

Contribution of the Commercial Banking and Savings Institutions Sectors to the New Jersey Economy

Submitted to:

New Jersey Bankers Association

January 2016

Will Irving, Michael L. Lahr, Marc Weiner

RUTGERS

Edward J. Bloustein School
of Planning and Public Policy

Contents

Executive Summary i

Introduction..... 1

Industry Definition 2

Industry Data and Methodology 3

Industry Magnitude..... 3

Input-Output Analysis and the R/ECON™ Input-Output Model..... 4

Results of the Analysis..... 5

Aggregate Impacts..... 5

Per-Million-Dollar Impacts 8

Overview of the Banking Industry in New Jersey and the United States 9

Appendix A 11

Executive Summary

This study analyzes the contribution of commercial banks and savings institutions – referred to here as the “banking industry” – to the New Jersey economy. The report provides a definition of the industry, an estimate of its annual economic impacts in New Jersey, and an overview of recent industry employment trends in New Jersey and the nation.

Among the study’s findings, commercial banks and savings institutions:

- Directly employ nearly 45,000 people in New Jersey, and indirectly support nearly 79,000 additional jobs through their expenditures;
- Generate over \$9 billion in compensation annually in association with the 123,000 supported jobs;
- Generate an estimated \$16.7 billion in GDP in New Jersey annually through their activities and the economic ripple effects of their operations;
- Generate approximately \$530 million in state taxes and \$934 million in local taxes annually in New Jersey.
- Each \$1 million in total expenditures made by the industry is estimated to generate:
 - 8.5 direct and indirect jobs
 - \$621,684 in compensation
 - \$36,496 in state tax revenues
 - \$64,390 in local tax revenues
- Employment growth in New Jersey’s commercial banks has been strong relative to the nation in recent years, and employment in the state’s savings institutions did not undergo the same post-recession decline experienced at the national level.

Introduction

This study estimates the contribution to the New Jersey economy of the operations of companies in the commercial banking and savings institutions sectors, collectively referred to herein as the “banking industry.” As of 2014, there were an estimated 3,081 establishments¹ of commercial banks and savings institutions in New Jersey, employing nearly 45,000 people. It should be noted that the economic impacts estimated in this report represent the contribution of the banking industry’s *business operations*, but do not capture the economic effects of its lending. That is, apart from the economic activity enabled by bank lending, the industry’s ongoing annual expenditures and the employment associated with its operations constitute a significant contribution to the state’s economy.

This report estimates the size of this contribution. It begins with a definition of the industry, followed by an assessment of its size in New Jersey. There is also a description of the methodology and the input/output model used in the analysis. Estimates of the direct and indirect economic and fiscal impacts of the industry’s operations in New Jersey are then provided, followed by a comparison of industry data for New Jersey to that of the nation.

¹ “An establishment is an economic unit, such as a factory, mine, store, or office that produces goods or services. It generally is at a single location and is engaged predominantly in one type of economic activity. Where a single location encompasses two or more distinct activities, these are treated as separate establishments, if separate payroll records are available, and the various activities are classified under different industry codes.” (U.S. Bureau of Labor Statistics)

Industry Definition

For purposes of this study, the banking industry is comprised of two sectors identified in the North American Industry Classification System (NAICS): Commercial Banking (NAICS 522110) and Savings Institutions (NAICS 522120). These sectors are defined as follows:

- Commercial Banking (NAICS 522110): “This industry comprises establishments primarily engaged in accepting demand and other deposits and making commercial, industrial, and consumer loans. Commercial banks and branches of foreign banks are included in this industry.”
- Savings Institutions (NAICS 522120): “This industry comprises establishments primarily engaged in accepting time deposits, making mortgage and real estate loans, and investing in high-grade securities. Savings and loan associations and savings banks are included in this industry.”²

This definition is intended to reflect the membership composition of the New Jersey Bankers Association. It does not include securities brokerages, investment banks and related financial institutions, nondepository institutions such as credit card companies, or other depository institutions such as credit unions and private banks.

