

# The New England Financial Services Industry: Around the Corner and Around the World



THE  
NEW ENGLAND  
COUNCIL

# THE NEW ENGLAND COUNCIL

January 2017

NEC Members and Friends,

As the nation's oldest regional business association, The New England Council is dedicated to promoting economic growth and a high quality of life in the New England region. Central to this mission is raising awareness of the key role various industries play in helping boost our economy and create and sustain good, well-paying jobs. As such, The Council is proud to present a report on the strength and role of the financial services industry in New England.

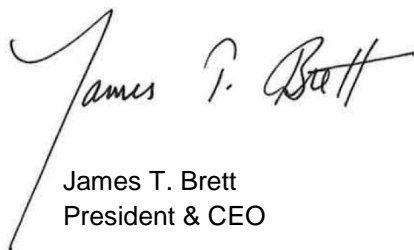
As this study demonstrates, the financial services sector is one of our region's strongest job-generating, growth-producing industries, with a tremendous footprint in each of the six New England states. In no state does financial services account for less than 5 percent of that state's jobs, and in many states the impact is far greater. Additionally, a hallmark of financial services jobs in New England is that they are high-wage jobs, featuring an impressive array of benefits for the hundreds of thousands of individuals who make up the region's workforce.

The history of finance in the United States is intertwined with the New England region. Boston is home to some of the world's largest asset management firms, while Connecticut boasts an outsized share of insurance companies. But what may be less obvious is the impact that the financial services industry has on the entire six-state region. Vermont is a global player in the captive insurance realm, while banks and credit unions help ensure economic development and vitality in hundreds of cities and towns from Bridgeport to Bangor.

The story told in these pages is one of an industry that makes all things possible. From funding a startup company in Providence with a small business loan to helping a hardworking couple in Portsmouth save for retirement, financial services impacts our lives on a daily basis. We are pleased that PwC, a member of The New England Council, provided invaluable resources in helping to tell this story, and we thank them for their expertise and support in bringing this project to fruition.

This report is intended to be a factual resource; there are no policy recommendations contained within. However, it is our hope that readers will gain a stronger understanding of, and appreciation for, the role that the financial services industry plays in enhancing the quality of life and economic well-being in New England, and will contemplate what steps should be taken to ensure that the sector – and the proud men and women who make up its workforce – continues to be a steadfast driver of jobs and growth here at home.

Best regards,

A handwritten signature in black ink, reading "James T. Brett". The signature is fluid and cursive, with a long, sweeping underline that extends to the left.

James T. Brett  
President & CEO

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# Introduction

## Background

Financial services, as former Treasury Secretary Larry Summers once said, “Don’t just grease the wheels of commerce – they are the wheels.” Consider this: without insurance, no ships would sail, no trucks or trains would roll, no planes would fly – at least not anywhere on the scale we see today. The risks would simply be too great. Without banks to provide mortgages and construction loans, few homes could get built – and only for cash by a wealthy few. Farmers would not risk planting huge crops to serve the global market without access to crop insurance and derivatives to hedge against bad harvests. E-commerce would be impossible, Amazon and E-bay would be mere fantasies – without credit cards and payments systems to clear transactions. Closer to home, the financial services industry helps parents save for their children’s tuition, affords the ability to pay for groceries (and get those groceries to market), provides capital for new businesses to open on main street and allows workers to save for their retirement. Everything we wear, drive, eat, live in and rely on depends, in turn, on the vast unseen web of financial contracts and networks that link us to each other and to buyers and sellers around the globe.

It seems that, all too often, stakeholders don’t fully appreciate the story behind the financial services industry, from its economic impact, to the jobs it creates, to the cutting-edge technology helping attract and retain college graduates to the region. The purpose of this report is to provide a contemporary data set that demonstrates the strength, importance, and impact of New England’s financial services industry. In all six New England states, the goal is to capture as much information as we can about the condition of financial services in New England – from the captive insurance market in Connecticut and Vermont, to the asset management industry in Boston, to the small and mid-sized banks and credit unions in cities and towns across the region. With this information, the hope is that the public will better appreciate the critical and positive role the New England’s financial services industry plays in their lives, and policymakers at both the state and federal levels will have a stronger understanding about how the financial services industry is helping their constituents get ahead and stay there.

## A Storied Industry in a Historic Region

The financial services industry has a long history and tradition in New England. The world’s first modern mutual fund, Massachusetts Investors Trust, was created in Boston by L. Sherman Adams, Charles H. Learoyd, and Ashton L. Carr in 1924.<sup>1</sup> Ninety two years later, Massachusetts Investors Trust is still an active mutual fund, with more than \$6.2 billion in net assets and has performed at an average annual total return of roughly 9% life to date.<sup>2</sup> In 1924, the fund broke ground becoming the first “open ended,” as we know the term today, fund that was willing to buy back its shares from its investors at the end of each business day. Today, mutual fund assets managed in the United States top \$16 trillion<sup>3</sup> as part of the more than \$51 trillion of industry assets under management.<sup>4</sup> The first U.S. exchange-traded fund, Standard and Poor’s Depository Receipt or SPDR, was launched in 1993 by State Street Global Advisors in Boston.<sup>5</sup>

Massachusetts was the first state to pass comprehensive laws regulating banks. While restrictions were previously contained within individual bank charters, the 1829 Act to Regulate Banks and Banking brought uniformity to areas such as capital, limitations on debt, and the liability of directors.<sup>6</sup> The nation’s first credit union was founded in New Hampshire in 1909.<sup>7</sup>

Connecticut has long been home to insurance companies which lead and innovate in the industry and further north in the region, Vermont became the first U.S. state to pass captive insurance legislation in 1981.<sup>8</sup> Vermont currently is the largest captive insurance domicile in the country,<sup>9</sup> and several states have since followed Vermont's lead by revising regulations to be more attractive to captive insurance companies. Currently, more than half of U.S. states have captive licensing laws.<sup>10</sup>



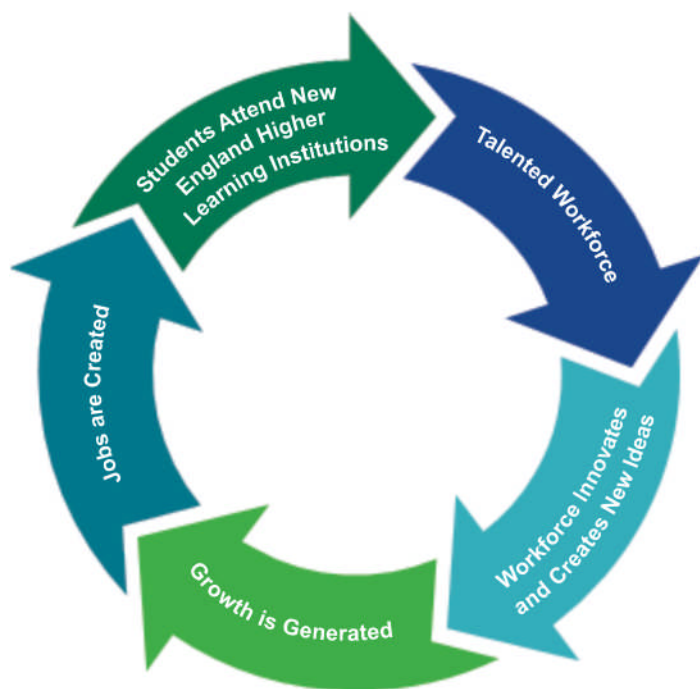
### The Report

Following a discussion on the New England financial services ecosystem and background on report methodology, the report then highlights the impact the financial services industry has on the region. This is followed by details on the industry sub sectors and states. Throughout this report, spotlights on regional industry participants have been included. The report closes with a section focused on FinTech.

# New England Financial Services Ecosystem

New England plays an outsized role in the financial services industry. The New England region accounted for only 4.6% of the U.S. population in 2015<sup>11</sup> but contributed 6.2% of the nation's direct financial services employment,<sup>12</sup> 1.3 times more than its population share. New England accounted for 8.3% of the total wages of the U.S. financial services industry in 2015.<sup>13</sup>

Forces which drive the New England Financial Services ecosystem include the region's colleges and universities which provide a diverse and innovative workforce. Diversity is fostered not only nationally with significant out of state presences at the region's institutions but also internationally. Curriculums offered in the region have continued to evolve with several institutions offering courses of study in the area of Financial Technology – known as FinTech – which is featured later in this report. Because of the ecosystem in place, the financial services industry is strong, sustainable, and resilient. As a result, the industry is a key contributor to region's overall economy and quality of life due to the growth and jobs it creates along with the services it provides.



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Located in New England are:

- 4 of the Top 10 MBA programs<sup>14</sup>
- 10 of the Top 50 National Universities<sup>15</sup>
- 13 of the Top 50 and 5 of the Top 10 Liberal Arts Colleges<sup>16</sup>

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The Boston-Cambridge-Quincy metropolitan area, had the third highest number of F-1 visa approvals among U.S. metropolitan areas in the 2008-2012 time period.<sup>17</sup>

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43% of first-time degree/certificate seeking undergraduates attending New England institutions came from out of state.<sup>18</sup>

# Report Methodology

For the purposes of this report, the financial services industry is defined as public and private sector firms and institutions falling under North American Industry Classification System (NAICS) code 52, "Finance and Insurance." The report further analyzes the industry in the following three subsectors, defined as follows:

## Key definitions

<b>Asset Management</b>	Firms primarily involved in portfolio management, investment advice, and trust and fiduciary activities.
<b>Insurance</b>	Insurance carriers and insurance agencies and brokerages.
<b>Banking</b>	Monetary authorities and firms primarily involved in depository credit banking (i.e. commercial banking, savings institutions, and credit unions), nondepository services (i.e. credit card issuing, sales financing, and consumer lending), mortgage and loan brokering, investment banking and securities dealing, and securities exchanges. <sup>19</sup>

Note that to the extent that a firm offers funds which hold real estate securities, these would be captured in the asset management category. Real estate firms which actively manage a portfolio of real estate assets as well as real estate investment trusts (REITs) are not within the scope of this report.

Also note that the classification of firms who perform activities across multiple subsectors are classified based on the primary activity performed at the office addresses of the firms. This approach allows the activities of a single firm to be captured across multiple subsectors.

In describing the economic impact of the financial services industry through its employment and purchases of goods and services, this report considers three separate channels – the direct impact, the indirect impact, and the induced impact – that in aggregate provide a measure of the total economic impact of the financial services industry to the region. The direct, indirect, and induced impacts are captured for jobs, labor income, value added, and output to further measure the impact the industry has to the region. These measures are defined as follows:

## Key definitions

<b>Jobs</b>	The total number of people employed in a given industry. <sup>20</sup>
<b>Labor Income</b>	Cash wages and salaries and benefits. <sup>21</sup> Throughout this report, labor income will be referred to as wages for ease of reference.
<b>Value Added</b>	Employee compensation, proprietors' income, income to capital owners from property, and taxes on production and imports. The value added of a particular industry excludes the value of intermediate inputs, for example the value added of the investment banking industry would exclude the value of purchased computers and software used for trading. The U.S. gross domestic product (GDP) is the sum of value added across all industries, and thus the value added of an industry can be thought of as the industry's contribution to GDP.



