

Finance & Insurance Industries in New Hampshire

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Table of Contents

- Executive Summary iii

- Introduction 1
 - Classifications & Content 2
 - Recent Trends in Covered Employment. 3
 - Gauging the Economic Impact using REMI 5
 - Counterfactual Study 7
 - Industry Share 8
 - Distribution by County 10

- The Value of the Finance and Insurance Sector12
 - Difference in Industry Employment 12
 - Difference in Occupational Employment 12
 - Difference in Wages & Personal Income 15
 - Difference in Gross Regional Product/
Gross State Product. 18
 - Difference in Government Finances 18
 - Difference in Population and Labor Force 20

Executive Summary

Despite a downturn in employment for the *Finance and insurance* sector in the early 1990s due to the reorganization of the banking industry in New Hampshire, by the turn of the century this industry had shown a strong recovery. Even the 2001 recession didn't seem to slow its expansion. The majority of the growth has been in the *Securities, commodity contracts, and other financial investments* subsector, fueled by an increasing number of babyboomers saving and investing for their retirement, and an ongoing shift nationwide from retirement plans based on pensions to plans based on defined contributions. Defined contributions retirement plans require the individual to make some kind of investment decisions and are typically managed by a security brokerage firm.

In New Hampshire's short-term employment projections from fourth quarter 2004 to fourth quarter 2006, *Personal financial advisors* and *Securities, commodities, financial services sales agents* emerged as the two fastest growing occupations, growing at 18.0 percent and 12.5 percent, respectively, over the two-year period.

In 2004, the *Finance and insurance* sector in New Hampshire employed about 27,600, accounting for 5.2 percent of the state's jobs covered by unemployment insurance. Preliminary numbers for 2005 show that employment in this sector continues to grow faster than the statewide average.



This paper attempts to gauge how much the *Finance and insurance* sector contributes to the state's economy, using a 10-county New Hampshire econometric model. The model is based on employment numbers from the Bureau of Economic Analysis, of the U.S. Department of Commerce. This series includes estimates of self-employment. For the purpose of estimating the full contribution of *Finance and insurance* to the statewide economy, it is an advantage to include the self-employed, because a fairly large portion of the jobs in this sector are based on commission and not necessarily included in covered employment counts. In addition, the model calculates the secondary jobs generated by the spending of workers in the *Finance and insurance* sector and by the sector's purchases.

Finance & Insurance Industries in New Hampshire

Some highlights of the study's findings are:

- ❖ On average, over a ten-year projection period, the *Finance and insurance* sector spawns more than 60,000 jobs in the New Hampshire economy, almost double the number of covered workers directly employed in the sector.

Of these jobs, 64.0 percent are from direct effects: 17.8 percent in *Banking and trusts*, 18.5 percent in *Securities and investments* and 27.7 percent in *Insurance*. The remaining 36.0 percent are created indirectly or induced in all other industries.

- ❖ About one-third of the *Finance and insurance* jobs are located in Hillsborough County, and another third are located in Rockingham and Merrimack counties, combined.
- ❖ Most of the jobs generated by the *Finance and insurance* sector are *Sales, office, and administrative* occupations. On a detailed level, *Information and record clerk*, *Financial specialist*, and *Sales representatives, services* are the occupations most common in the sector.

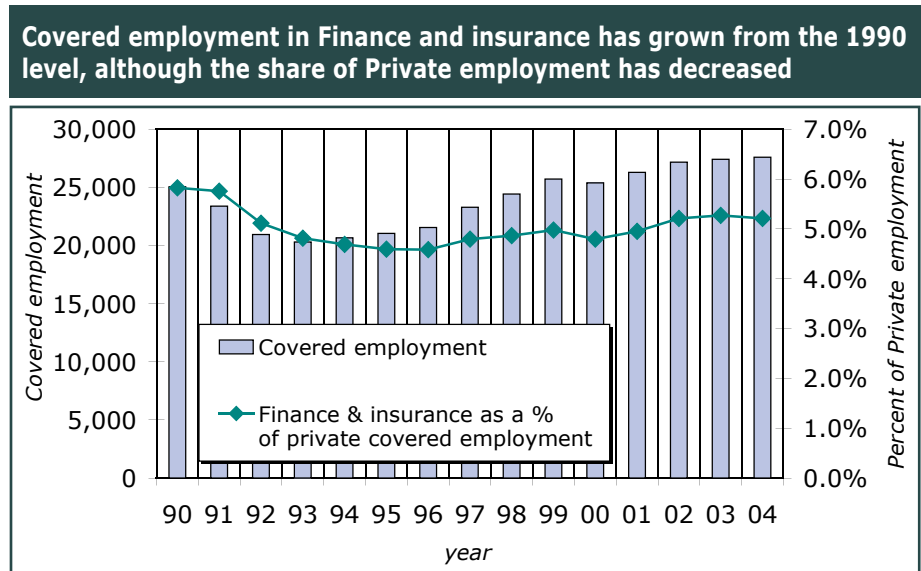
[To complement the our econometric model, we used the New Hampshire Occupational Employment and Wage May 2004 survey. This data showed that jobs in the *Finance and insurance* sector, on average, pay well above the average for the state.]

- ❖ The *Finance and insurance* sector, statewide, contributes \$1,400 in nominal dollars to the annual wage rate, accounting for 3.4 percent of wages in 2011.
- ❖ In 2005, the *Finance and insurance* sector contributed \$4.7 billion in chained 2000 dollars to New Hampshire's Gross State Product (GSP), accounting for 9.4 percent of the total GSP.
- ❖ According to the model, the *Finance and insurance* sector generates significant government revenues while adding little to government expenses. So not only does the *Finance and insurance* sector create jobs, both directly and indirectly, but it also provides state government with a net boost to the bottom line.

Even though the employment level in *Finance and insurance* in New Hampshire is smaller than that in either *Retail* or *Manufacturing*, and its impact less recognized than the more publicized tourism and high-tech related industries, this sector contributes a large share of employment and wages to the New Hampshire economy. Continued job growth in this sector relies on the availability of qualified and skilled workers for businesses and continued demand for its services. This demand is largely driven by population, but is also affected by changes in government regulations.

Introduction

The *Finance and insurance* sector has long played an important role in the New Hampshire economy. In 2004, this sector provided about 27,600 covered jobs¹ in New Hampshire, representing 5.2 percent of the state’s private covered employment. But the role of finance and insurance businesses goes beyond the direct employment they create. Most businesses and individuals depend on the products and services that this sector provides such as business and personal loans, mortgages, and investments as well as health and life insurance, and property and casualty insurance.



The role that banks play in the economy is often taken for granted. It is not until a major failure occurs, such as happened in New Hampshire in the early 1990s, that it becomes evident how crucial the banking industry is. At that time the state’s banking community was in such disarray that the Federal Deposit Insurance Commission (FDIC) stepped in and reorganized the state’s five largest banks.

Among insurance carriers, New Hampshire’s life, and property and casualty insurance companies sell their products well beyond the state’s boundaries. A couple of these regional life, and property and casualty insurance companies were originally founded in New Hampshire between seventy and a hundred years ago, and these companies still have strong ties to the state.

The importance of the *Finance and insurance* sector in any economy cannot be ignored. To imagine the New Hampshire economy functioning without this sector is not plausible. But, to measure the full economic impact that this sector has on the New Hampshire economy, we removed the sector using our econometric model. We created a forecast where all *Finance and insurance* employment was taken out.

¹ Covered employment are jobs covered by New Hampshire Unemployment Insurance Law and reported quarterly by employers to New Hampshire Employment Security.

