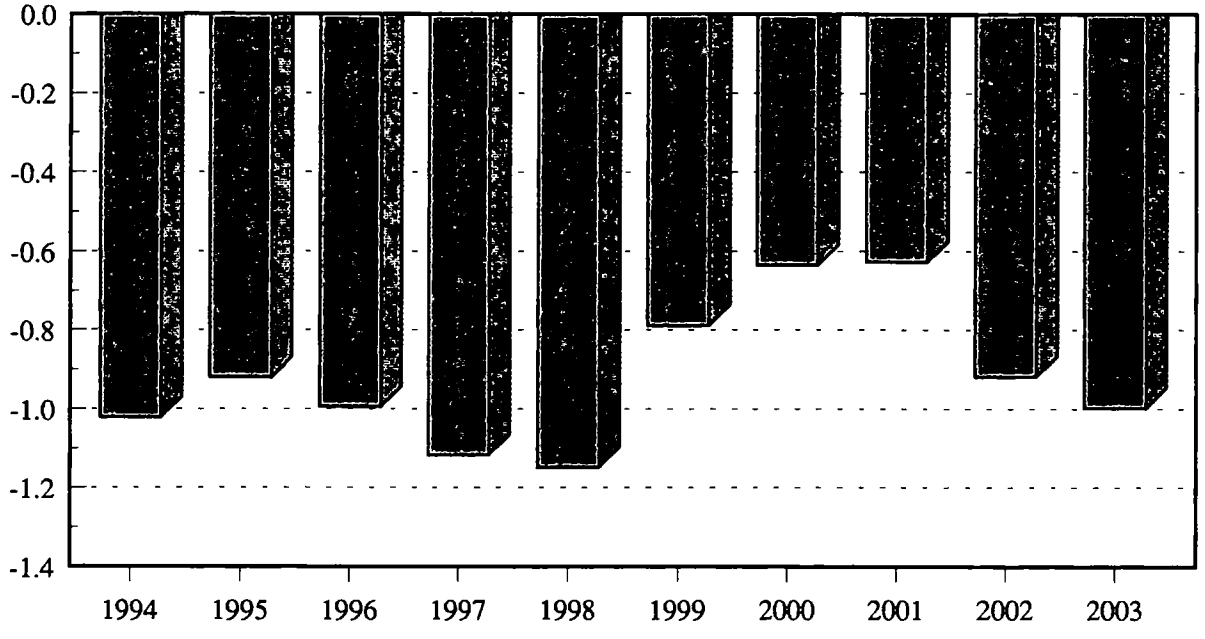


Exports grow faster than imports as domestic manufacturers regain competitive advantages through more efficient processes.

The merchandise trade balance is $33 billion stronger in ten years.

Figure 7

Consumer Price Inflation Rate
LOB Relief Simulation vs. Baseline
(Difference)