<b>Output</b>	The total value of sales, including the value of intermediate goods. For example, the output of the investment banking industry would include the value of purchased computers and software that are reflected in the cost of doing business for investment firms.
<b>Direct Impact</b>	Jobs, labor income, value added, and output within the financial services industry. <sup>22</sup> To the extent an employee is determined to be employed by a financial services firm, they are included within the category. For example, an individual in an administrative role at an asset management firm would be considered in the direct category.
<b>Indirect Impact</b>	Jobs, labor income, value added, and output occurring throughout the supply chain of the financial services industry. <sup>23</sup> For example, the indirect impact would capture an advertising firm hired by a financial services company to design an ad campaign.
<b>Induced Impact</b>	Jobs, labor income, value added, and output resulting from household spending of wages earned either directly or indirectly from the financial services industry's spending. <sup>24</sup> For example, the induced impact would capture the jobs and wages of the local deli frequented by financial services industry employees at lunch.

Jobs and associated wages are captured for all employees of firms in the financial services industries, not just employment and wages for financial services occupations. For more detailed information on methodology, see Appendix A.



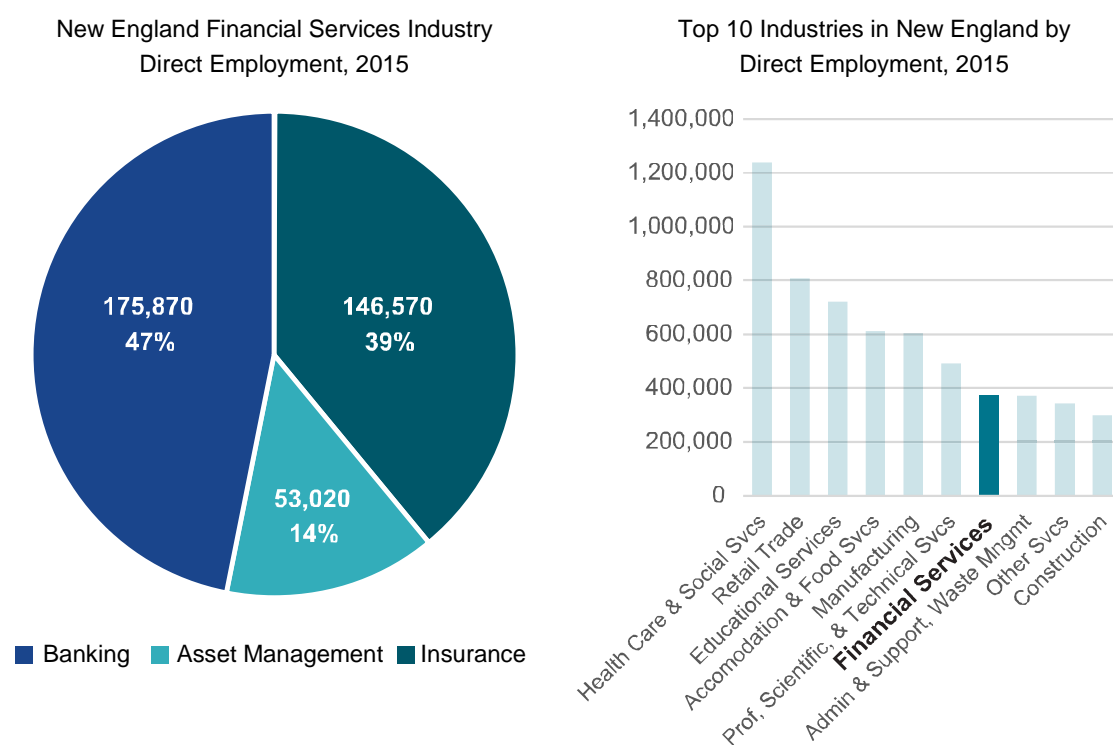


# Economic Impacts of the Financial Services Industry

## New England Employment

Financial services jobs are a significant part of the New England economy. In 2015, there were 375,460 direct jobs in the financial services industry, the 7<sup>th</sup> most of any industry in New England.<sup>25</sup> The insurance sector contributed the largest share of these jobs, at 175,870, followed by the banking sector with 146,570 jobs and the asset management sector with 53,020 jobs (Figure 1).<sup>26</sup>

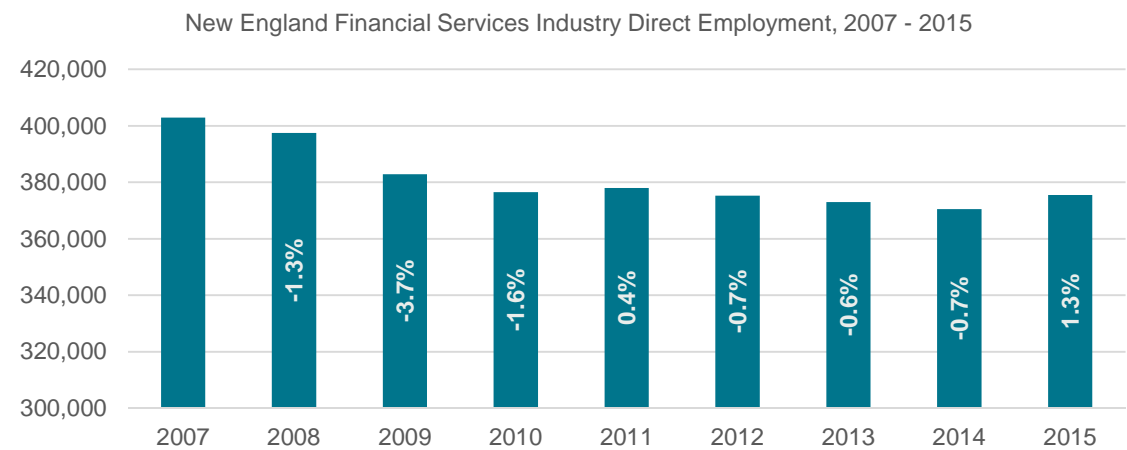
**Figure 1**



Source: PwC analysis of BLS and BEA data.

While not immune to downturns in the economy, the financial services industry has proven to be resilient in times of stress and recession. It has not experienced volatility seen by certain other industries on a comparative basis. For example, nationally, total employment in the financial services industry declined by 7.4 percent between 2007 and 2010,<sup>27</sup> with industry employment in New England falling 6.5 percent.<sup>28</sup> While employment in the industry in New England has not yet recovered to pre-recession levels, it did grow by 1.3% in 2015 (Figure 2).<sup>29</sup>

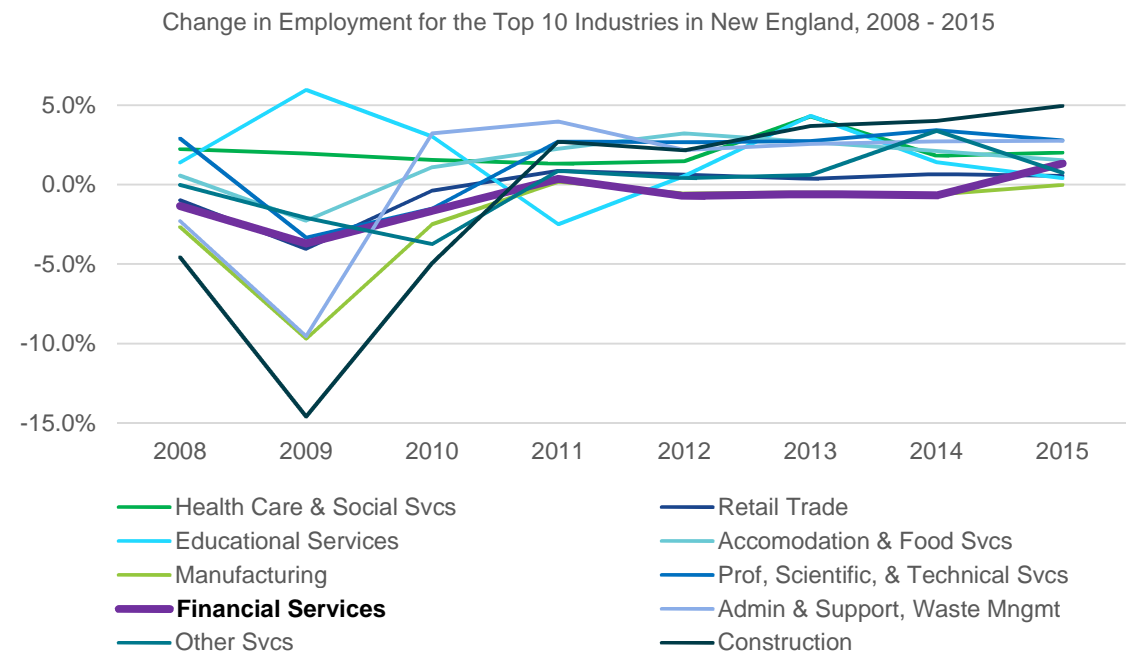
**Figure 2**



Source: PwC analysis of BLS and BEA data.

Other top industries in New England were hit harder in the recession, particularly construction, manufacturing, and the administrative and support and waste management and remediation services industry where employment in 2009 fell by 14.6 percent, 9.7 percent, and 9.5 percent, respectively, from the previous year (Figure 3).<sup>30</sup>

**Figure 3**



Source: PwC analysis of BLS and BEA data.

## New England Wages

Financial services industry wages in New England are not only strong, they are continuing to grow. The average wage increased 26% between 2009 and 2015 (Figure 4).<sup>31</sup> The industry supports upper middle class jobs, with an average wage of \$157,674 in 2015,<sup>32</sup> the second highest wage in New England behind the management of companies and enterprises industry (Figure 5).<sup>33</sup> In comparison, the average wage across all industries in New England was \$64,996 (Figure 6).<sup>34</sup>

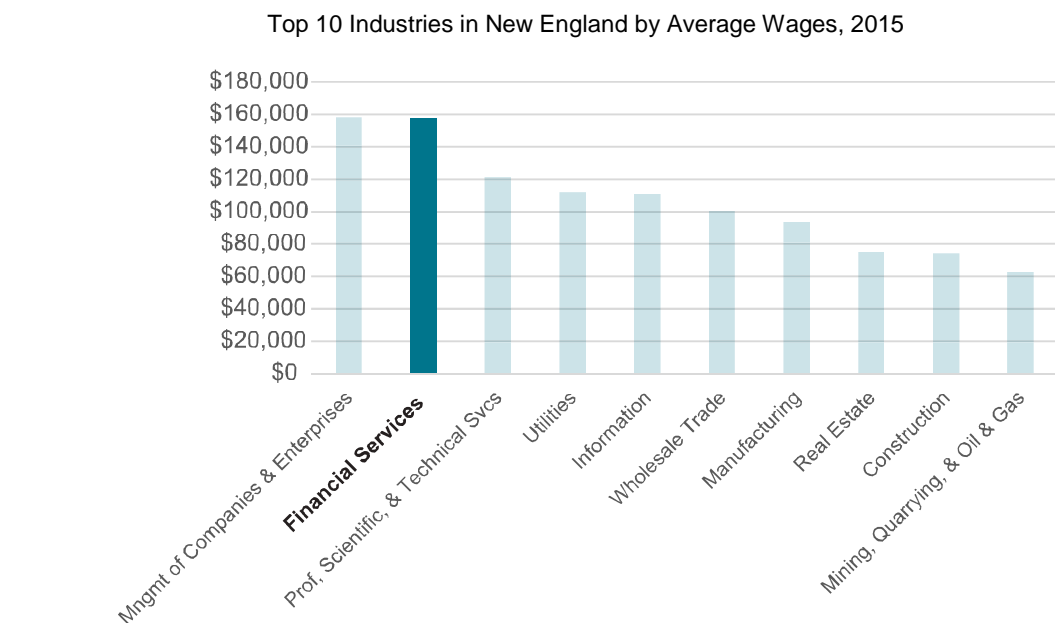
*Note: Wages, as defined in the “Report Definitions” section of the report include not only cash wages and salaries, but also benefits.*

**Figure 4**



Source: PwC analysis of BLS and BEA data. Wages include wages and salaries and benefits.