Finance & Insurance Industries in New Hampshire

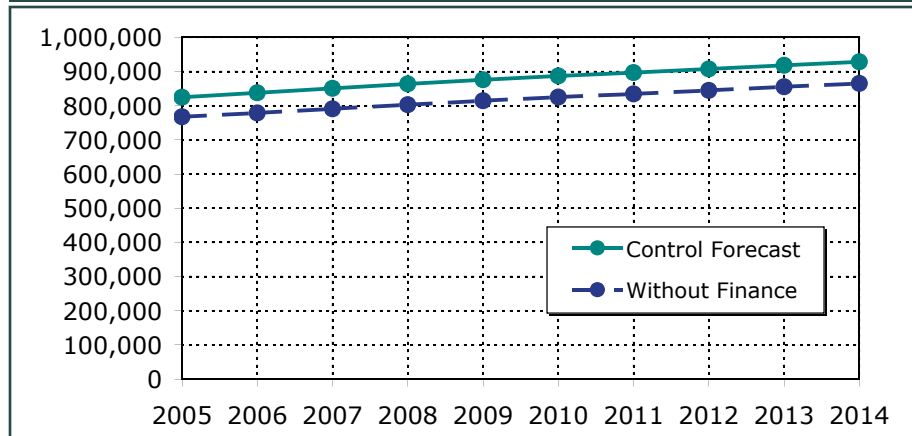
The difference between the results of this simulation and a control forecast (including *Finance and insurance*) is assumed to represent the economic value that this sector contributes to the state's economy.

Classification & Content

The *Finance and insurance* sector as defined by the North American Industry Classification System (NAICS) is comprised of the following five subsectors:

- ❖ 521: *Monetary authorities* – consists of central banks.² No central banks are located in New Hampshire as the state is part of the New England Region of the Federal Reserve System, serviced and monitored by the Federal Reserve Bank of Boston.

Employment levels without Finance and insurance would average 61,000 fewer jobs; 7.0 percent fewer - during the period



- ❖ 522: *Credit intermediation and related activities* – includes commercial banking, savings institutions, and credit unions as well as mortgage brokerage firms. By the end of 2004, there were 10 commercial banks and 17 savings institutions operating through 400 branches in New Hampshire.³ In addition, 27 credit unions are present in the state.⁴
- ❖ 523: *Securities, commodity contracts, investments* – includes securities brokers, investment firms, and mutual funds management firms. According to 2004 County Business Patterns⁵, three quarters of the *Security, commodity contracts, and like activity* firms in New Hampshire have 1 – 4 employees and only two firms have more than 100 employees.

² A central bank is a national bank that operates to establish monetary policy to control money supply and interest. The Federal Reserve Bank System, represented by its 12 regional banks and often referred to as the Federal Reserve, is the central bank of the United States.

³ Federal Deposit Insurance Corporation (FDIC). Accessed on July 10, 2006. <www2.fdic.gov/SDI/SOB/pdf/2005_soball.pdf>.

⁴ National Credit Union Administration (NCUA). Accessed on July 14, 2006. <www.ncua.gov/ReportsAndPlans/statistics/yearend2004.pdf>.

⁵ County Business Patterns, <<http://www.census.gov/epcd/cbp/view/cbpview.html>>, County Business Patterns is an annual series that provides subnational economic data by industry. Businesses use the data for analyzing market potential, measuring the effectiveness of sales and advertising programs, setting sales quotas, and developing budgets. Government agencies use the data for administration and planning.

Finance & Insurance Industries in New Hampshire

- ❖ 524: *Insurance carriers and related services* – includes life, health, and medical insurance carriers as well as carriers of property and casualty insurance and reinsurance. Insurance brokerage agencies and claims adjusters are also included. Again, according to 2004 County Business Patterns, about 60 percent of insurance businesses in New Hampshire employ 1 – 4 workers and close to 30 percent employ 5 – 19 workers. Only 16 firms have more than 100 employees. In this subsector, the large majority of the smaller firms were insurance agencies, whereas 14 of the 16 firms with more than 100 employees were insurance carriers.
- ❖ 525: *Funds, trusts, and other financial vehicles* – consist of pension funds, trusts and real estate trusts. This subsector is very small in New Hampshire.

County Business Patterns 2004								
Industry Code	Industry Code Description	Total Establishments	Establishments Size					
			1-4	5-9	10-19	20-99	100-499	> 499
52	Finance & insurance	1,896	1,007	448	235	175	25	6
522	Credit intermediation & related activities	788	294	249	143	89	13	0
523	Security, commodity contracts & like activity	365	271	53	19	20	2	0
524	Insurance carriers & related activities	739	439	145	73	66	10	6
5241	Insurance carriers	177	82	28	21	32	8	6
5242	Agencies & other insurance related activities	562	357	117	52	34	2	0
525	Funds, trusts, & other financial vehicles (part)	4	3	1	0	0	0	0

Because *Funds, trusts and other financial vehicles* and *Monetary authorities* (The Federal Reserve) have little to no employment in New Hampshire, these two subsectors are not included in the further detailed analysis of covered employment.

Recent Trends in Covered Employment

All three of the primary subsectors (522, 523, 524) in *Finance and insurance* have seen major changes since 1990. The FDIC reorganization of New Hampshire's banks was just the beginning. Since then, changes in national and state banking regulations led to acquisitions and mergers resulting in the ownership of New Hampshire's largest banks migrating out of state and in some cases out of the country. Responding to a perceived need for local banking, some of the state's mutual savings banks have recently started to expand, but, by and large, the bulk of administrative functions of banks has left the state. These employment changes can be seen in the industry group *Depository credit intermediation* (NAICS 5221). From 1990 to 2000, employment in this industry group, containing commercial banking, savings institutions, and credit unions, declined from more than 10,300 to just below 5,700. The trend was then reversed, and employment rebounded to just below 6,500 by 2003. In 2004, employment in *Depository credit intermediation* (NAICS 5221) declined

Finance & Insurance Industries in New Hampshire

to about 6,340, suggesting that employment in banking is leveling off.

Overall, covered jobs in *Credit intermediation and related activities* (NAICS 522) reached the bottom of its trough in 1996 with about 7,550 jobs, and by 2003 covered employment had risen to 9,260 positions. In 2004, this subsector's employment leveled off at 9,200. Most of the growth this subsector has experienced has been in *Activities related to credit intermediation* (NAICS 5223). This industry group accounted for barely 150 jobs in 1990. In 1995, it had increased to 242, after which it started to expand rapidly; by 2004 its workforce had swollen to about 1,400 jobs. Credit card processing services and mortgage brokers are the two areas of employment within this industry group that have contributed to the growth. As mentioned above, *Depository credit intermediation* (NAICS 5221) experienced severe cutbacks in the 1990s but recovered slightly from 2000 onwards. Finally, employment in *Nondepository credit intermediation* (NAICS 5222), the third industry group under *Credit intermediation and related activities* (NAICS 522), has grown at a more moderate pace from about 950 in the early nineties to more than 1,450 in 2004. This industry group consists of credit card issuing and sales businesses and consumer lending businesses.