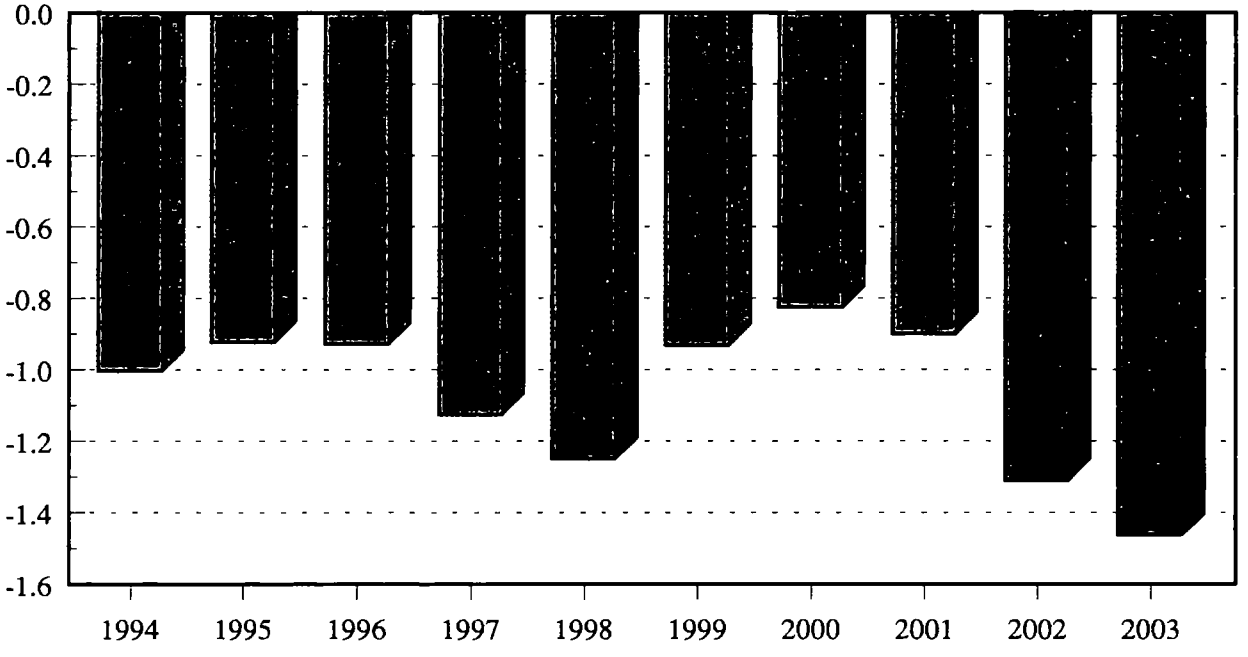


More efficient systems and processes help contain inflation at home, too.

The inflation rate averages almost a full point lower over the next ten years.

Figure 8

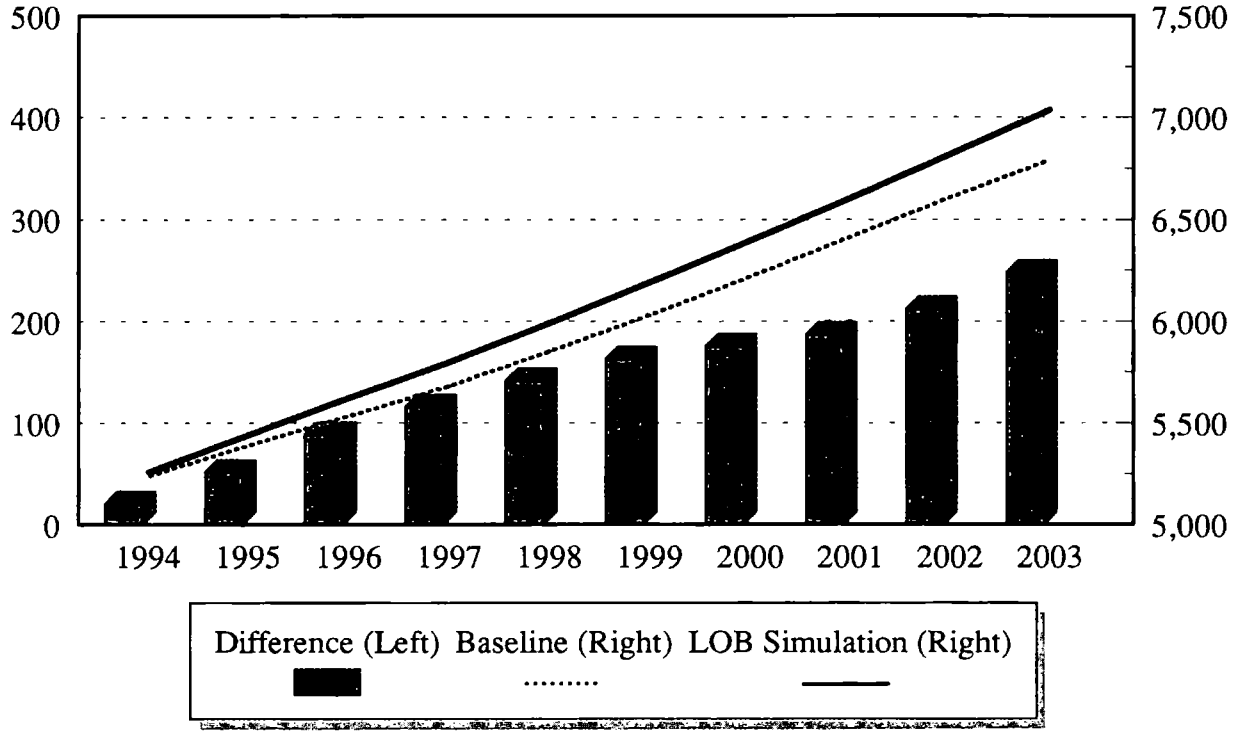
Prime Interest Rate
LOB Relief Simulation vs. Baseline
(Difference)