**Figure 5**

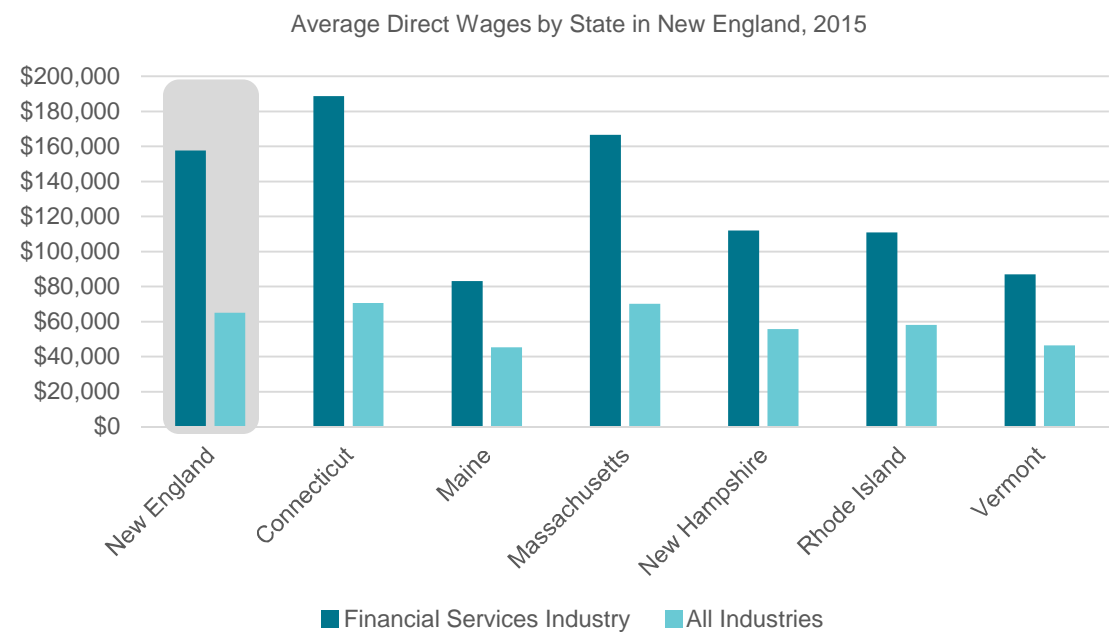


Source: PwC analysis of BLS and BEA data. Wages include wages and salaries and benefits.



Among the New England states, the financial services industries in Connecticut and Massachusetts had the highest average direct wages, at \$188,741 and \$166,524 respectively in 2015 (Figure 6).<sup>35</sup>

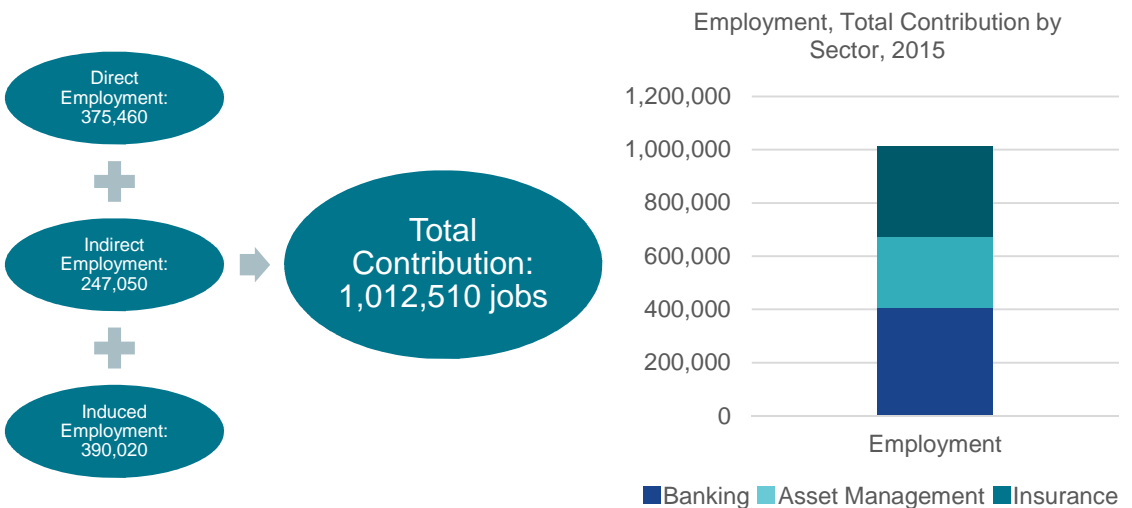
Figure 6



Source: PwC analysis of BLS and BEA data. Wages include wages and salaries and benefits.

In addition to the 375,460 direct jobs supported by the financial services industry, the industry also supported 247,050 indirect and 390,020 induced jobs (see “Report Methodology” section for definitions), for a total contribution of jobs by the financial services industry of 1,012,510 in 2015, over 10% of total regional employment (Figure 7).<sup>36</sup>

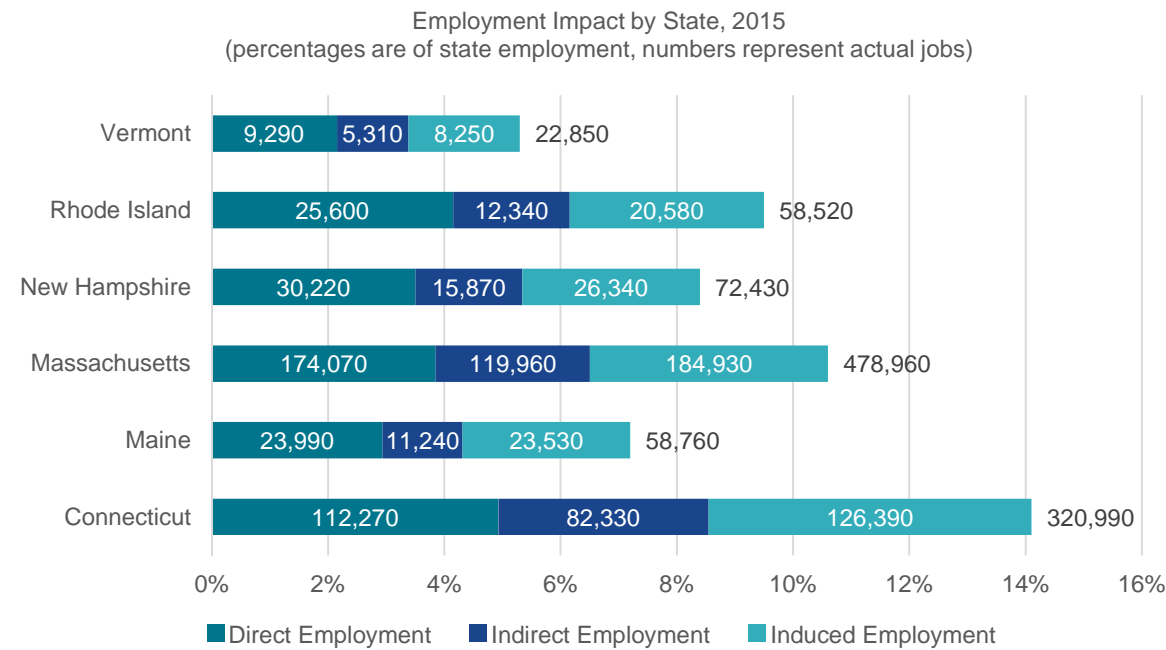
Figure 7



Source: PwC calculations using IMPLAN modeling system (2013 database).  
Note: Numbers do not add to total due to rounding.

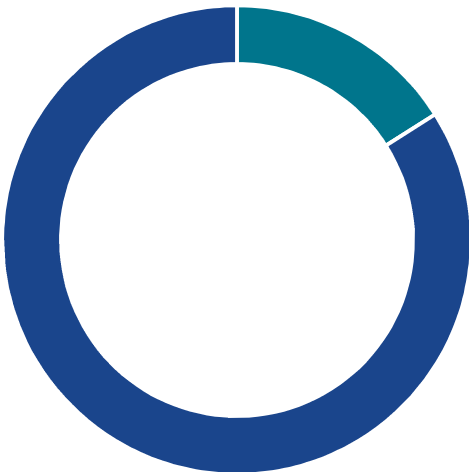
As a share of state employment, the financial services industry has the largest contribution in Connecticut, where the financial services industry accounts for 14.1% of total state employment (Figure 8).<sup>37</sup> Massachusetts has the largest total contribution to employment, at 478,960 jobs (10.6%).<sup>38</sup> In Vermont, the state with the smallest share of financial services industry employment, the sector still accounts for a significant 5.3% of the state's jobs.<sup>39</sup>

**Figure 8**



Source: PwC calculations using IMPLAN model system (2013 database).  
Note: Numbers may not add to total due to rounding

In addition to the total employment contribution, the financial services industry makes a substantial contribution to wages, value added, and total output in New England. Including indirect and induced wages, the financial services industry in New England accounts for 16.2% of total wages.<sup>40</sup> The financial services industry accounts for 15.0% of the New England economy's GDP and 13.7% of total output.<sup>41</sup> This output provides a large tax base for state and local government income, wage and property taxes.



The financial services industry in New England accounts for 16% of total wages.

# Sector Spotlights

## Banking

In 2015, New England was home to 3,951 bank branches and 1,200 credit union branches, keeping a combined \$643 billion in deposits.<sup>42</sup> In 2015, banks in New England originated over \$133 billion in residential mortgages and home loans, and supported small businesses in the economy with \$11.7 billion in small business loans.<sup>43</sup> New England credit unions originated nearly \$23 billion in first mortgage loans in 2015.<sup>44</sup> New England credit unions are key drivers of growth for small businesses, with over \$1 billion in small business loans originated in 2015<sup>45</sup> and approximately \$3.5 billion in small business loans outstanding.<sup>46</sup> New England credit unions spent an estimated \$543 million on small business related goods and services in 2015.<sup>47</sup>

In addition to their roles in stimulating the New England economy through loans and jobs, banks and credit unions in the New England region have distinguished themselves nationally by emphasizing the quality of their assets. Several New England states rate highly across banking sub-industries in quality measuring metrics such as noncurrent loans and nonperforming assets.<sup>48</sup>



### New England's Credit Unions

Credit unions are not-for-profit financial cooperatives that are governed by a board of directors, elected by and from the credit union's membership. They are a key part of the financial services ecosystem in communities across New England.