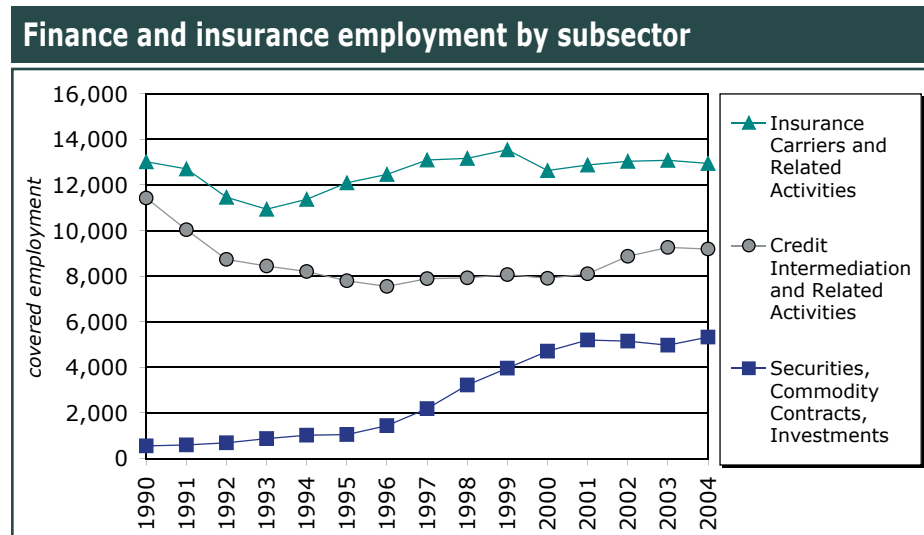


Although covered employment in *Insurance carriers and related activities* dipped below 12,000 jobs from 1992 to 1994, since then employment in this subsector has stayed relatively stable at around 13,000 workers. The decline was mainly caused by a dip in *Insurance carriers* (NAICS 5241) employment. As with the banking industry, insurance carriers have experienced several rounds of consolidation, mergers, and acquisitions that have seen the ownership of many companies leave the state. Insurance agencies have become larger and larger, as well, with mergers and acquisitions. Many have been acquired by major interstate insurance agencies. Employment in *Insurance agencies, brokerages, and related activities* (NAICS 5242) dipped from more than 4,000 to about 3,420 in 1996, but has been on a steady increase since then, reflecting New Hampshire population growth.

The third leg of New Hampshire's *Finance and insurance* stool, *Securities, commodity contracts, and other financial investments and related activities*, has seen a meteoric rise from 554 jobs in 1990 to 5,323 in 2004. The vast majority of employment in this subsector is in *Securities and commodity contracts brokerage* (NAICS 5231) and *Other financial investment activities*

Finance & Insurance Industries in New Hampshire

(NAICS 5239). In addition to relocation of activities from Massachusetts to southern New Hampshire, the growth in the securities industries coincides with the high population growth the state has experienced over the last decade as well as an aging population, more concerned about saving for retirement. Over the last decade or so, there has



been a change, nationwide, in the types of retirement plans offered by employers. Instead of offering lifetime pensions (defined benefit plans), the vast majority of private companies today – if offering a retirement plan – offer some type of defined contribution plan [401(K) plan, 403(b) plan, SEP-IRA, profit sharing etc.].⁶ This change has increased the demand for financial services. Unlike the participant in a defined benefit plan, a participant in a defined contribution plan is required to make investment decisions, typically managed by a security brokerage firm. A combination of these factors has seen Boston-based Fidelity Investments, which first opened a New Hampshire facility in 1996, expand significantly and grow to the state's fifth largest private employer by 2006, according to the New Hampshire Book of Lists.⁷

Gauging the Economic Impact Using REMI

To estimate the total economic impact of the *Finance and insurance* sector on the Granite State's economy, the Economic Labor Market Information Bureau (ELMIB) of New Hampshire Employment Security, used its econometric model.⁸ This model was developed by Regional Economic Models, Inc. (REMI).

⁶ "The data [Survey of Income and Program (SIPP) Data, U.S. Bureau of Census] also demonstrate the well-documented shift away from "traditional" defined benefit pension plans and toward defined contribution plans, such as 401(k) plans in the private sector. A defined contribution plan was the primary retirement plan for 57.7 percent of participants in 2003, up from 51.5 percent in 1998 and more than double the 1988 level, the EBRI study reported. Correspondingly, 40.5 percent reported a defined benefit pension plan was their primary retirement plan in 2003, down from 46.3 percent in 1998 and 56.7 percent in 1988.", Press release from Employee Benefit Research Institute, <www.ebri.org/pdf/PR_712_21Sept05.pdf>

⁷ New Hampshire Business Review, Book of Lists 1997 to 2005.

⁸ REMI Policy Insight[®] New Hampshire Employment Security Version 7.0 EDFS 10 area, 169 sector model includes data and control projections for 169 NAICS industries and ten regions representing New Hampshire's counties.

Finance & Insurance Industries in New Hampshire

The employment statistics in the model are based on estimates produced by the U.S. Department of Commerce, Bureau of Economic Analysis (BEA). These BEA estimates are, in turn, developed from data from an annual sample-based survey of businesses. The BEA estimates capture self-employment and sole proprietor information, using data from the Internal Revenue Service. This explains why their employment estimates are higher than the covered employment data,⁹ derived from New Hampshire businesses' unemployment insurance quarterly reports.¹⁰ Because the *Finance and insurance* sector has a relatively large share of self-employed workers, using the BEA employment data to gauge the total impact of the sector will give a more complete perspective.

The REMI Model is a dynamic input/output model that traces how a dollar of investment moves through the economy over time. Based on many equations, the REMI model makes the correlation between input of goods and services (capital, labor, and technology) and output. For example, producing a ton of steel may require three workers, the raw materials, and a particular set of equipment (representing technology and capital investment). If any of the three ingredients become scarce or unavailable, the final output would be negatively affected. Likewise, businesses in the *Finance and insurance* sector must purchase materials and services, lease or own facilities, and employ workers skilled in the field.

A regional control forecast is a baseline projection imbedded in the model. It is possible to run a simulation in the New Hampshire model, and then compare it to the control forecast. The control forecast is

2002 Comparison - QCEW vs. REMI							
Quarterly Census of Employment and Wages (QCEW) 2002 Annual Averages					REMI Model 2002 data		
NAICS	Sector	Covered Employment	Average Weekly Wage	Total Wages (millions)	REMI industries based on NAICS	REMI Employment	Total Wages (millions)
521	Monetary authorities - central banks	0	-	-	Monetary authorities - central bank; Credit intermediation and related activities; Funds, trusts, & other financial vehicles. For short: <i>Banking and trusts</i>	9,992	\$402.47
522	Credit intermediation and related activities	8,872	\$860.33	\$396.90			
525	Funds, trusts, and other financial vehicles	103	\$880.71	\$4.71			
<i>Subtotal</i>	<i>Banking and trusts</i>	<i>8,975</i>	<i>\$860.51</i>	<i>\$401.60</i>			
523	Securities, commodity contracts, investments	5,152	\$1,570.69	\$420.75	Securities, commodity contracts, investments	10,672	\$436.31
524	Insurance carriers and related activities	13,036	\$1,043.43	\$707.32	Insurance carriers and related activities	15,747	\$761.77
52	Finance and insurance	27,162	\$1,083.01	\$1,529.67	Finance and insurance	36,411	\$1,600.55

⁹ In addition to self-employment, covered employment excludes employment by religious organizations, workers paid entirely on commission, work-study students, and railroad workers.

¹⁰ Covered employment counts are calculated by ELMIB from reports provided quarterly by New Hampshire employers. ELMIB of New Hampshire Employment Security (NHES) produces covered employment data under contract with the Bureau of Labor Statistics.

Finance & Insurance Industries in New Hampshire

based on the historic trend projected out to 2050. This underlying feature is what makes the model a dynamic model, meaning that it is able to show how the New Hampshire economy will react over time. As the *Finance and insurance* sector has grown a little faster than total private employment since 1995, the control forecast predicts that this sector will continue to increase employment and hence Gross Regional Product (GRP) and personal income will grow accordingly.

By using the model, we can measure the secondary effects contributed by the presence of the *Finance and insurance* sector. The secondary effects include jobs that are generated by consumption (spending) of workers employed in the *Finance and insurance* sector (induced employment), as well as jobs generated from the goods and services consumed by firms in the *Finance and insurance* sector (indirect employment). *Finance and insurance* is an industry that has a high share of self-employment, so using the model for this sector analysis has advantages, since the BEA-based employment count applied by the model captures all employment. The indirect and induced effects of the *Finance and insurance* industries will grow over time in proportion to the size of this sector at that given point in time.