² These definitions from the 2012 U.S. NAICS Manual are provided in the online NAICS database maintained by the U.S. Census Bureau at <http://www.census.gov/eos/www/naics/index.html>. The definitions and more detail on each industry can be found on the respective pages for NAICS 522110 (<http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=522110&search=2012>) and NAICS 522120 (<http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=522120&search=2012>).

Industry Data and Methodology

This section presents the economic data from the U.S. Bureau of Labor Statistics (U.S. BLS) used in this analysis. It also describes the R/ECON™ Input-Output Model of the New Jersey economy used to estimate the contribution of the banking industry to the state economy.

Industry Magnitude

In order to assess the contribution of the banking industry to the state economy, it is necessary to understand the magnitude of the industry's annual operating expenditures, the types of expenditures made, and the distribution of these expenditures across other industries. For this analysis, data on the size of the industry in New Jersey was drawn from the U.S. BLS Quarterly Census of Employment and Wages, as well as the U.S. Bureau of Economic Analysis (U.S. BEA) Benchmark Input-Output Tables. The number of jobs and establishments and the total wages for each of the sectors included in the banking industry are shown in table 1.

The key data for each industry are the level of employment, and most importantly for modeling purposes, the total wages paid. Economic input-output tables (see next section) produced by the U.S. BEA and adapted for New Jersey provide information on the portion of each industry's total economic output that is comprised by wages. Based on the wage estimates from the U.S. BLS, it is possible to estimate total output for the banking industry, and thus to estimate the industry's overall contribution to the state economy.

Based on the industry definition used for this analysis, in 2014 the banking industry in New Jersey directly employed nearly 45,000 people at over 3,000 establishments, with a total payroll of over \$3.6 billion. The average annual pay for these sectors was \$81,218 – 34% higher than the average annual pay for all jobs in the state.

| NAICS Code | NAICS Industry | Employment | Establishments | Total Wages (\$000) |
|-------------------|-------------------------|-------------------|-----------------------|----------------------------|
| 522110 | Commercial Banking | 36,492 | 2,360 | 3,157,729 |
| 522120 | Savings Institutions | 8,159 | 721 | 468,714 |
| | Banking Industry | 44,651 | 3,081 | 3,626,443 |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Input-Output Analysis and the R/ECON™ Input-Output Model

The annual expenditures of the banking industry in New Jersey constitute a significant *recurring* economic contribution to the New Jersey economy. Economic input-output modeling estimates the overall economic impact of contributions such as these based on the interrelationships of sales and purchases among sectors of the economy.

The R/ECON™ Input-Output model developed and maintained at Rutgers University's Edward J. Bloustein School of Planning and Public Policy is used to estimate the economic impacts of various types of expenditures or investments, in terms of employment, state gross domestic product, compensation (i.e., income) and tax revenues. The model consists of 383 individual sectors of the New Jersey economy and measures the effect of expenditures in one industry on economic activity in all other industries. Thus, the distribution of expenditures made on payroll, materials, equipment, real estate, and other inputs necessary for the ongoing operations of commercial banks and savings institutions are captured in the inter-industry relationships embodied in the model. These have both **direct economic effects** as those expenditures become incomes and revenues for workers and businesses, and they also have subsequent **indirect effects** as those workers and businesses, in turn, spend those dollars on other goods and services. These expenditures on consumer goods, business investment expenditures, and other items, in turn, become income for other workers and businesses. This income gets further spent, and so on, in a multiplier process that has a cumulative impact on the overall economy of the state.

In addition, embodied in the model are estimates – known as regional purchase coefficients, or RPCs – of the share of local (i.e., in-state) demand for labor and material that can be met by in-state supply. That is, based on historical inter-industry relationships, the model can estimate the portion of an industry's expenditures that are made on labor, material and services produced (i.e., sourced) *in New Jersey*. Similarly, these inter-industry relationships also capture the portion of *indirect* expenditures (i.e., spending of the business revenues and personal incomes generated by the initial industry expenditures) that remain in the state. Any initial expenditures and indirect impacts that spill out of the state are referred to as economic “leakage.” Estimates of “leakage” associated with expenditures can be further refined based on specific information regarding the expected sourcing of labor, materials or other services.