According to the most recent data from the National Credit Union Administration's (NCUA) Credit Union Call Report, as of June 30, 2016, credit unions boasted the following statistics:

	No. of Credit Unions	Total Assets	No. of Memberships
<b>Connecticut</b>	107	\$9.9 billion	855,000
<b>Maine</b>	58	\$7.0 billion	679,000
<b>Massachusetts</b>	174	\$35.0 billion	2,700,000
<b>New Hampshire</b>	18	\$7.2 billion	620,000
<b>Rhode Island</b>	20	\$5.6 billion	362,000
<b>Vermont</b>	21	\$3.9 billion	348,000
<b>TOTAL</b>	<b>398</b>	<b>\$68.6 billion</b>	<b>5,564,000</b>

Highlights include:

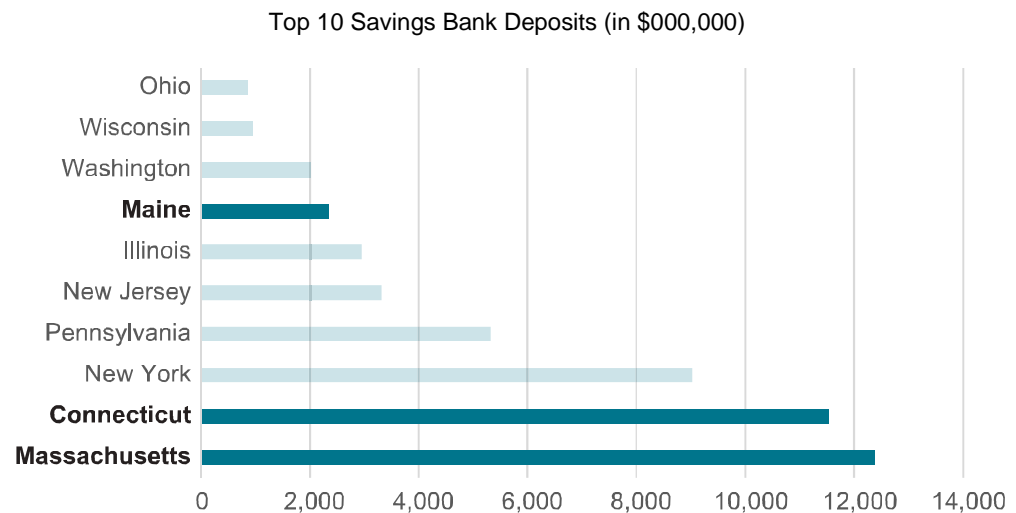
- Commercial bank activity in five of the six New England states ranks in the top half of states nationally in noncurrent loan and nonperforming asset quality metrics.<sup>49</sup> Massachusetts commercial banks perform particularly well by having the lowest percentage of nonperforming assets and second lowest percentage of noncurrent loans nationally.<sup>50</sup> Vermont has the fifth lowest percentage of noncurrent loans.<sup>51</sup>



- Similarly, noncurrent loan ratios for credit unions in five of the six New England states are below the savings bank and credit union national ratios, indicating above average loan quality versus comparable institutions in other parts of the country.<sup>52</sup> New Hampshire leads the way for credit unions, ranking #1 nationally in this metric, with Rhode Island also placing in the top ten.<sup>53</sup>
- Net charge offs – a measure of debt owed that is unlikely to be recovered over average loans – is another important loan quality and risk management metric used by banks and credit unions. Similar to noncurrent loans and nonperforming assets, this ratio for credit unions in each New England state indicated higher quality than the national average. Rhode Island is #1 nationally in this metric with Massachusetts (#4), New Hampshire (#8), and Maine (#10) also rated in the top ten.<sup>54</sup>
- All six states have noncurrent loan ratios that better the national ratio for savings and loan associations.<sup>55</sup>

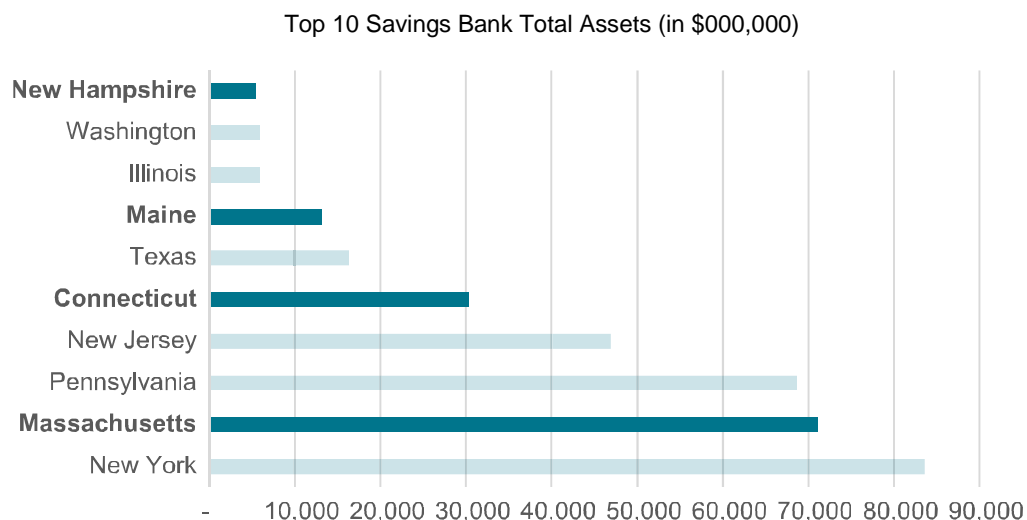
Activity in savings banks, which are banks that prioritize “Main Street” customers by primarily focusing on taking deposits and creating mortgage loans, is concentrated in the New England region. Approximately 50% of U.S. savings bank (as categorized by SNL) deposits in 2015 were made in New England states<sup>56</sup> and 33% of total savings bank assets as of June 2016 were held by New England savings banks.<sup>57</sup> Massachusetts, Connecticut and Maine were each among the top 10 states in both savings bank deposits in 2015 and total savings bank assets as of June 2016 (Figures 9<sup>58</sup> and 10<sup>59</sup>).

**Figure 9**



Source: Deposit Summary by State for all states for 2015; SNL.com

**Figure 10**



Source: U.S. Banking Industry Aggregates (and by state) for 06/16 Q; SNL.com

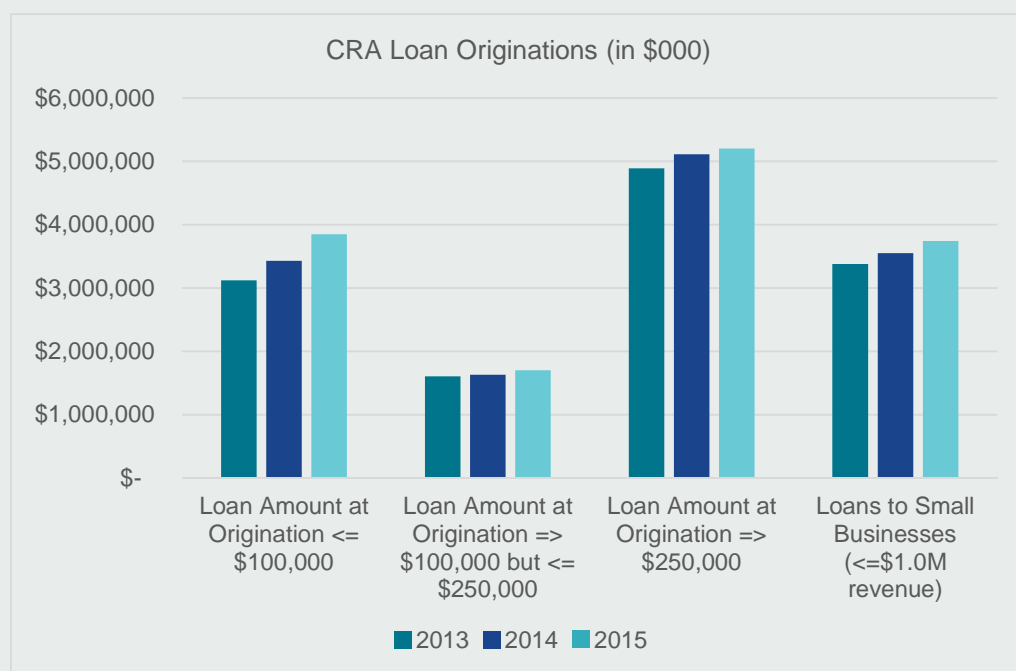
In addition to the prominence of savings banks in Maine, Maine-based credit unions are ranked fifth nationally in net interest margin,<sup>60</sup> a performance and profitability metric that measures the difference between interest income generated and the amount of interest paid out to lenders. Rhode Island ranks second nationally in this same metric in the savings and loan association sub-industry.<sup>61</sup>



### Community Reinvestment Act lending in New England

The Community Reinvestment Act ("CRA"), enacted in 1977, is intended to encourage depository institutions to help meet the credit needs of the communities in which they operate, including low and moderate income neighborhoods, consistent with safe and sound banking operations. Depository institutions in the six New England States play an active role in meeting the objectives of the CRA by providing credit across various segments of the borrower population, serving individuals and small businesses.

As shown in the graphic below, over the last three years, New England depository institutions originated more than \$41.2 billion in CRA loans,<sup>62</sup> providing much needed financing in the served areas:



## Asset Management

New England is an asset management leader, accounting for 11.5% of the nation's direct asset management employment in 2015.<sup>63</sup> In 2014, hedge funds located in Connecticut and Massachusetts combined to account for 28% of assets under management ("AUM") of the top 50 hedge funds, second only to New York.<sup>64</sup> The New England region is home to 457 private equity firms.<sup>65</sup> Private equity firms provide capital to early stage businesses including FinTech startups.

As of December 2015, Massachusetts-based mutual funds had \$2.8 trillion in AUM, a full 17.2% of all AUM nationwide and the 4<sup>th</sup> highest state total in the U.S.<sup>66</sup>

Massachusetts' role in the asset management space also crosses into other financial products. Six of the top 50 hedge fund firms in 2014 in terms of AUM were located in Massachusetts and had more than \$100 billion in AUM combined, nearly 10% of the cumulative top 50 hedge fund firms.<sup>67</sup> Nearly 19% of exchange-traded fund AUM were in Massachusetts as of December 2015,<sup>68</sup> and Massachusetts is home to 283 private equity firms, the third most in the country behind New York and California, including two of the top 10 private equity firms in terms of total funds raised over the last ten years.<sup>69</sup>

Having enough savings to enjoy retirement is an important goal for many Americans. With two of the top 10 largest retirement plan and retirement savings managers managing assets approximating \$1.21 trillion (Figure 11),<sup>70</sup> Massachusetts employees are helping make that goal a reality for millions of Americans.

**Figure 11**

Top 10 Defined Benefit/Defined Contribution Money Managers					
	Company Name	Defined Benefit AUM	Defined Contribution AUM	Total	Location
1	BlackRock Inc.	\$481,304	\$608,150	\$1,089,454	NY
2	Vanguard Group	\$39,387	\$735,868	\$775,705	PA
3	<b>Fidelity Investments</b>	<b>\$51,440</b>	<b>\$606,554</b>	<b>\$657,994</b>	<b>MA</b>
4	<b>State Street Global Advisors</b>	<b>\$299,935</b>	<b>\$251,783</b>	<b>\$551,718</b>	<b>MA</b>
5	TIAA Global Asset Management	Not available	\$409,704	\$409,704	NY
6	Prudential Financial	\$183,208	\$198,856	\$382,064	NJ
7	J.P. Morgan Asset Management	\$158,794	\$159,502	\$318,296	NY
8	T. Rowe Price	Not available	\$311,592	\$311,592	MD
9	Northern Trust Asset Management	\$163,903	\$112,367	\$276,270	IL
10	Capital Group	Not available	\$275,318	\$275,318	CA

All dollar values are in \$ millions

Source: Pensions and Investments – May 2016.

Data compiled was from top 25 firms by size. Firms whom did not fall within the top 25 are listed as not available.