Lower inflation yields lower interest rates.

The prime rate averages more than 100 basis points lower over the next ten years.

Figure 9
Real Gross Domestic Product Improvement
LOB Relief Simulation vs. Baseline
(Billions of 1987 Dollars)



The economy thrives on more favorable costs, lower interest rates, and higher incomes.

The nation's real GDP expands by almost $250 billion during the next decade.

Table 2
State Employment Summary
LOB Relief Simulation vs. Baseline Forecast
(Thousands of Jobs)

				Percent Growth		
	1993	1998	2003	1993-1998	1998-2003	1993-2003
Alabama						
LOB Simulation	1700.894	1921.652	2100.108	2.5	1.8	2.1
Baseline Forecast	1700.894	1884.767	2041.994	2.1	1.6	1.8
Difference	0.000	36.885	58.114			
Percent Diff.	0.0	2.0	2.8			
Alaska						
LOB Simulation	248.834	276.072	312.248	2.1	2.5	2.3
Baseline Forecast	248.834	271.479	303.698	1.8	2.3	2.0
Difference	0.000	4.593	8.550			
Percent Diff.	0.0	1.7	2.8			
Arkansas						
LOB Simulation	980.970	1108.756	1229.045	2.5	2.1	2.3
Baseline Forecast	980.970	1086.831	1193.001	2.1	1.9	2.0
Difference	0.000	21.925	36.044			
Percent Diff.	0.0	2.0	3.0			
Arizona						
LOB Simulation	1559.928	1864.382	2179.290	3.6	3.2	3.4
Baseline Forecast	1559.928	1825.687	2111.400	3.2	3.0	3.1
Difference	0.000	38.695	67.890			
Percent Diff.	0.0	2.1	3.2			
California						
LOB Simulation	12167.382	14123.913	16092.235	3.0	2.6	2.8
Baseline Forecast	12167.382	13843.412	15621.865	2.6	2.4	2.5
Difference	0.000	280.501	470.370			
Percent Diff.	0.0	2.0	3.0			
Colorado						
LOB Simulation	1635.916	1859.885	2081.678	2.6	2.3	2.4
Baseline Forecast	1635.916	1825.498	2024.930	2.2	2.1	2.2
Difference	0.000	34.387	56.748			
Percent Diff.	0.0	1.9	2.8			
Connecticut						
LOB Simulation	1519.627	1669.460	1772.917	1.9	1.2	1.6
Baseline Forecast	1519.627	1638.775	1727.641	1.5	1.1	1.3
Difference	0.000	30.685	45.276			
Percent Diff.	0.0	1.9	2.6			
Delaware						
LOB Simulation	347.985	382.186	411.299	1.9	1.5	1.7
Baseline Forecast	347.985	375.132	400.405	1.5	1.3	1.4
Difference	0.000	7.054	10.894			
Percent Diff.	0.0	1.9	2.7			

Table 2 (Cont'd)
State Employment Summary
LOB Relief Simulation vs. Baseline Forecast
(Thousands of Jobs)