Counterfactual Study

In order to measure what the state economy would look like without the *Finance and insurance* sector, a simulation was run in the model. In this simulation the employment levels for each of the five components of the *Finance and insurance* sector were reduced to zero from 2005 to 2014.¹¹ This type of analysis is termed a “counter-factual study”, since it creates an artificial situation not based on fact.

Secondly, we used a policy variable to nullify investment induced by employment for each of the same five components mentioned. The reason for nullifying *Finance and insurance* related investments is the model assumes that a change in employment induces a corresponding change in capital investment in buildings and equipment. When *Finance and insurance* employment decreases, the model assumes this change creates an oversupply of buildings and computer equipment, leading to a downturn in non-residential construction and in sales and manufacturing of computer equipment. Since this is a counterfactual study, we do not want to include the impact of the employment loss linked to vacant commercial real estate and oversupply of equipment.

¹¹ Note that the REMI 169 sector model divides the *Finance and insurance* sector into five components not corresponding directly to the five NAICS sub-sectors (see table comparison REMI-NAICS industries).

Finance & Insurance Industries in New Hampshire

The result of these simulations is an alternative forecast. By comparing this alternative forecast to the control forecast (which includes the *Finance and insurance* sector), it is possible to estimate the impact that the *Finance and insurance* sector has on the economy. We ran the simulation from 2005 to 2014 in order to feature some of the model's dynamic properties. The direct effect and most of the secondary effects are most evident in the first year after the change, but the impacts on population, and government revenues and expenditures become more evident over time.



Industry Share

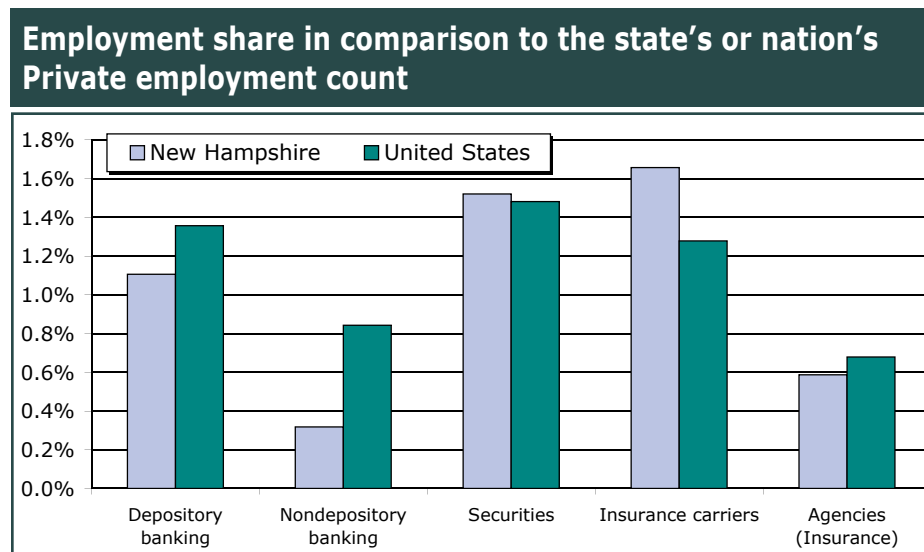
Based on 2002 data in the model, the *Finance and insurance* sector's share of private employment in New Hampshire was 5.2 percent versus 5.6 percent for the United States. This smaller share of total private employment is due to New Hampshire's share of *Banking* (both *Depository* and *Nondepository*) employment being below the national share. The lower share of *Depository banking* employment

Comparison - REMI vs. NAICS			
REMI industries		Includes the following NAICS codes/titles	
1	Monetary authorities and depository credit intermediation	521	Monetary authorities - central bank
		5221	Depository credit intermediation (commercial banking, saving institutions and credit unions)
2	Nondepository credit intermediation and related support activities, funds, trusts, and lessors of nonfinancial intangible assets	5222	Nondepository credit intermediation (credit card issuing and sales financing)
		5223	Activities related to credit intermediation (mortgage and nonmortgage brokers)
		525	Funds, trusts, and other financial vehicles
		533	Lessors of nonfinancial intangibles assets
3	Securities, commodity contracts, and other financial investments and related activities	523	Securities, commodity contracts, and other financial investments and related activities
4	Insurance carriers	5241	Insurance carriers
5	Agencies, brokerages, and other related insurance related	5242	Agencies, brokerages, and other related insurance related activities

Finance & Insurance Industries in New Hampshire

in New Hampshire has to do with a centralization of many banks' administrative headquarters outside New Hampshire and the state's lack of a central bank. New Hampshire has a much smaller share of employment than the nation in *Nondepository banking activities including trusts* (see table comparison REMI-NAICS industries). With the exception of *Activities related to credit intermediation (Mortgage and nonmortgage brokers)*, the state has a significantly lower location quotient¹² than the nation in the rest of the components of *Nondepository banking activities*.

The share of *Securities, commodity contracts, and other financial investments* employment in New Hampshire was slightly higher than the share for the United States. This has to do with the large concentration of *Securities* employment in Hillsborough County, suggesting that securities firms in this county might be serving out-of-state customers.



New Hampshire had a much higher share, than the nation, of *Insurance carriers*, which suggests that New Hampshire exports these services to other states, as well. Unlike banking, the Granite State is headquarters to some insurance carriers, and several other insurance carriers have regional administrative offices located in the state. Finally, New Hampshire had a lower share than the nation in *Agencies, brokerages, and other related insurance related activities*. A possible explanation may be that New Hampshire's population is concentrated in a small geographic area which can be served efficiently with a smaller number of agents.¹³

¹² Ratio that compares the concentration of a resource or activity, such as employment, in a defined area to that of a larger area or base. For example, location quotients can be used to compare state employment by industry to that of the nation. When an area's location quotient is larger than one, this area is assumed to be an exporter of that specific resource or industry.

¹³ Census 2004 population estimates show that New Hampshire has 144.9 persons per square mile in comparison to the nation's population density of 83.0 persons per square mile.

Finance & Insurance Industries in New Hampshire

Distribution by County

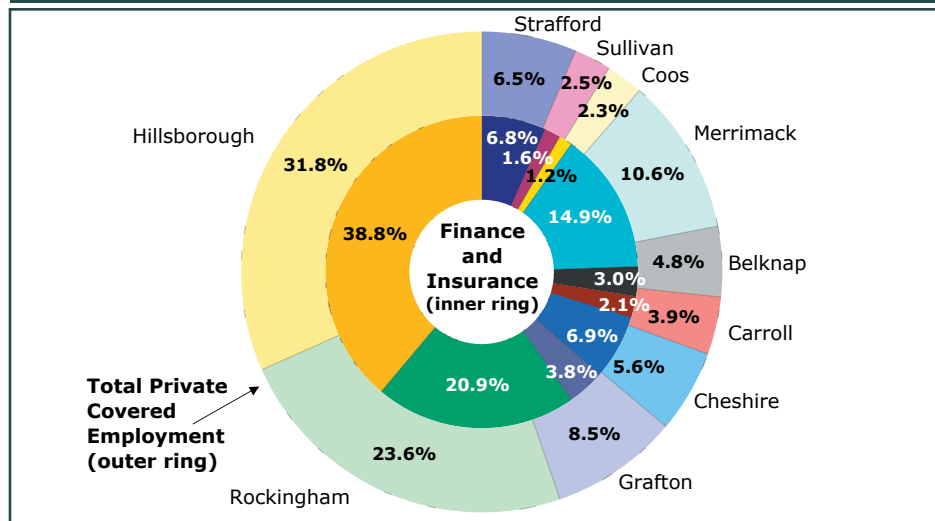
In general, jobs in *Finance and insurance* are most prevalent in Hillsborough, Merrimack, and Rockingham counties. These counties are where the highest concentrations of New Hampshire's population and businesses are located. Comparing the county shares of *Finance and insurance* employment to their share of total employment, it is clear that Hillsborough County has more than its proportionate share of the sector's jobs.