Connecticut is also a large player in the asset management sector. The state was in the nation's top 10 in terms of number of private equity deals, number of private equity firms, and the total value of equity invested for the previous five years ended 2015.<sup>71</sup> The state was also in the nation's top 10 in total assets of mutual funds.<sup>72</sup> Several of the largest hedge funds and private equity firms are domiciled in Connecticut. Of the top 50 hedge funds in 2014, as measured by AUM, Connecticut was home to 18.6% of the AUM, the second most in the U.S.<sup>73</sup> Connecticut ranks 5<sup>th</sup> in the U.S. in the number of private equity firms located in the state, and fourth in the aggregate capital raised by those firms over the last 10 years.<sup>74</sup>

Rhode Island barely missed the top 10, coming in at number 11 in the country in terms of total value of private equity invested for the previous five years ended 2015.<sup>75</sup>



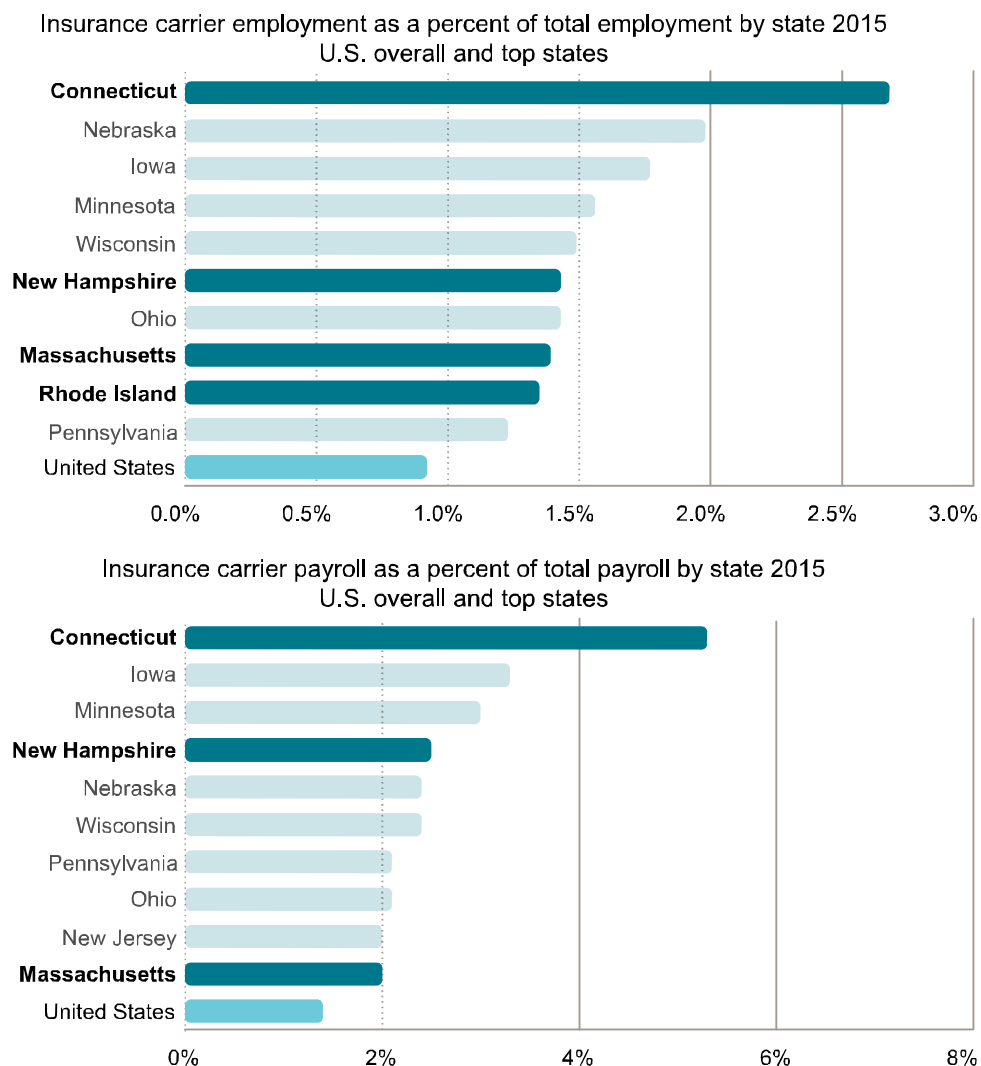


## Insurance

Several states in New England are national hubs for the insurance industry and all New England states are meaningfully impacted by the insurance industry. New England is home to 11.5% of actuaries in the U.S.,<sup>76</sup> and the region also accounts for 6.9% of all people directly employed in the insurance industry in the nation.<sup>77</sup>

Connecticut is a national leader in the insurance sector. Approximately 9% of life and health and property and casualty insurers are companies chartered, incorporated, organized or constituted in Connecticut.<sup>78</sup> The top 20 life and health insurers operating in Connecticut wrote direct premiums totaling nearly \$11 billion and had admitted assets of \$449 billion in 2014.<sup>79</sup> The top 20 property and casualty insurers operating in Connecticut wrote direct premiums totaling approximately \$1 billion and had admitted assets of \$131 billion in 2014.<sup>80</sup> Not surprisingly, Connecticut also leads the nation in actuaries as a percentage of total state employment while Rhode Island ranks third.<sup>81</sup> Connecticut ranks first in the U.S. in insurance carrier employment and payroll as a percent of state totals (Figure 12).<sup>82</sup> New Hampshire, Massachusetts and Rhode Island are also highly ranked in these insurance carrier payroll and employment measures (Figure 12).<sup>83</sup>

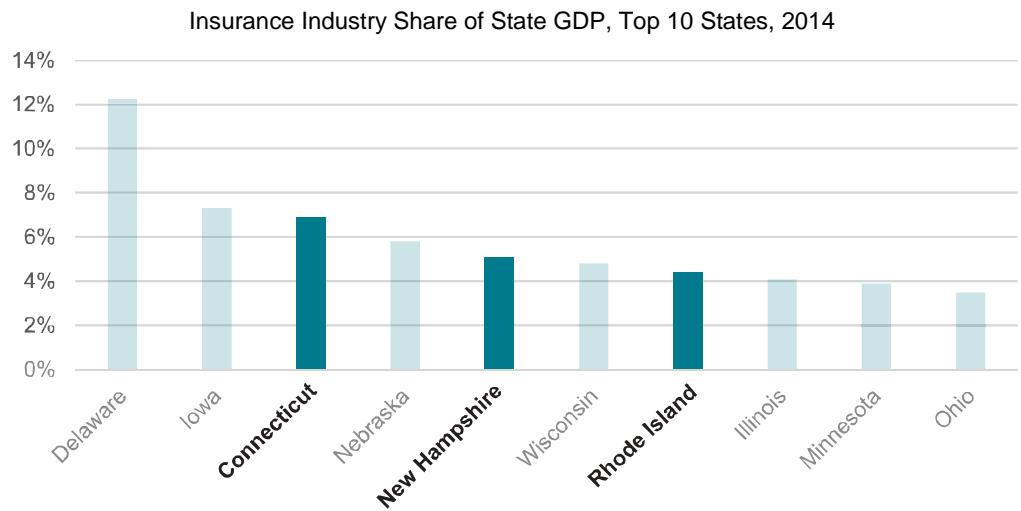
**Figure 12**



Source: CERC calculation of Moody's Analytics data. NAICS 5241. August 2016

Connecticut, New Hampshire and Rhode Island also rank highly in the nation in 2014 for the share of state GDP attributable to the insurance sector (Figure 13).<sup>84</sup>

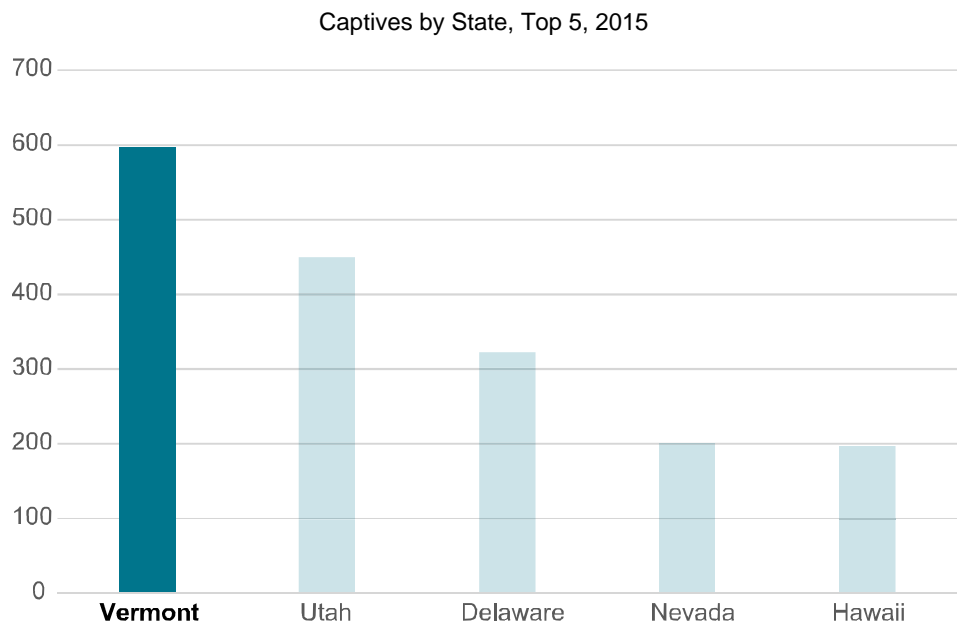
**Figure 13**



Source: Bureau of Economic Analysis, gross domestic product by state, 2014.

Meanwhile, Vermont is the national leader in captive insurance. A captive is similar to self-insurance whereby an insurance company is created and owned by a non-insurance company to insure the risks of the owner. In 2015, the state was home to 596 captives, the most of any state in the nation (Figure 14).<sup>85</sup> Globally, Vermont was the 3<sup>rd</sup> largest captive domicile in 2015 behind Bermuda and the Cayman Islands.<sup>86</sup>

**Figure 14**

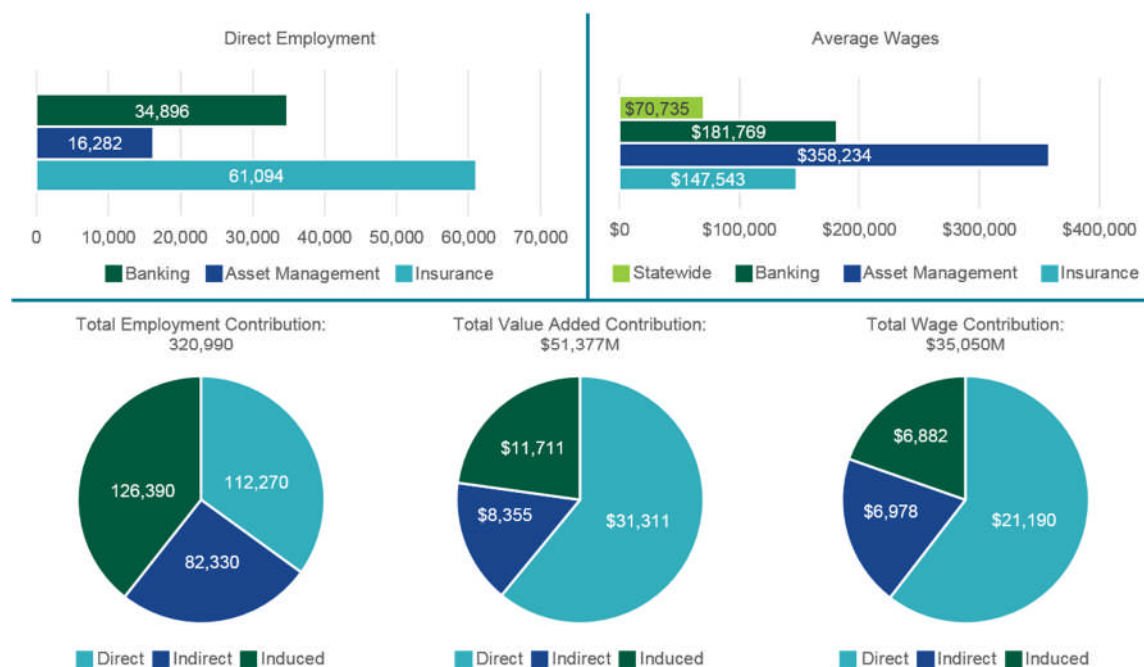


Source: Insurance Information Institute, Captives by State.