				Percent Growth		
	1993	1998	2003	1993-1998	1998-2003	1993-2003
District of Columbia						
LOB Simulation	676.920	720.218	751.288	1.2	0.8	1.0
Baseline Forecast	676.920	713.068	741.571	1.0	0.8	0.9
Difference	0.000	7.150	9.717			
Percent Diff.	0.0	1.0	1.3			
Florida						
LOB Simulation	5475.076	6594.477	7659.486	3.8	3.0	3.4
Baseline Forecast	5475.076	6457.404	7428.151	3.4	2.8	3.1
Difference	0.000	137.073	231.335			
Percent Diff.	0.0	2.1	3.1			
Georgia						
LOB Simulation	3056.496	3499.805	3897.714	2.7	2.2	2.5
Baseline Forecast	3056.496	3431.938	3788.283	2.3	2.0	2.2
Difference	0.000	67.867	109.431			
Percent Diff.	0.0	2.0	2.9			
Hawaii						
LOB Simulation	551.517	615.110	680.895	2.2	2.1	2.1
Baseline Forecast	551.517	605.370	665.764	1.9	1.9	1.9
Difference	0.000	9.740	15.131			
Percent Diff.	0.0	1.6	2.3			
Idaho						
LOB Simulation	427.986	474.729	506.780	2.1	1.3	1.7
Baseline Forecast	427.986	466.597	494.928	1.7	1.2	1.5
Difference	0.000	8.132	11.852			
Percent Diff.	0.0	1.7	2.4			
Illinois						
LOB Simulation	5267.112	5879.924	6265.664	2.2	1.3	1.8
Baseline Forecast	5267.112	5770.154	6105.441	1.8	1.1	1.5
Difference	0.000	109.770	160.223			
Percent Diff.	0.0	1.9	2.6			
Indiana						
LOB Simulation	2578.861	2913.532	3124.603	2.5	1.4	1.9
Baseline Forecast	2578.861	2854.901	3036.670	2.1	1.2	1.6
Difference	0.000	58.631	87.933			
Percent Diff.	0.0	2.1	2.9			

Table 2 (Cont'd)
State Employment Summary
LOB Relief Simulation vs. Baseline Forecast
(Thousands of Jobs)

				Percent Growth		
	1993	1998	2003	1993-1998	1998-2003	1993-2003
Iowa						
LOB Simulation	1255.410	1375.677	1464.799	1.8	1.3	1.6
Baseline Forecast	1255.410	1352.007	1430.186	1.5	1.1	1.3
Difference	0.000	23.670	34.613			
Percent Diff.	0.0	1.8	2.4			
Kansas						
LOB Simulation	1116.290	1220.448	1302.061	1.8	1.3	1.6
Baseline Forecast	1116.290	1200.141	1271.978	1.5	1.2	1.3
Difference	0.000	20.307	30.083			
Percent Diff.	0.0	1.7	2.4			
Kentucky						
LOB Simulation	1537.066	1753.777	1961.088	2.7	2.3	2.5
Baseline Forecast	1537.066	1718.526	1901.908	2.3	2.0	2.2
Difference	0.000	35.251	59.180			
Percent Diff.	0.0	2.1	3.1			
Louisiana						
LOB Simulation	1633.289	1815.568	2006.411	2.1	2.0	2.1
Baseline Forecast	1633.289	1783.340	1952.866	1.8	1.8	1.8
Difference	0.000	32.228	53.545			
Percent Diff.	0.0	1.8	2.7			
Maine						
LOB Simulation	521.134	583.006	640.831	2.3	1.9	2.1
Baseline Forecast	521.134	572.457	624.077	1.9	1.7	1.8
Difference	0.000	10.549	16.754			
Percent Diff.	0.0	1.8	2.7			
Maryland						
LOB Simulation	2069.562	2263.797	2446.546	1.8	1.6	1.7
Baseline Forecast	2069.562	2228.155	2392.847	1.5	1.4	1.5
Difference	0.000	35.642	53.699			
Percent Diff.	0.0	1.6	2.2			
Massachusetts						
LOB Simulation	2798.253	3096.479	3292.956	2.0	1.2	1.6
Baseline Forecast	2798.253	3040.571	3212.672	1.7	1.1	1.4
Difference	0.000	55.908	80.284			
Percent Diff.	0.0	1.8	2.5			
Michigan						
LOB Simulation	3977.548	4403.191	4720.384	2.1	1.4	1.7
Baseline Forecast	3977.548	4321.890	4599.467	1.7	1.3	1.5
Difference	0.000	81.301	120.917			
Percent Diff.	0.0	1.9	2.6			