Employment in *Depository banking* is concentrated in the three most populous counties - Hillsborough, Rockingham, and Merrimack. Most of the employment in this component is in the local banking branches and reflects population and business density. *Nondepository banking* employment is primarily present in only Rockingham and Hillsborough counties.

Hillsborough County has by far the largest share of employment in the *Securities, commodity contracts, and investments*. Hillsborough is the most populous county in the state and is the county with the highest per capita personal income. In addition, this county is the New Hampshire location of Fidelity Investments, a mutual fund broker employing more than 4,800 workers¹⁴ and serving a national market.

Insurance carrier employment is concentrated in the five southern counties: Hillsborough, Merrimack, Rockingham, Strafford, and Cheshire. Each of these counties is home to the administrative offices of at least one insurance carrier. As with employment in banking, employment in insurance agencies (the other arm of insurance)

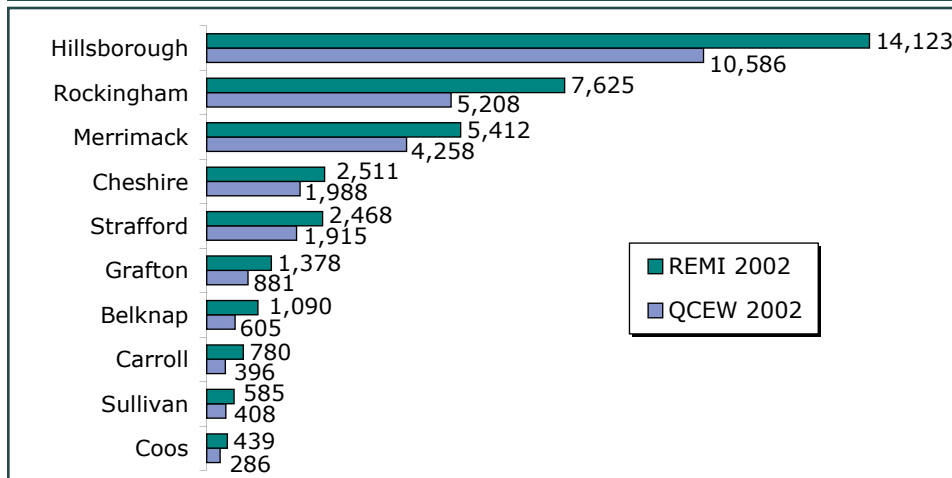
2002 REMI employment by county as percent of State total Private employment and total Finance and insurance employment



¹⁴ Stated on the company's website <<http://jobs.fidelity.com/locations/merrimack.shtml>>, Accessed April 19, 2006.

Finance & Insurance Industries in New Hampshire

Comparing REMI Standard Regional Control 2002 data with Covered employment data (QCEW) from 2002



tends to be distributed in proportion to population. In comparison to population, there is a higher share of *Agencies and brokerages (Insurance)* in Belknap, Carroll, and Sullivan counties. This higher share of employment may have to do with diseconomies of scale. These three counties are fairly rural in character, which may require more agents per unit of output to cover larger geographies. However, county lines are political constructs, and don't necessarily follow the lines of trade. In other words, insurance agencies in these three counties can easily serve customers in neighboring counties, or conversely customers can be served by agencies in neighboring counties. Similarly, because of licensing reciprocity, customers can be served across state lines.

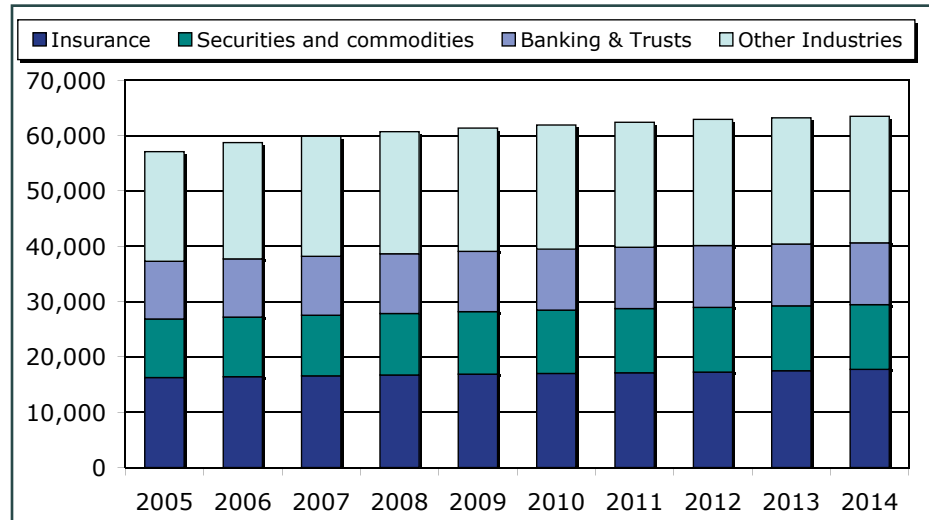
The largest difference, when comparing REMI employment with covered employment for the *Finance and insurance* sector, is in *Securities and investments*. Self-employment is the prevailing employment arrangement in brokering securities, as the broker is paid a share of the transactions. The difference between REMI and covered employment is especially evident in Hillsborough and Rockingham counties due to the size of population and to high concentration of business activity.

The Value of the Finance and Insurance Sector

Difference in Industry Employment

The difference between the alternative forecast and the control forecast is what the *Finance and insurance* sector contributes to the economy. Total employment shows a difference of 57,100 jobs in 2005, and this difference increases to 63,500 jobs by 2014. In 2005, 99 percent of the difference between the alternative and control forecasts would be jobs located in the private sector, whereas only 95 percent of the job difference by 2014 would be located in the private sector. On average over the ten-year period, the jobs are split among the three *Finance and insurance* components and among all other industries as

Direct effects and secondary effects of Finance industries on Private employment in New Hampshire



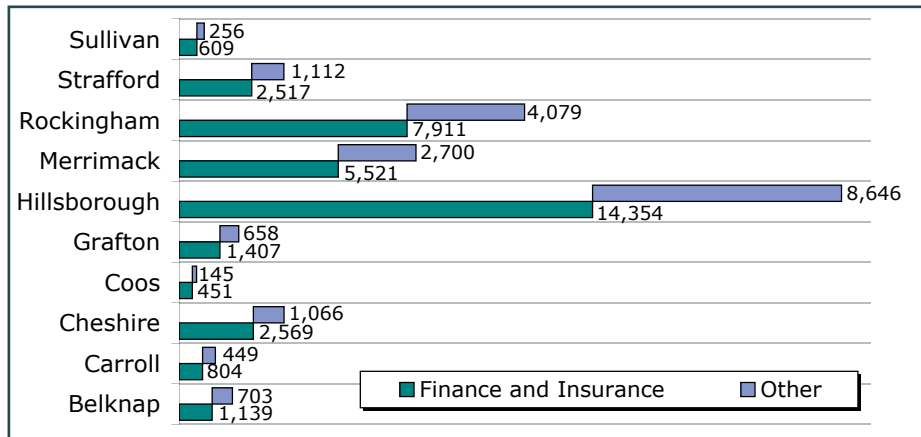
follows: 17.8 percent in *Banking and trusts*, 18.5 percent in *Securities and investments*, 27.7 percent in *Insurance* and 36.0 percent in all other industries.