Industry operating expenditures are comprised of annual outlays that generate recurring economic impacts each year. That is, the economic ripple effects – or “multiplier” effects – that result from the expenditures of the banking industry recur annually, as long as the industry continues to operate at existing levels. If the industry and its expenditures grow or contract, the indirect impacts – in terms of employment, income, output (GDP), and tax revenues – will increase or decrease accordingly.

Results of the Analysis

Aggregate Impacts

Table 2 provides the aggregate economic contribution of the banking industry in New Jersey, based on the 2014 wage and employment data provided in table 1.

| Table 2 Contribution of the Banking Industry to the New Jersey Economy | | | |
|---|---------------|-----------------|-----------------|
| | Direct | Indirect | Total |
| Employment (jobs) | 44,651 | 78,812 | 123,463 |
| Gross Domestic Product (millions) | \$8,959 | \$7,726 | \$16,685 |
| Compensation (millions) | \$3,626 | \$5,395 | \$9,022 |
| State Tax Revenues (millions) | | | \$529.6 |
| Local Tax Revenues (millions) | | | \$934.4 |

The estimated contribution of the banking industry to the New Jersey economy includes:

- **Employment**

123,463 jobs are estimated to be supported annually by the activities of the banking industry in New Jersey. These include both direct jobs in the industry and indirect jobs supported by the industry's activities and expenditures.

***123,463 jobs**
supported annually
in New Jersey*

Employment is generated across a wide range of sectors, as the initial direct expenditures supporting jobs and business revenues in the banking industry “ripple” through the broader economy, generating indirect employment in other industries such as retail, services, transportation, etc.³ The large number of indirect jobs (more than twice as many as direct jobs) results from the high-paying direct jobs and high level of other (non-labor) expenditures in the banking industry. Average compensation for the direct jobs within the industry is estimated at \$81,218, compared to \$68,458 for the indirect jobs. Table 3 provides the estimated sector distribution (job categories are from the U.S. BLS) of the 123,463 direct and indirect

³ The broadly defined services sector includes professional and business services (e.g., engineering, architecture, accounting, legal services, etc.), education and health services, leisure and hospitality services, the information sector, and other service industries.

jobs supported in New Jersey by the activity of commercial banks and savings institutions.

| Table 4 Distribution of Employment Impacts by Sector | |
|---|----------------|
| Sector | Employment |
| Financial Activities* | 52,383 |
| Services** | 50,787 |
| Retail Trade | 10,321 |
| Manufacturing | 4,648 |
| Transportation, Warehousing & Public Utilities | 3,809 |
| Wholesale Trade | 727 |
| Construction | 440 |
| Natural Resources & Mining | 348 |
| Total | 123,463 |

*Includes direct employment in the banking industry.

**The broadly defined services sector includes professional and business services (e.g., engineering, architecture, accounting, legal services, etc.), education and health services, leisure and hospitality services, the information sector, and other service industries.

- **Compensation**

Labor compensation represents the total wages, salaries and wage supplements (i.e., employer contributions to government and private pension funds) paid for all direct *and* indirect jobs generated in New Jersey as a result of the expenditures made *in New Jersey* by commercial banks and savings institutions. Total annual compensation for all jobs supported directly and indirectly by the industry is estimated at \$9 billion.

\$9 billion in compensation

- **State Gross Domestic Product**

Total gross domestic product (GDP), a measure of the value of the new economic output generated in the state as a result of the industry's expenditures, is estimated at \$16.7 billion.

\$16.7 billion in GDP

- **State Tax Revenues**

Estimated annual state tax revenues generated by the industry comprise the income taxes associated with the salaries paid to the workers in the direct and indirect jobs supported by the industry, as well as the sales taxes associated with the economic output generated by those expenditures. In total, the industry's operations are estimated to generate approximately \$530 million in annual state tax revenues.