Table 2 (Cont'd)
State Employment Summary
LOB Relief Simulation vs. Baseline Forecast
(Thousands of Jobs)

				Percent Growth		
	1993	1998	2003	1993-1998	1998-2003	1993-2003
Minnesota						
LOB Simulation	2229.875	2515.377	2755.463	2.4	1.8	2.1
Baseline Forecast	2229.875	2467.798	2681.266	2.0	1.7	1.9
Difference	0.000	47.579	74.197			
Percent Diff.	0.0	1.9	2.8			
Mississippi						
LOB Simulation	981.679	1085.125	1173.147	2.0	1.6	1.8
Baseline Forecast	981.679	1065.343	1142.028	1.6	1.4	1.5
Difference	0.000	19.782	31.119			
Percent Diff.	0.0	1.9	2.7			
Missouri						
LOB Simulation	2336.458	2591.961	2791.138	2.1	1.5	1.8
Baseline Forecast	2336.458	2544.807	2720.294	1.7	1.3	1.5
Difference	0.000	47.154	70.844			
Percent Diff.	0.0	1.9	2.6			
Montana						
LOB Simulation	322.866	346.015	365.815	1.4	1.1	1.3
Baseline Forecast	322.866	341.058	358.853	1.1	1.0	1.1
Difference	0.000	4.957	6.962			
Percent Diff.	0.0	1.5	1.9			
Nebraska						
LOB Simulation	751.832	828.570	889.412	2.0	1.4	1.7
Baseline Forecast	751.832	814.871	869.135	1.6	1.3	1.5
Difference	0.000	13.699	20.277			
Percent Diff.	0.0	1.7	2.3			
Nevada						
LOB Simulation	663.118	830.987	920.010	4.6	2.1	3.3
Baseline Forecast	663.118	811.351	890.711	4.1	1.9	3.0
Difference	0.000	19.636	29.299			
Percent Diff.	0.0	2.4	3.3			
New Hampshire						
LOB Simulation	491.054	541.096	572.555	2.0	1.1	1.5
Baseline Forecast	491.054	531.311	558.554	1.6	1.0	1.3
Difference	0.000	9.785	14.001			
Percent Diff.	0.0	1.8	2.5			
New Jersey						
LOB Simulation	3464.096	3850.388	4095.445	2.1	1.2	1.7
Baseline Forecast	3464.096	3782.634	3999.240	1.8	1.1	1.4
Difference	0.000	67.754	96.205			
Percent Diff.	0.0	1.8	2.4			

Table 2 (Cont'd)
State Employment Summary
LOB Relief Simulation vs. Baseline Forecast
(Thousands of Jobs)