# State Spotlights

## Connecticut

### Quick Facts, 2015



Source: PwC analysis of BLS and BEA data. IMPLAN model (2013 database). Wages (as defined, see "Report Methodology") include wages and salaries and benefits.

Financial services in Connecticut tops the New England region in having the largest impact on the state and its economy. The total employment contribution of the financial services industry in Connecticut accounted for 14.1% of all state employment in 2015.<sup>87</sup> The total wage contribution of \$35.1 billion represents nearly 22% of all wages paid in the state in 2015. The financial services industry's total contribution to Connecticut's GDP, or value added, is nearly 20%.<sup>88</sup>



### State Highlights

- In Connecticut the financial services industry accounted for 14.1% of all state employment in 2015.
- Connecticut is the national leader in Insurance for payroll and employment.
- 6 of the top 20 life and health insurers by direct written premiums are located in Connecticut.



## Connecticut Insurance & Education

Over the last decade, Travelers and the Travelers Foundation have contributed more than \$200 million toward programs and organizations that support academic and career success, develop thriving neighborhoods and create culturally enriched communities.

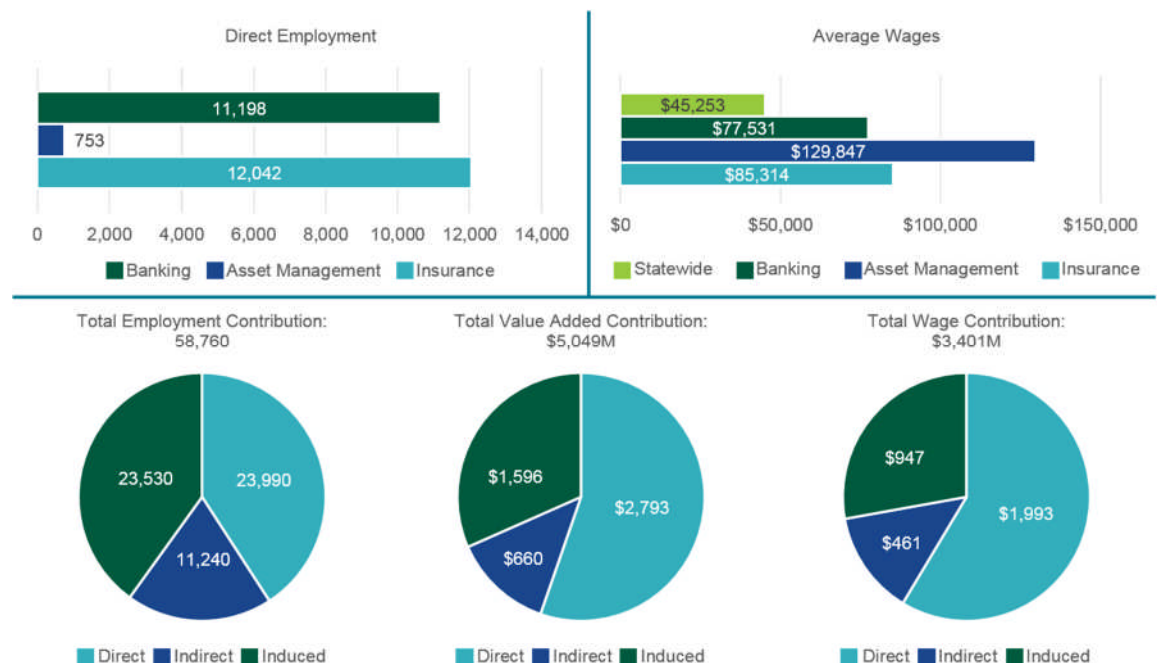
In 2007, Travelers launched a new initiative, Travelers EDGE® (Empowering Dreams for Graduation and Employment), to help increase the number of underrepresented students who complete bachelor's degrees in preparation for a career at Travelers or within the insurance and financial services industry. Through partnerships with colleges, universities and community-based organizations, the program helps students progress from middle to high school to post-secondary education, with a growing emphasis on awareness of career opportunities in the insurance industry. Once enrolled in college, Travelers EDGE scholars benefit from a broad range of services, including financial support, mentor relationships with Travelers employees, internships, job shadow opportunities and professional development workshops.

Over the last 10 years, nearly 160 college students have benefitted from Travelers EDGE in Connecticut alone. In its locations across the country, the program has helped about 400 college students and provided more than \$6 million in scholarships.

"Travelers EDGE enabled me to continue my education and earn a bachelor's degree," said Melissa Rodriguez, one of the program's first participants, who now works as a business analyst at Travelers. "I was the first in my family to graduate from college, so it was a major accomplishment not only for me, but for my entire family."

## Maine

### Quick Facts, 2015



Source: PwC analysis of BLS and BEA data. IMPLAN model (2013 database). Wages (as defined, see "Report Methodology") include wages and salaries and benefits.



When direct, indirect, and induced employment are combined, total financial services industry employment in Maine of 58,760 in 2015 accounted for 7.2% of the state's total jobs.<sup>89</sup> The financial services industry's impact on Maine wages and value added was even larger, accounting for 9.2% of total wages and 8.9% of state GDP across all industries in 2015.<sup>90</sup>



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## State Highlights

- Indirect and direct financial services employment accounted for 7.2% of the jobs in the state of Maine.
- Maine is home to 58 credit unions with almost 700,000 members.



### Maine Banking supporting the local economy

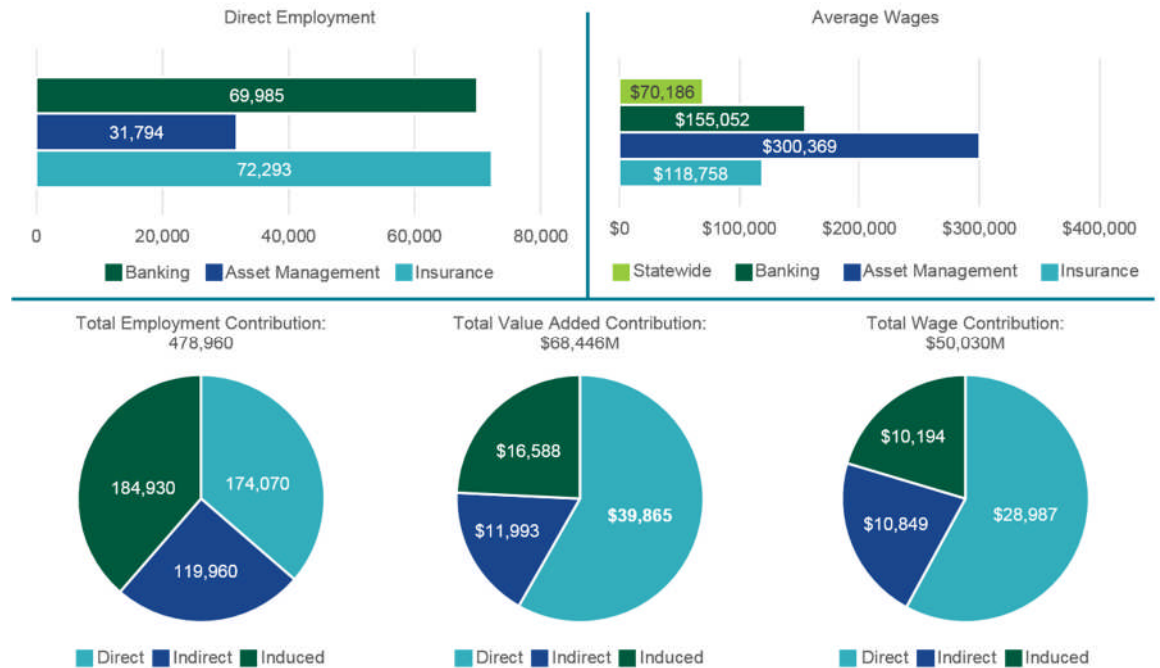
TD Bank understands the important role small businesses play in our local economies, and is dedicated to helping them grow and be successful. As the No. 3 Small Business Administration (SBA) lender in Maine by dollar volume and a preferred SBA lender, one way TD does this is by partnering with the SBA. That partnership formed the foundation of a relationship with Alison Evans and Chris Fritz of AE Ceramics in Boothbay Harbor and Yarmouth, Maine.

From the age of 14, Alison Evans knew she wanted to be a potter. She began her business, AE Ceramics, which focused on oyster shell pottery, in 2001. However, it was not until 2005 that she was able to commit full time. The company grew slowly at first, but in 2012 AE began to experience higher demands and expanded its product line from bowls to include sinks, lamps, serving ware, chandeliers and a line of dishes. Around that time her husband Chris Fritz left his job working for his family lumber business and committed to AE Ceramics full time.

With a need to finance inventory and accounts receivable, TD provided a \$30,000 SBA line of credit. Then things really heated up: in the next three years, AE Ceramics purchased their retail space in Yarmouth with a commercial mortgage, opened a second store in 2014 in Boothbay with a second commercial mortgage and along the way increased their line of credit. Today, in addition to its two retail locations, AE Ceramics sells to wholesalers nationwide and is partnering with local designers and interior decorators.

# Massachusetts

## Quick Facts, 2015



Source: PwC analysis of BLS and BEA data. IMPLAN model (2013 database). Wages (as defined, see "Report Methodology") include wages and salaries and benefits.



## State Highlights

- Massachusetts is home to the largest share of asset management employment in New England.
- Average financial services wage in Massachusetts was 2.4 times average state wages across all industries in 2015.
- Massachusetts is home of 2 of the top 10 private equity firms in terms of total funds raised in the past 10 years.

## Massachusetts FinTech Curriculum

As financial technology continues to evolve, a critical question has emerged: how does the industry sustain continued innovation? Part of the answer lies in having a prepared and knowledgeable workforce. Given New England's tremendous network of higher education institutions, it was inevitable that one of these universities would be a trailblazer in getting students ready to succeed in FinTech. The Massachusetts Institute of Technology (MIT) is now home to the first graduate-level course to cover the topic of financial technology applications in the United States. The course, entitled FinTech Ventures, is the result of a collaboration between the Martin Trust Center for MIT Entrepreneurship and the Finance Group at the MIT Sloan School of Management, alongside the MIT Department of Electrical Engineering and Computer Science and Harvard Law School. As FinTech continues to grow, and companies continue to adapt, expect the base of knowledge – and the number of courses offered at colleges and universities – to change as well.