Among counties, the largest impact from *Finance and insurance* is 23,000 jobs in Hillsborough County in 2005, with 14,350 coming directly from the sector itself and 8,650 jobs from other industries dependent on the presence of *Finance and insurance*. In 2005, Rockingham County accounted for close to 8,000 jobs in the *Finance and insurance* sector with an additional 4,100 jobs generated in other industries.

Difference in Occupational Employment

The occupational grouping with the largest number of jobs, related to or dependent on the *Finance and insurance* sector, is *Sales, office, and administrative* occupations. This occupational grouping consists of high-volume occupations such as *Sales representatives* and *Secretaries, and other*

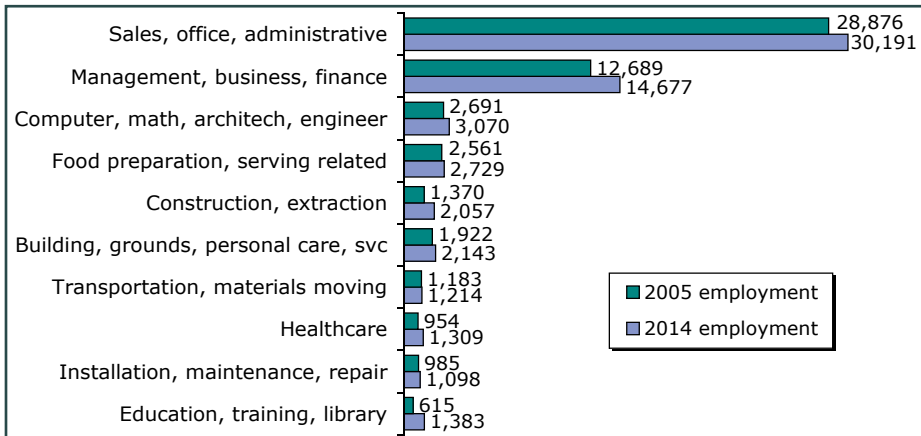
2005 REMI employment in Finance and insurance and secondary jobs induced by this employment



office support staff. So even though these jobs are amply represented in the *Finance and insurance* sector, these jobs are widespread among all industries. The second largest occupational grouping, *Management, business, financial* occupations, is more directly related to the *Finance and insurance* sector. A large portion of the jobs in the *Computer, mathematical, architectural, engineering* occupations are related directly to the *Finance and insurance* sector, as well, though some of the jobs are related more indirectly as consultants providing services to the industry. The remaining occupations are impacted mainly as a result of the consumption expenditures by workers in the *Finance and insurance* sector.

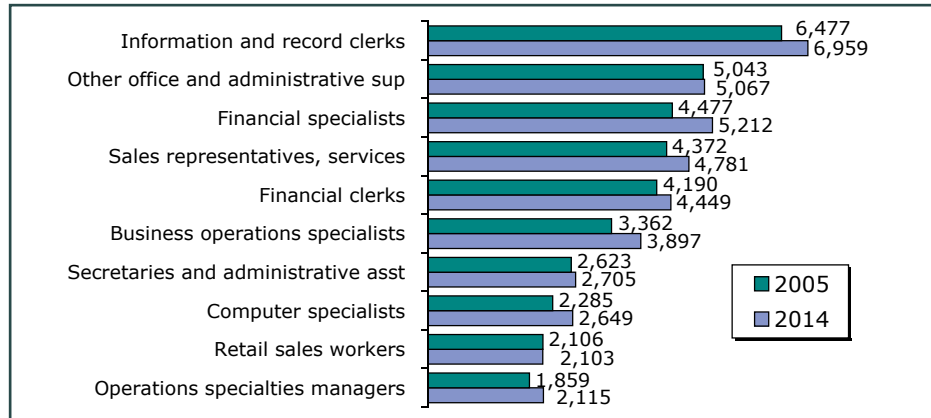
Over the ten-year period, the difference in jobs between the alternative and control forecasts for *Education, training, and library* occupations more than doubled, which may seem counter intuitive. The reason is that the model presumes a growth in jobs in the *Finance and insurance* sector, over time, contributes to population growth. Population growth

Occupational groupings contributing the most jobs to the economy by the presence of the Finance and insurance sector



Finance & Insurance Industries in New Hampshire

Top Minor occupational groups¹⁵ employed in Finance and insurance related industries



means more school-aged children, leading to a greater demand for education workers. As this is a counterfactual study, the 2005 difference in jobs in the *Education, training, and library* occupations is not equivalent to the total amount of jobs generated by the *Finance and insurance* sector either. The model presumes a lag in population out-migration in the economy's response to a large job loss.

When looking at the top 10 Minor occupational groups¹⁵ by employment and the detailed occupations within each Minor occupational group, we get a more precise picture of the jobs related to the *Finance and insurance* sector. *Information and record clerks*, which is at the top of the list, includes occupations such as *Brokerage clerks*, *Credit authorizers*, *Customer service representatives*, and *Loan interviewers* – all occupations directly related to the finance industry. *Other office and administrative support* occupations is the group next most commonly present in the *Finance and insurance* sector. This group contains a variety of occupations such as *Data entry keyers*, *Desktop publishers*, *Mail clerks*, and *Proofreaders*, which are present in many industries. But one occupation among the *Other office and administrative support* occupations is more specifically related to the *Finance and insurance* sector. That is *Insurance claims and policy processing clerks*. Third and fifth on the list of top 10 Minor occupational groups related to the *Finance and insurance* sector are *Financial specialist* and *Financial clerks*. *Sales representatives, services*, the number four Minor occupational group, includes *Insurance sales agents* and *Securities, commodities, and financial services sales agents*.

The presence of *Retail sales workers* among the top ten minor occupational groups is related to the induced effect of wages spent by *Finance and insurance* sector workers in local retail stores.

The occupational data used in the REMI Model comes from national Occupational Employment Statistics (OES) employment and wage

¹⁵ This terminology is from the Standard Occupational Classification (SOC). This system classifies all occupations in the economy - private, public and military occupations. In the SOC system, workers are classified at four levels of aggregation: Major group, Minor group, Broad occupation, and Detailed occupation.

Finance & Insurance Industries in New Hampshire

data, and applies the national occupational industry share to New Hampshire-specific industry employment. Detailed occupational employment and wage information from the New Hampshire Occupational Employment Statistics program's May 2004 survey complements the model at the detailed occupational level.

As in many other industries, occupations in the *Finance and insurance* sector that are more plentiful, such as *Customer service representatives* and *Tellers*, are in the lower end of the pay scale. As the pay level increases, the number of jobs in the occupation diminishes. For example, the majority of the top 20 occupations in the *Finance and insurance* sector pay above the average hourly wage of \$17.28 for all industries in May 2004. In comparison, the average hourly wage rate for all occupations in *Finance and insurance* is substantially higher at \$22.96.

Difference in Wages & Personal Income

The overall impact on total wages from the presence of the *Finance and insurance* sector in New Hampshire is \$2.4 billion in 2005 nominal dollars. This amount represents 9.3 percent of total statewide wages for that year. By 2014, the *Finance and insurance* sector's share of projected wages accounts for 9.6 percent of total New Hampshire wages.

The *Finance and insurance* sector contributes \$2.2 billion to personal income, which represents 4.3 percent of total statewide personal income. By 2014, the *Finance and insurance* sector's share of the state's total personal income would increase to 4.9 percent. Likewise, the *Finance and insurance* sector accounts for 4.2 percent of New Hampshire's total disposable personal income in 2005, and this share would increase to 4.8 by 2014.