				Percent Growth		
	1993	1998	2003	1993-1998	1998-2003	1993-2003
New Mexico						
LOB Simulation	601.451	672.774	731.071	2.3	1.7	2.0
Baseline Forecast	601.451	661.880	714.345	1.9	1.5	1.7
Difference	0.000	10.894	16.726			
Percent Diff.	0.0	1.6	2.3			
New York						
LOB Simulation	7693.382	8355.990	8956.051	1.7	1.4	1.5
Baseline Forecast	7693.382	8221.167	8753.445	1.3	1.3	1.3
Difference	0.000	134.823	202.605			
Percent Diff.	0.0	1.6	2.3			
North Carolina						
LOB Simulation	3197.979	3652.873	4045.179	2.7	2.1	2.4
Baseline Forecast	3197.979	3577.754	3924.829	2.3	1.9	2.1
Difference	0.000	75.119	120.350			
Percent Diff.	0.0	2.1	3.1			
North Dakota						
LOB Simulation	280.287	302.044	319.942	1.5	1.2	1.3
Baseline Forecast	280.287	297.650	313.480	1.2	1.0	1.1
Difference	0.000	4.394	6.462			
Percent Diff.	0.0	1.5	2.1			
Ohio						
LOB Simulation	4889.331	5463.836	5806.131	2.2	1.2	1.7
Baseline Forecast	4889.331	5359.580	5655.197	1.9	1.1	1.5
Difference	0.000	104.256	150.934			
Percent Diff.	0.0	1.9	2.7			
Oklahoma						
LOB Simulation	1213.132	1351.638	1454.474	2.2	1.5	1.8
Baseline Forecast	1213.132	1328.364	1419.010	1.8	1.3	1.6
Difference	0.000	23.274	35.464			
Percent Diff.	0.0	1.8	2.5			
Oregon						
LOB Simulation	1291.622	1464.512	1661.818	2.5	2.6	2.6
Baseline Forecast	1291.622	1437.227	1615.624	2.2	2.4	2.3
Difference	0.000	27.285	46.194			
Percent Diff.	0.0	1.9	2.9			
Pennsylvania						
LOB Simulation	5110.452	5595.233	6005.397	1.8	1.4	1.6
Baseline Forecast	5110.452	5494.061	5852.925	1.5	1.3	1.4
Difference	0.000	101.172	152.472			
Percent Diff.	0.0	1.8	2.6			

Table 2 (Cont'd)
State Employment Summary
LOB Relief Simulation vs. Baseline Forecast
(Thousands of Jobs)

				Percent Growth		
	1993	1998	2003	1993-1998	1998-2003	1993-2003
Rhode Island						
LOB Simulation	422.509	456.276	478.747	1.5	1.0	1.3
Baseline Forecast	422.509	448.332	467.388	1.2	0.8	1.0
Difference	0.000	7.944	11.359			
Percent Diff.	0.0	1.8	2.4			
South Carolina						
LOB Simulation	1567.069	1792.527	1932.121	2.7	1.5	2.1
Baseline Forecast	1567.069	1756.410	1877.264	2.3	1.3	1.8
Difference	0.000	36.117	54.857			
Percent Diff.	0.0	2.1	2.9			
South Dakota						
LOB Simulation	307.032	333.424	359.926	1.7	1.5	1.6
Baseline Forecast	307.032	328.232	352.024	1.3	1.4	1.4
Difference	0.000	5.192	7.902			
Percent Diff.	0.0	1.6	2.2			
Tennessee						
LOB Simulation	2266.128	2565.792	2853.280	2.5	2.1	2.3
Baseline Forecast	2266.128	2514.851	2770.040	2.1	2.0	2.0
Difference	0.000	50.941	83.240			
Percent Diff.	0.0	2.0	3.0			
Texas						
LOB Simulation	7365.863	8280.740	8996.215	2.4	1.7	2.0
Baseline Forecast	7365.863	8127.146	8759.372	2.0	1.5	1.7
Difference	0.000	153.594	236.843			
Percent Diff.	0.0	1.9	2.7			
Utah						
LOB Simulation	786.664	905.746	1011.975	2.9	2.2	2.6
Baseline Forecast	786.664	888.452	983.892	2.5	2.1	2.3
Difference	0.000	17.294	28.083			
Percent Diff.	0.0	1.9	2.9			
Vermont						
LOB Simulation	255.594	293.922	324.339	2.8	2.0	2.4
Baseline Forecast	255.594	288.148	315.287	2.4	1.8	2.1
Difference	0.000	5.774	9.052			
Percent Diff.	0.0	2.0	2.9			
Virginia						
LOB Simulation	2869.850	3242.413	3495.464	2.5	1.5	2.0
Baseline Forecast	2869.850	3183.713	3407.462	2.1	1.4	1.7
Difference	0.000	58.700	88.002			
Percent Diff.	0.0	1.8	2.6			

Table 2 (Cont'd)
State Employment Summary
LOB Relief Simulation vs. Baseline Forecast
(Thousands of Jobs)