Massachusetts is a regional leader in the financial services industry, with the highest total contribution of employment, total wages, and value added of the New England states. The state is also home to the largest share of asset management employment in the region, accounting for 60% of direct asset management employment in New England.<sup>91</sup> Massachusetts ranks 4<sup>th</sup> in the nation for direct asset management employment.<sup>92</sup> In addition, Massachusetts accounted for 44% of direct employment in the banking and insurance sectors in New England in 2015.<sup>93</sup>

The strong wages paid by the Massachusetts financial services industry make a large contribution to the state economy. The average financial services wage in 2015 of \$166,521 was nearly 2.4 times the average state wage across all industries.<sup>94</sup>

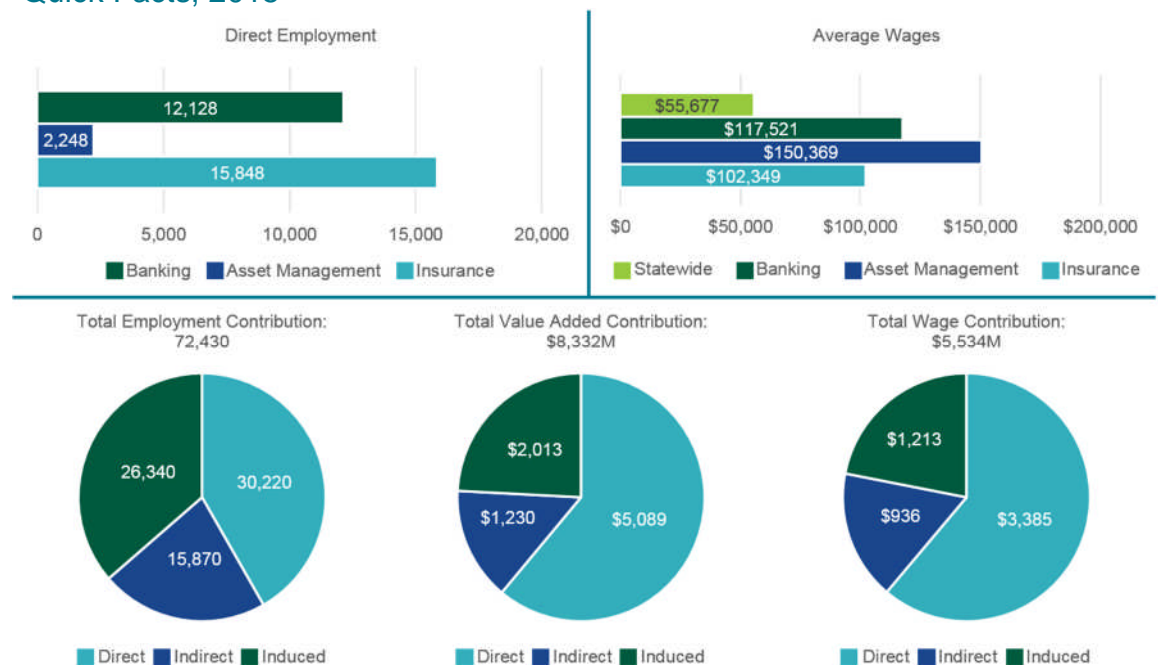


## Charitable giving in Massachusetts

Financial service firms give back with meaningful contributions to local communities of which they are a part. During 2015, a survey of giving by Massachusetts businesses to Massachusetts charities highlighted this impact noting that of participating firms, financial service firms, based on total contributions (defined to include both cash and in-kind contributions) comprised 10 of the top 25 and 22 of the top 50 contributors to state charities.<sup>95</sup> The total contributions of these 22 participating firms were in excess of \$100 million, supporting a wide range of charitable causes throughout the state.<sup>96</sup>

## New Hampshire

### Quick Facts, 2015



Source: PwC analysis of BLS and BEA data. IMPLAN model (2013 database). Wages (as defined, see "Report Methodology") include wages and salaries and benefits.

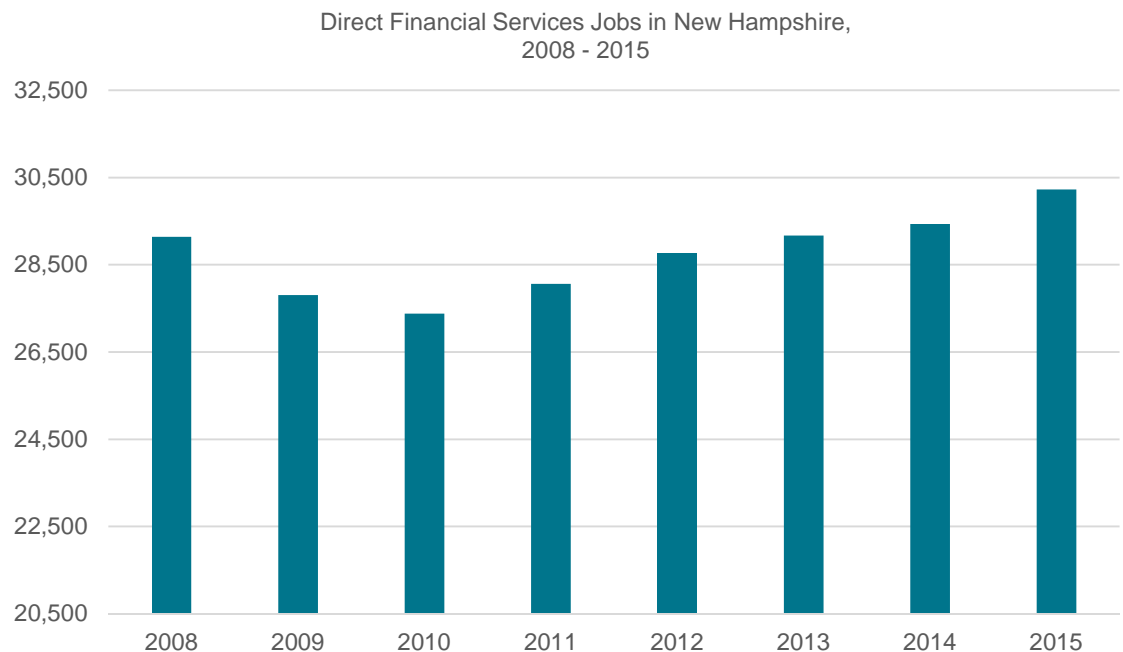


## State Highlights

- In New Hampshire, the financial services industry has added jobs each year since 2010.
- New Hampshire was 4th in the U.S. in 2015 for insurance carrier payroll as a percentage of total state payroll.

Overall, the financial services industry accounted for 8.4% of all employment in New Hampshire in 2015 when considering the total of direct, indirect, and induced employment, and accounted for 11.5% of state GDP.<sup>97</sup> The overall wage contribution comes in at 11.6% of statewide wages<sup>98</sup> and while the financial services industry in the New England region as a whole has not yet replaced all employment lost in the 2009 recession, the financial services industry in New Hampshire has added jobs each year since 2010 (Figure 15).<sup>99</sup>

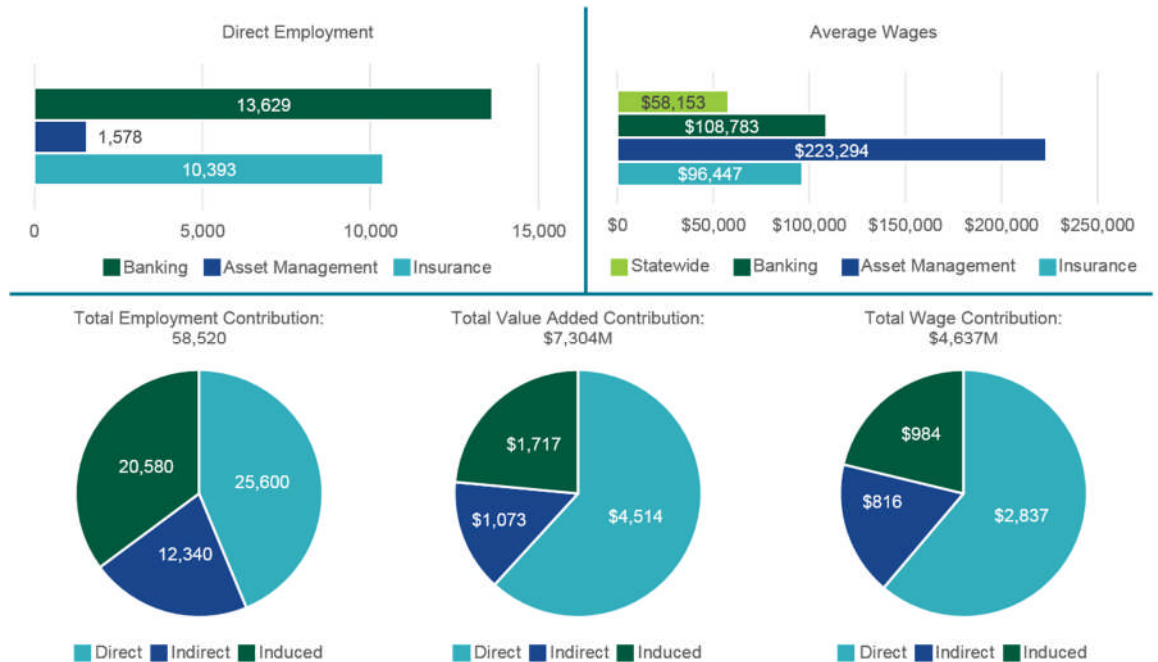
**Figure 15**



Source: PwC analysis of BLS and BEA data.

# Rhode Island

## Quick Facts, 2015



Source: PwC analysis of BLS and BEA data. IMPLAN model (2013 database). Wages (as defined, see "Report Methodology") include wages and salaries and benefits.



### State Highlights

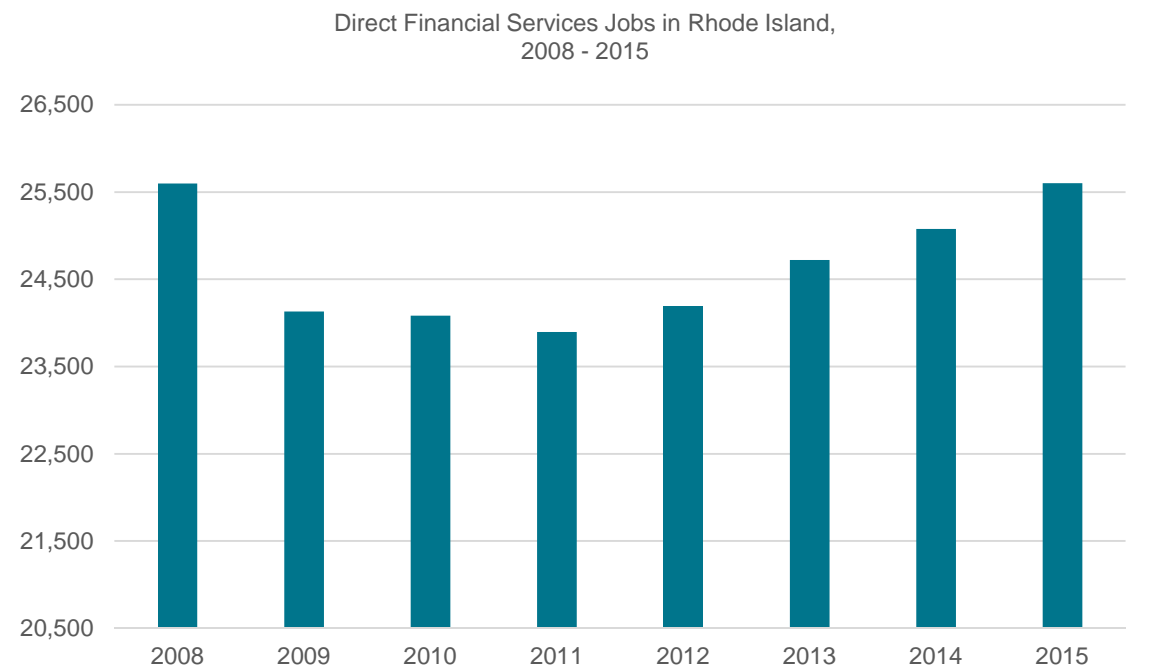
- Rhode Island is 3<sup>rd</sup> in the U.S. for actuaries as a percentage of total state employment.
- In Rhode Island, the financial services industry has added jobs each year since 2011.