*\$530 million in
state tax revenues*

- **Local Tax Revenues**

The estimated local tax revenues for the state represent property tax revenues that accrue, over time, as a result of improvements to existing or construction of new property afforded by the personal and business incomes generated directly and indirectly by the operations of commercial banks and savings institutions. These local tax revenues are estimated at \$934 million. Unlike the other impacts, the increase in property tax revenues occurs over a considerably longer period (see Appendix A for additional detail).

*\$934 million in
local tax revenues*

Per-Million-Dollar Impacts

Table 5 presents the estimated annual economic contribution of the banking industry per \$1 million of industry outlays. Total industry expenditures are estimated to be approximately \$14.5 billion annually.

| Table 5 Per-Million Dollar Annual Economic Contribution of the Banking Industry in New Jersey | |
|--|--------------------|
| Indicator | Impact |
| Employment (jobs) | 8.5 |
| Gross Domestic Product | \$1,149,760 |
| Compensation | \$621,684 |
| State Tax Revenues | \$36,496 |
| Local Tax Revenues | \$64,390 |

Each \$1 million in *total* expenditures made by the industry is estimated to generate *in New Jersey*:

- 8.5 (direct and indirect) jobs;
- \$1,149,760 in GDP;
- \$621,684 in compensation;
- \$36,496 in state tax revenues; and
- \$64,390 in local tax revenues.

Overview of the Banking Industry in New Jersey and the United States

New Jersey's 3.1% share of nationwide banking industry employment is slightly greater than its share of total national employment and population (2.8%). The higher share is driven primarily by the high concentration of employment in savings institutions (5.2% of the national total), as shown in Table 6.

| NAICS Code | NAICS Industry | New Jersey | United States | NJ Share (%) |
|-------------------|-------------------------|-------------------|----------------------|---------------------|
| 522110 | Commercial Banking | 36,492 | 1,289,343 | 2.8 |
| 522120 | Savings Institutions | 8,159 | 157,295 | 5.2 |
| | Banking Industry | 44,651 | 1,446,638 | 3.1 |
| | Total Employment | 3,841,854 | 136,613,609 | 2.8 |
| | Population | 8,938,844 | 318,907,401 | 2.8 |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

From 2001 to 2014, banking industry employment in New Jersey grew by 11.5%, faster than statewide employment in all sectors (-0.9%) and faster than the industry nationwide (-2.9%) (Table 7). This difference in industry growth between New Jersey and the U.S. was driven by growth in the commercial banking sector in New Jersey, which saw growth of 15.7% over the period, and by a sharp decline of 33.5% in employment at savings institutions nationwide following the recession and housing market decline of 2007-2009. Figures 1 and 2 illustrate the cumulative percentage change in employment for the two sectors in New Jersey and the United States. While New Jersey has lost some of the commercial banking sector employment gained during the period prior to the recession, its growth over the period was significantly stronger than that of the U.S., and its employment in the savings institutions sector has not undergone a post-recession decline like that of the nation.

| NAICS Code | NAICS Industry | New Jersey | | United States | |
|-------------------|-------------------------|-------------------|----------------|----------------------|----------------|
| | | Absolute | Percent | Absolute | Percent |
| 522110 | Commercial Banking | 4,941 | 15.7 | 35,579 | 2.8 |
| 522120 | Savings Institutions | -324 | -3.8 | -79,251 | -33.5 |
| | Banking Industry | 4,617 | 11.5 | -43,672 | -2.9 |
| | Total Employment | -34,340 | -0.9 | 6,977,809 | 5.4 |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