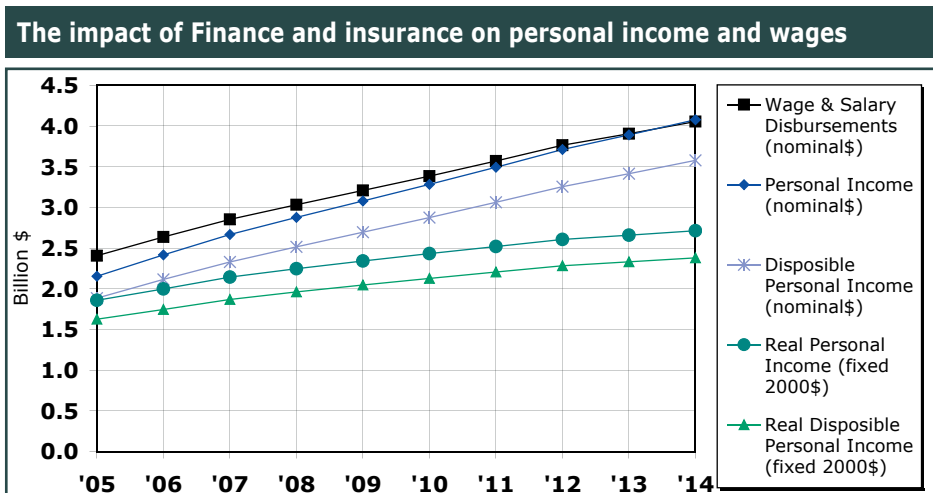
The impact on wages is bigger than the impact on personal income, because personal income includes transfer payments and net residence adjustments. Total wages includes only the money earned from jobs in New Hampshire, so wages from New Hampshire commuters to out-of-state jobs are not included. If the *Finance and insurance* sector were to disappear, some of the people losing their jobs would receive some

Detailed Occupations - May 2004 Employment & Wage			
SOC code	Title	OES May 2004 Employment	Average Hourly Wage
43-4051	Customer service representatives	2,090	\$14.65
43-3071	Tellers	1,890	\$10.28
43-9041	Insurance claims and policy processing clerks	1,310	\$13.46
41-3031	Securities, commodities, and financial services sales agents	1,280	\$31.18
41-3021	Insurance sales agents	1,070	\$26.97
43-1011	First-line supervisors/managers of office and administrative support workers	1,060	\$19.34
11-3031	Financial managers	820	\$34.60
13-1031	Claims adjusters, examiners, And investigators	820	\$23.15
43-9061	Office clerks, general	790	\$12.78
43-6011	Executive secretaries and administrative assistants	750	\$16.26
15-1051	Computer systems analysts	720	\$38.87
13-2072	Loan officers	710	\$35.88
13-2051	Financial analysts	690	\$30.08
13-1199	Business operations specialists, all other	590	\$27.13
43-3031	Bookkeeping, accounting, and auditing clerks	590	\$14.16
15-1031	Computer software engineers, applications	580	\$36.45
43-4131	Loan interviewers and clerks	540	\$14.02
43-4141	New accounts clerks	510	\$13.44
11-1021	General and operations managers	440	\$50.60
13-2053	Insurance underwriters	440	\$23.40

Finance & Insurance Industries in New Hampshire

sort of transfer payments, and presumably, more people would be employed outside the state which would have a positive impact on the net residence adjustment. A positive net residence adjustment occurs when those commuting out of the state outnumber those commuting into the state.

However, by 2014 the removal of the *Finance and insurance* sector has a bigger net impact on personal income than on wages. Transfer payments related to the loss of the *Finance and insurance* sector would have a negative impact on personal income by 2011. This is because the positive spike in transfer payments, caused by employment loss would have leveled out, and as population decreases, so would transfer payments overall. Despite an increase, over time, in net residence adjustment because the number of people commuting to neighboring states is presumed to grow, this positive influx of commuter income would be offset by the losses in *Proprietors and other labor* income by 2014.¹⁶

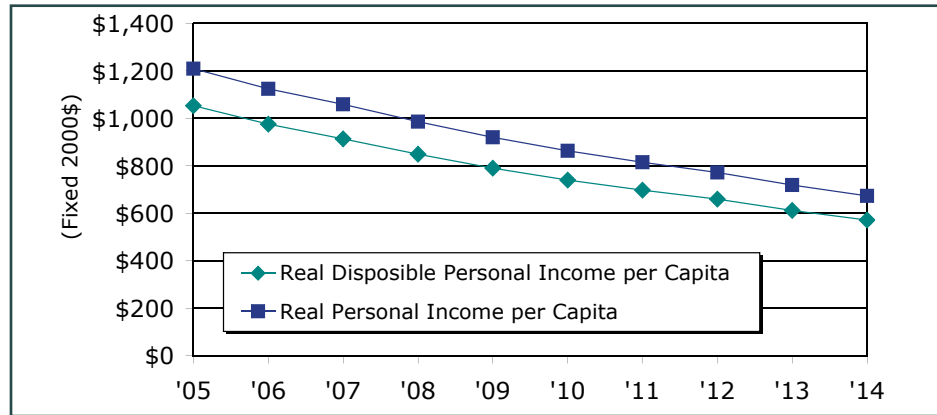


The difference in the annual average wage rate in nominal dollars (not adjusted for inflation) compared to the control forecast is about \$930 in 2005 and increases to a \$1,500 difference by 2014. This difference represents close to three percent of the average annual paycheck, statewide, and would have its peak impact by 2011, representing more than 3.4 percent of the annual wage rate. Over time, wage rates recover, population leaves the state, and some industries increase their demand for workers. As a result, skilled labor will become scarce, and wages will start to increase.

The difference in real personal income and real disposable personal income is \$1.9 billion and \$1.6 billion, respectively, in fixed 2000 dollars¹⁷ in 2005 and increases to \$2.7 and \$2.4 billion in fixed 2000 dollars by 2014. The main reason for this increase is that the *Finance*

¹⁶ This includes sole proprietors and partnerships income (profits) and employer contribution for employee pension, insurance funds, and government social insurance.

Difference in per capita real personal income and per capita disposable personal income compared to baseline forecast

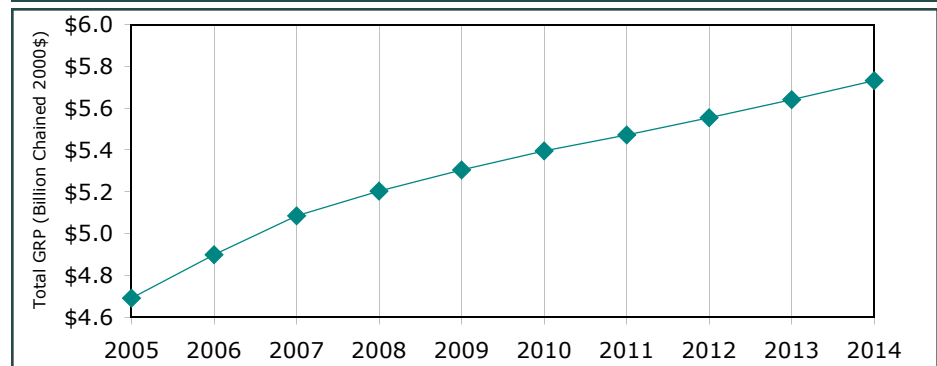


and insurance sector, over the next ten years, is projected to increase its employment and output. However, with a lack of employment opportunities in the *Finance and insurance* sector, some people would leave. Hence, the differences in per capita real personal income compared to the control forecast diminishes from about \$1,200 to \$670 in fixed 2000 dollars (adjusted for inflation) from 2005 to 2014. Per capita real disposable personal income decreases, as well, from \$1,050 to \$570 in fixed 2000 dollars from 2005 to 2014.