				Percent Growth		
	1993	1998	2003	1993-1998	1998-2003	1993-2003
Washington						
LOB Simulation	2235.772	2514.037	2831.149	2.4	2.4	2.4
Baseline Forecast	2235.772	2468.719	2755.014	2.0	2.2	2.1
Difference	0.000	45.318	76.135			
Percent Diff.	0.0	1.8	2.8			
West Virginia						
LOB Simulation	641.583	700.115	746.341	1.8	1.3	1.5
Baseline Forecast	641.583	687.853	727.683	1.4	1.1	1.3
Difference	0.000	12.262	18.658			
Percent Diff.	0.0	1.8	2.6			
Wisconsin						
LOB Simulation	2395.337	2742.326	3017.022	2.7	1.9	2.3
Baseline Forecast	2395.337	2686.381	2928.536	2.3	1.7	2.0
Difference	0.000	55.945	88.486			
Percent Diff.	0.0	2.1	3.0			
Wyoming						
LOB Simulation	206.170	218.755	233.113	1.2	1.3	1.2
Baseline Forecast	206.170	215.334	227.413	0.9	1.1	1.0
Difference	0.000	3.421	5.700			
Percent Diff.	0.0	1.6	2.5			

Table 3
Macroeconomic Forecast Comparison
LOB Relief Simulation vs. Baseline Forecast

REAL GDP AND ITS MAJOR COMPONENTS
(Billions of 1987 $)

				Percent Growth		
	1993	1998	2003	1993-1998	1998-2003	1993-2003
Gross Domestic Product						
LOB Simulation	5075.2	5984.7	7034.3	3.4	3.3	3.3
Baseline Forecast	5075.2	5843.8	6787.0	2.9	3.0	2.9
Difference	0.0	140.9	247.3			
Personal Consumption Expenditures						
LOB Simulation	3409.0	3981.8	4528.3	3.2	2.6	2.9
Baseline Forecast	3409.0	3883.4	4391.2	2.6	2.5	2.6
Difference	0.0	98.4	137.1			
Business Fixed Investment						
LOB Simulation	552.8	783.8	1027.3	7.2	5.6	6.4
Baseline Forecast	552.8	765.4	975.1	6.7	5.0	5.8
Difference	0.0	18.4	52.2			
Residential Investment						
LOB Simulation	215.7	267.8	301.1	4.4	2.4	3.4
Baseline Forecast	215.7	257.2	281.4	3.6	1.8	2.7
Difference	0.0	10.6	19.7			
Exports						
LOB Simulation	591.0	871.1	1237.3	8.1	7.3	7.7
Baseline Forecast	591.0	854.7	1195.8	7.7	6.9	7.3
Difference	0.0	16.4	41.5			
Imports						
LOB Simulation	642.5	871.9	1109.3	6.3	4.9	5.6
Baseline Forecast	642.5	860.0	1100.9	6.0	5.1	5.5
Difference	0.0	11.9	8.4			

Table 3 (Cont'd)
Macroeconomic Forecast Comparison
LOB Relief Simulation vs. Baseline Forecast

				Percent Growth		
	1993	1998	2003	1993-1998	1998-2003	1993-2003
KEY INDEXES						
Industrial Production, 1987 = 100						
LOB Simulation	113.3	138.5	160.1	4.1	2.9	3.5
Baseline Forecast	113.3	134.6	153.0	3.5	2.6	3.0
Difference	0.0	3.9	7.1			
GDP Deflator, 1987 = 100						
LOB Simulation	124.1	138.7	156.0	2.2	2.4	2.3
Baseline Forecast	124.1	145.3	170.2	3.2	3.2	3.2
Difference	0.0	-6.6	-14.2			
Consumer Price Index, 1982-84 = 100						
LOB Simulation	144.9	166.2	193.0	2.8	3.0	2.9
Baseline Forecast	144.9	174.8	211.0	3.8	3.8	3.8
Difference	0.0	-8.6	-18.0			
OTHER KEY VARIABLES						
Auto Sales, Million Units						
LOB Simulation	9.0	13.1	14.4	7.8	1.9	4.8
Baseline Forecast	9.0	11.4	11.9	4.8	0.9	2.8
Difference	0.0	1.7	2.5			
Housing Starts, Million Units						
LOB Simulation	1.3	1.6	1.7	4.2	2.4	3.3
Baseline Forecast	1.3	1.5	1.6	2.9	1.3	2.1
Difference	0.0	0.1	0.1			
Unemployment Rate, Percent						
LOB Simulation	6.9	5.7	5.1	-3.7	-2.2	-3.0
Baseline Forecast	6.9	6.4	5.6	-1.5	-2.6	-2.1
Difference	0.0	-0.7	-0.5			