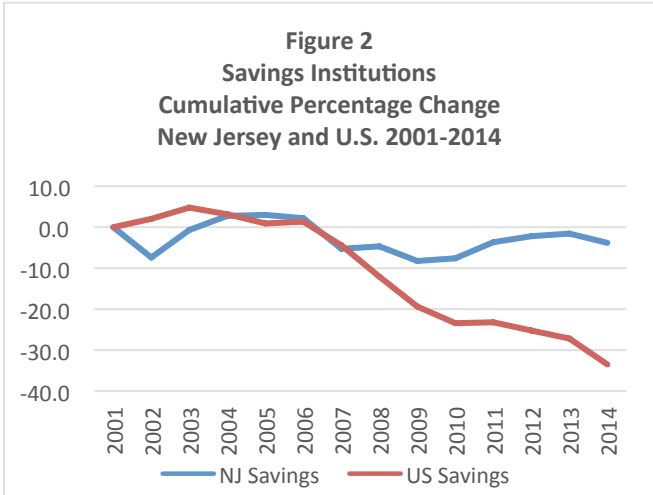
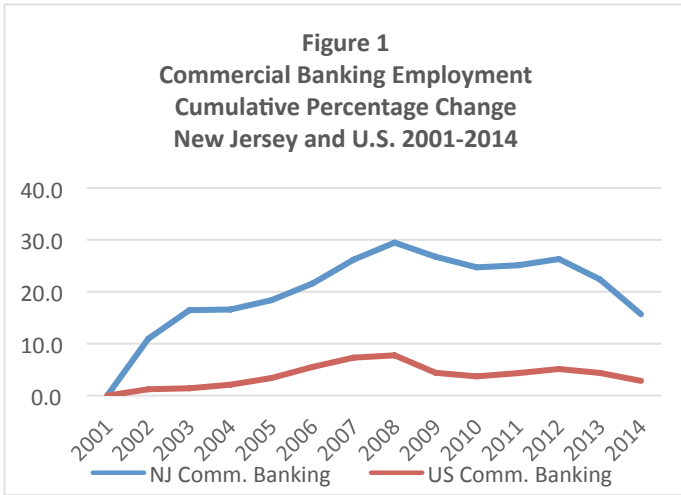


Table 8 provides the average annual pay for commercial banking and savings institutions and for all payroll employment in the U.S. and New Jersey in 2014. Notably, average pay was significantly higher (22%) in the commercial banking sector in New Jersey than in the U.S., while it was slightly lower in New Jersey for savings institutions. As a result, the banking industry in New Jersey had average pay 1.16 times that of the industry nationwide, a ratio comparable to that of average pay for all payroll employment, which was 1.18 times higher in New Jersey than in the U.S.

| NAICS Code | NAICS Industry | New Jersey | United States | Ratio: NJ/US |
|------------|-------------------------|------------|---------------|--------------|
| 522110 | Commercial Banking | 86,532 | 71,085 | 1.22 |
| 522120 | Savings Institutions | 57,449 | 60,351 | 0.95 |
| | Banking Industry | 81,218 | 69,918 | 1.16 |
| | All Employment | 60,597 | 51,364 | 1.18 |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Appendix A

The estimated local tax revenues for the state estimated in this analysis represent property tax revenues that accrue, over time, as a result of improvements to existing or construction of new property. This activity is afforded by the personal and business incomes generated directly and indirectly by the expenditures of the banking industry.

Local tax revenues result from the expenditures generated from the income for workers and revenues for business.⁴ The personal incomes and business revenues are, in part, used to pay property taxes and to improve properties (both residential and commercial). Thus, households and businesses that benefit from the industry's activities acquire and/or improve residential and commercial properties or alternatively are able to pay rents that include associated property taxes.

Historical New Jersey fiscal and economic data are used to measure the relationship between business revenues and the amount of commercial property tax revenues collected, and between household incomes and the amount of residential property tax revenues collected.⁵ Given both household income and business revenues associated with the operations of the banking industry, the R/ECON™ Input-Output Model invokes the known statistical relation of local property tax revenues to both household income and business revenues in order to estimate the addition to local tax revenues attributable to the expenditures.

⁴ For businesses, the revenue increase is measured in terms of value-added, and it is the change in value added in the business sector that is the basis for the estimated change in property tax revenues.

⁵ For the entire state, approximately 76% of total local property tax revenues are attributable to residential property; with approximately 21% derived primarily from commercial and industrial property.