Difference in Gross Regional Product / Gross State Product

The *Finance and insurance* sector contributes an estimated \$4.7 billion in chained 2000 dollars¹⁸, in 2005, to the Gross Regional Product (GRP), accounting for 9.4 percent of the total (GRP). In this case, GRP equals Gross State Product (GSP). This amount increases to \$5.7 billion in chained 2000 dollars by 2014. The increase is due to a projected increase in this sector’s employment. However, by 2014, the

The value of the Finance and insurance sector on the State’s Gross Regional Product



¹⁷ Fixed 2000 dollars is analytical measurement, indicating that data is adjusted for inflation using 2000 as a fixed (single year) weight. This concept is used in the national input-output relationships reported by the BLS.

Finance & Insurance Industries in New Hampshire

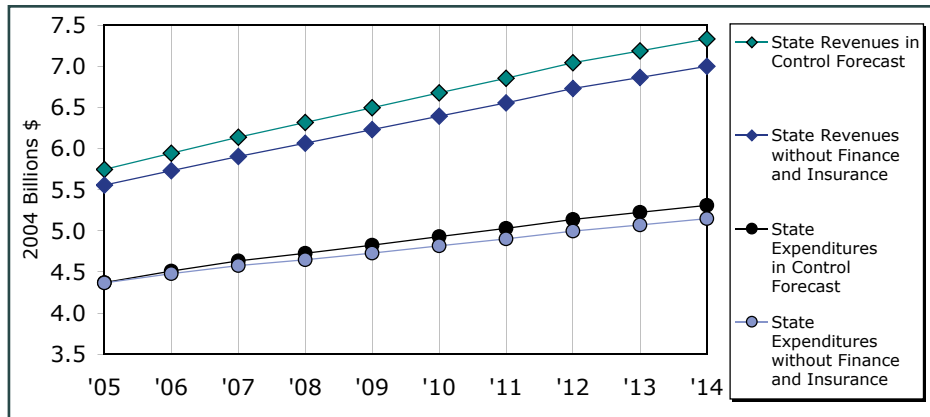
share of GSP contributed by *Finance and insurance* would be reduced to 8.5 percent. An explanation could be that, with the disappearance of the *Finance and insurance* sector, an excess labor force is available which would suppress wages in general. This creates a competitive advantage for the other industries, hence increasing their output at a faster rate than with the presence of the *Finance and insurance* sector. In other words, as the economy tries to recover, other industries compensate by being more productive.

Difference in Government Finances

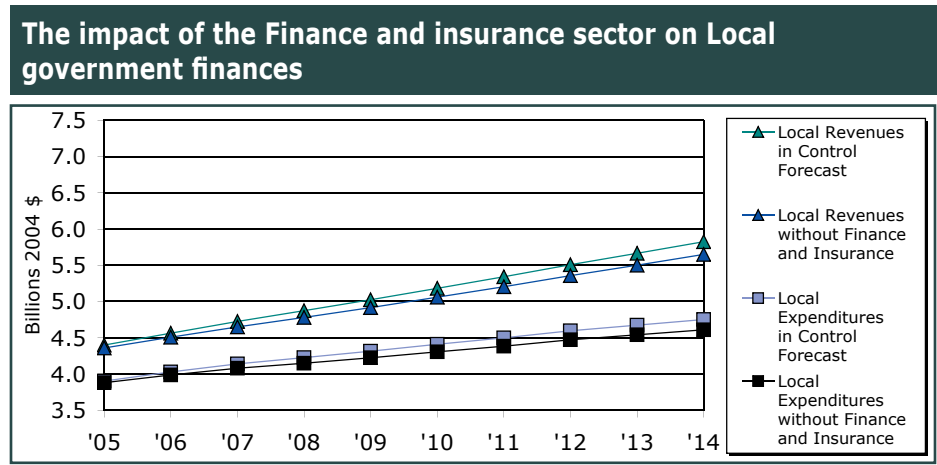
The *Finance and insurance* sector has a substantial impact on government finances. State revenues come primarily from business profit taxes and business enterprise taxes, whereas local revenues mainly come from property taxes.

According to the model, the presence of the *Finance and insurance* sector generated \$189.0 million (2004 dollars) in state government revenues, whereas the difference in expenditures would be minimal (\$4.4 million in 2004 dollars) in the first year following its removal. Expenditures would not immediately diminish significantly because of the high economic cost related to eliminating a large number of jobs. For example, expenditures for unemployment compensation and human services would increase. In the second year after the removal of the *Finance and insurance* sector, the difference in government expenditures between an economy with and an economy without this sector increased to \$31.9 million in 2004 dollars, and the difference in revenues increased to \$211 million. By 2014, the state revenues would collect \$332.4 million less than with the *Finance and insurance* sector, but the state expenditures would also have decreased by \$163.1 million.

The impact of the Finance and insurance sector on State government finances



¹⁸ Chained 2000 dollars is an analytical measurement, indicating that data is adjusted for inflation using a chain-weighted measure. This concept was developed by BEA to try to correct the problem with the use of fixed (single year) weights, which tend to overstate "the impact of recent investment in computers in relation to other types of investment." This is especially true the farther away we get from the weighting period and is due to the prices dropping rapidly for certain products.



The reason why state revenues decline is that the businesses in the *Finance and insurance* sector cease to pay business profit and enterprise taxes, whereas the state’s expenditures decline, over time, as the state has to provide services to fewer people.

As state revenues generated by the *Finance and insurance* sector are much larger than the government expenses related to the presence of this sector, New Hampshire state government finances gain immensely from this sector’s presence.

The impact on the local government finances would be less evident as there is a stronger relationship between what each municipality collects and what it spends on services. Most of the local revenues are from property taxes, which have a strong correlation to population. And the majority of local expenditures go to teacher salaries and schools, which likewise are tied to population. If the *Finance and insurance* sector would cease to exist, the lack of business profit taxes has little effect on local government revenues. What would affect the local finances the most, would be the number of property owners deciding to leave the state. However, there is a correlation between the number of property owners and the number of school children, so a decrease in the number of property owners would lead to a reduction in local expenditures, as fewer children would be enrolled in the schools. In 2005, both local revenues and local expenditures would be reduced slightly by \$39.4 million in 2004 dollars in revenues and \$21.9 million in expenditures. By 2014, the deficit in local government revenues increased to \$175.3 million in 2004 dollars and the decline in local government expenditures increased to \$142.8 million in 2004 dollars. In other words, without the *Finance and insurance* sector, local government would experience a reduction in their net finances (revenues minus expenditures) ranging from \$13.7 million in 2007 to \$32.4 million in 2014.

Finance & Insurance Industries in New Hampshire

Difference in Population and Labor Force

The REMI model is created to forecast a real event scenario, and it calculates what would happen to population and labor force when jobs are either removed or added. Since this is a counterfactual study rather than a truly plausible event simulation, the changes to population and labor force are more examples of how the economy would react if the state lost the approximately 40,000 jobs in the *Finance and insurance* sector. Both labor force and population would shrink. Population is less elastic than the labor force and would not decline as fast in the beginning, but in the long term it would decline more than the labor force. The reason is that most people, initially, will stay in the region after getting laid off, and hence they and their families would remain in the population count. Some of the people without jobs will try to improve their skills or acquire new skills through education, and thereby leave the labor force. People close to retirement age might decide to retire early and will leave the labor force as well. On the other hand, when a person migrates to another region they not only leave the local labor force, but they take their entire family with them, thereby resulting in a much larger decline in population. The model presumes a lack of the *Finance and insurance* sector in New Hampshire would not eliminate the need of New Hampshire residents for those services. Instead, the services would be imported from neighboring states, inducing some of the state's residents to commute across state lines to continue employment in their occupational specialty.

Opportunities in the Finance and insurance bring additional labor force and population to the state