CORPORATE OVERVIEW
The WEFA Group

The WEFA Group was formed through the 1987 merger of two leading international econometric consulting firms, Wharton Econometric Forecasting Associates and Chase Econometrics.

Founded in 1963 by Lawrence R. Klein, winner of the 1980 Nobel Prize in Economics, Wharton Econometric Forecasting Associates was the original economic forecasting firm started at the request of business leaders who wanted objective, independent forecasts for business planning and analysis. Over the years, WEFA built its reputation on academic standards, quality research, and forecast accuracy. In the 1980s, WEFA added technology leadership to its impressive credentials.

Chase Econometrics, an independent subsidiary of Chase Manhattan Bank, provided unequaled planning support to financial institutions, corporations, and government agencies for over 15 years. Chase Econometrics' research covered every aspect of the U.S. national and regional economy, exploring key industries in depth. The firm offered a tradition of client support unmatched in the economic consulting industry.

The WEFA Group has always been at the forefront of economic consulting, forecasting, and analysis.

In 1963, WEFA develops the first commercially available, Quarterly Econometric Model of the U.S. Economy.

In 1968, Lawrence Klein is the first to analyze Global Economic Interdependence with Project Link.

In 1969, WEFA introduces its Long-Term Industry and Mexican Model Services

In 1972, WEFA launches Latin America Service.

In 1974, WEFA develops State and Local Area Models.

In 1976, WEFA produces model of the Agricultural Industry.

In 1977, WEFA develops the first commercially Trade-Linked World Model.

In 1977, WEFA begins its analysis on Eastern European Economies.

In 1978, WEFA holds its First World Model Outlook Meeting in New York.

In 1980, Lawrence Klein wins the Nobel Price in economics.

In 1981, Middle East, Asia, and Foreign Exchange Services are born.

In 1983, WEFA pioneers the first Bilateral Trade Service.

In 1984, WEFA pioneers the first PC-Model of the U.S. Economy.

In 1985, WEFA begins its Automotive Service.

In 1985, WEFA launches PC AREMOS - the first fully integrated software for economists, planners, and analysts.

In 1985, Steven McNees of Federal Reserve Bank of Boston finds WEFA forecasts to be most accurate.

In 1989, WEFA develops its Resource Planning Service to study and forecast market potentials by micro industries and region.

In 1989, WEFA forecasts are again found to be most accurate by the Rand Corporation.

In 1990, WEFA pioneers the first global coverage of World Travel and Tourism.

In 1991, WEFA expands its world energy analysis to include Eastern Europe and Russia.

Over the years, The WEFA Group's long-standing association with the academic world has ensured the integrity of its research and analysis. WEFA maintains this devotion to academic excellence while working closely with its clients to solve practical business planning problems. Senior staff members of the company have shown a strong commitment to education by working closely with recognized experts in the academic community, by teaching undergraduate and graduate courses in economics, by speaking to audiences around the world on economic issues, by writing articles and editorial pieces on current economic topics, and by providing commentary and analysis to the news media on changes in economic conditions.

The WEFA Group operates throughout North America and Europe, with affiliates in Latin America and the Far East. Today, clients in 45 countries look to The WEFA Group for a broad range of services, professional research and consulting support on everything from the Soviet agricultural outlook to the demand for computer hardware and software by industry by country in Europe to the changing dynamics in Yellow Pages advertising. WEFA's analysts are frequently called upon to provide congressional testimony and judicial expert opinion.