At a direct level, the financial services industry in Rhode Island accounted for 9.0% of the state's GDP in 2015, the 8<sup>th</sup> most in the country, despite only accounting for 4.2% of direct employment in the state in 2015.<sup>100</sup> When direct, indirect, and induced employment are combined, the total contribution of the financial services industry in Rhode Island increases to 9.5% of all employment statewide and 12.8% of state GDP, or value added.<sup>101</sup>

When accounting for the direct, indirect, and induced wages and value added, the financial services industry in Rhode Island accounted for 13.0% of all wages in Rhode Island in 2015, the third highest in New England behind Connecticut and Massachusetts.<sup>102</sup> The financial services industry in Rhode Island has begun recovering from the 2009 recession, adding jobs each year since 2011 (Figure 16).<sup>103</sup>



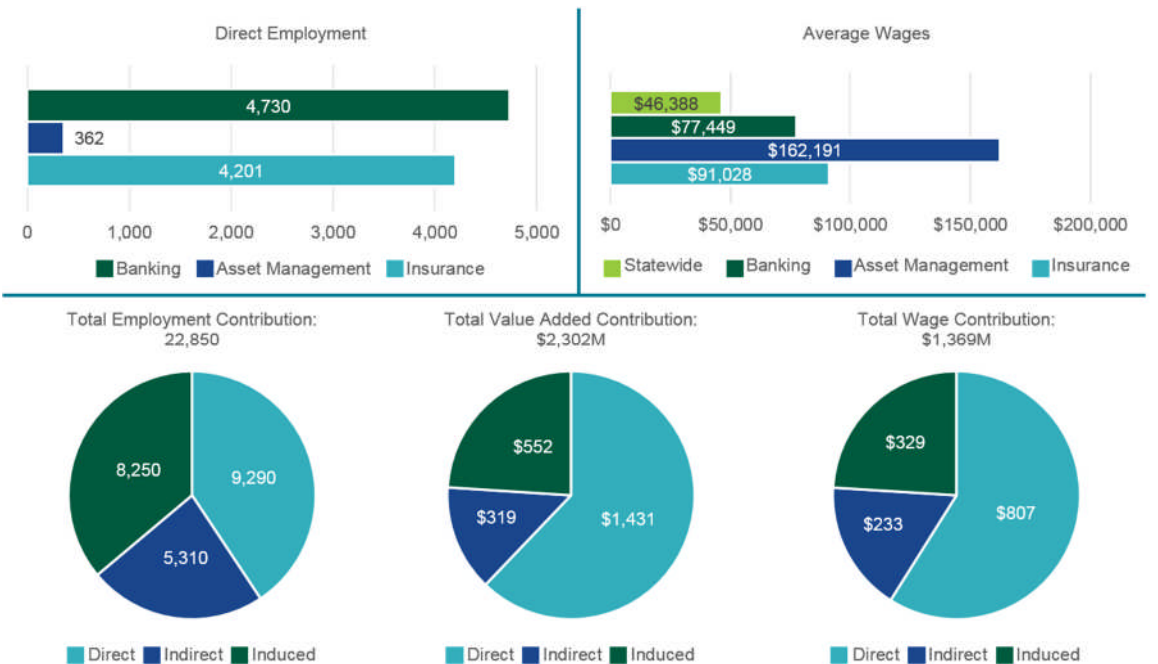
Figure 16



Source: PwC analysis of BLS and BEA data.

## Vermont

### Quick Facts, 2015



Source: PwC analysis of BLS and BEA data. IMPLAN model (2013 database). Wages (as defined, see "Report Methodology") include wages and salaries and benefits.

The financial services industry accounted for 5.6% of Vermont's gross domestic product in 2014.<sup>104</sup> When combining direct, indirect, and induced employment, wages, and value added, the financial services industry in Vermont made up 5.3% of statewide employment, 6.8% of statewide total wages, and 7.6% of state GDP across all industries.<sup>105</sup>



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## State Highlights

- Vermont is the 3<sup>rd</sup> largest captive insurance domicile in the world.
- In Vermont, the financial service industry accounted for 6% of the state's GDP in 2014.



## Vermont: A global leader in captive insurance

Captive insurance is a regulated form of self-insurance that has existed since the 1960's, and has been a part of the Vermont insurance industry since 1981, when Vermont passed the Special Insurer Act. Captive insurance companies are formed by companies or groups of companies as a form of alternative insurance to better manage their own risk. Captives are typically used for corporate lines of insurance such as property, general liability, products liability, or professional liability. Growth sectors of the captive insurance industry include professional medical malpractice coverage for doctors and hospitals, and the continued trend of small and mid-sized companies forming captive insurance companies.

Vermont's dedication to excellence has helped attract over 1,000 licensed captive insurance companies to the State of Vermont, making it third in the world behind Bermuda and the Cayman Islands. If you measure domiciles by gross written premium, Vermont ranks first world-wide with \$29.8 billion. In 2015, the Vermont captive industry is estimated to have generated \$24 million of premium tax benefits and related fees for Vermont. At last count in an economic study completed 10 years ago, more than 1400 direct and indirect jobs (full and part-time), were created by the captive industry in Vermont. The captive industry infrastructure that has developed in Vermont over the past 35 years includes managers, accountants, attorneys, and others, as well as the Vermont Captive Insurance Association (VCIA), and provides Vermont with a significant advantage. In fact, Burlington, VT has become a "Center of Excellence" in the captive insurance industry world-wide.

All of that is the result of several key factors: the foresight of the domicile's founders, the consistent commitment of state officials and Vermont legislators to captive insurance, the expertise and responsiveness of Vermont's captive regulatory team, an effective and efficient infrastructure supported by the VCIA, and a strong connection between policymakers and the industry that creates an environment in which captives can thrive.

# FinTech

New England has a history of innovation and is well positioned for new opportunities in FinTech

## FinTech

The financial services sector continues to evolve with the technological revolution and the rise of FinTech. As discussed earlier in this report, the current state of the financial services ecosystem in New England is strong. This interconnectedness and access to the top talent through our universities is crucial to future success in a technological world. The New England region fosters a cycle of education and innovation. First was the mutual fund and the ETF in Massachusetts, then the explosion of captives in Vermont, and now FinTech is the quickly growing phenomenon that is currently gaining steam across the region.

## What is FinTech?

FinTech is a dynamic segment at the intersection of the financial services and technology sectors where start-ups, new market entrants, and even the traditional big players innovate the products and services currently provided.

Cutting-edge FinTech companies and new market activities are redrawing the competitive landscape, blurring the lines that define players in the sector (see the diagram below). The changes are creating opportunities for market players to create products that provide consumer populations access to the financial services industry in ways that were not previously cost effective or even possible.

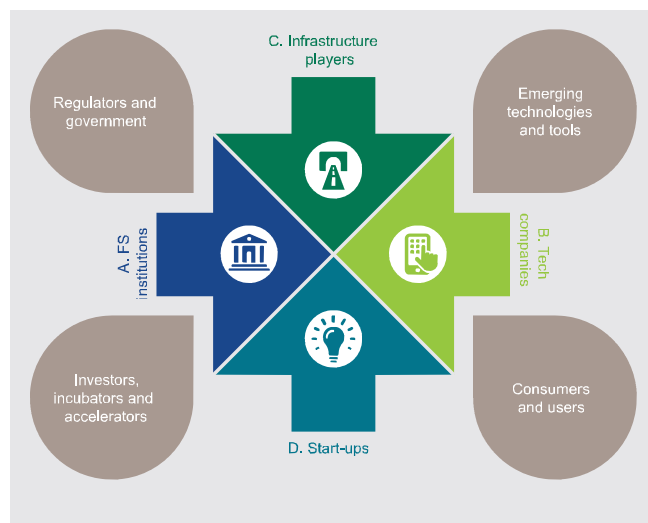
## FinTech's Impact in New England

With New England well-positioned at the heart of financial services and technology, innovation in FinTech has taken off locally in recent years. Through early 2016, the total investment in FinTech start-up companies founded in New England is now over \$750 million.

106

In this section, we've highlighted examples of FinTech's growing impact on banking, asset management, and insurance industries across the New England region.

FinTech is a complex ecosystem shaping Financial Services from the outside in.



Source: Blurred Lines: How FinTech is shaping Financial Services, March 2016

## Asset Management: Spotlight on FinTech

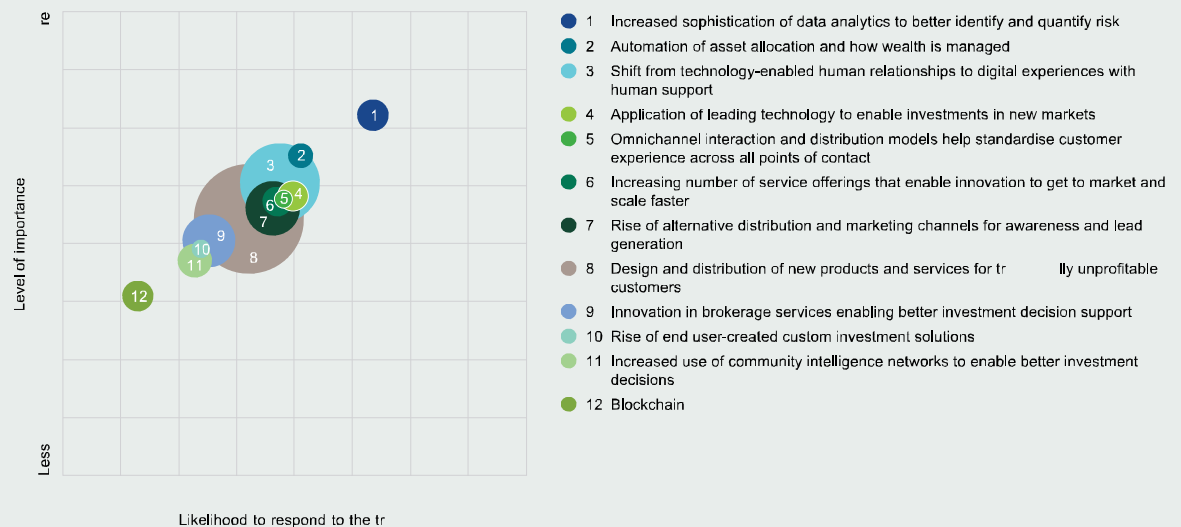
### Asset and Wealth Management shifts from technology-enabled human advice to human supported technology-driven advice

Automated investment advice (i.e. robo-advisors) poses a competitive threat to operators in the execution-only and self-directed investment market as well as to traditional financial advisors. However, such capabilities also create an opportunity for these traditional firms to transform their delivery of advice. Many self-directed firms have responded by hiring, or investing in, talented employees with both technology and finance experience.

A secondary by-product of automated customer analysis is the lower cost of customer onboarding, conversion and funding rates. This change in the financial advisory model has created an opening for wealth managers, who have struggled for years to figure out how to create profitable relationships with clients in possession of fewer total assets. Robo-advisors provide a viable solution for this segment and, if positioned correctly as part of a full service offering, can serve as a segue to full service advice for clients with specific needs or higher touch.

In early 2015, Boston-based Fidelity Investments partnered with Thomson Reuters and Amazon.com to launch the FinTech Sandbox. The FinTech Sandbox, based in Boston, is an innovative program that provides free or discounted access to data feeds from partners in the financial industry to participating FinTech startups. Through its vast network of partners, the FinTech Sandbox can also provide direct exposure to its partners in the Massachusetts area, some of the leading financial firms in the world. Different than a typical accelerator or incubator, the FinTech Sandbox is a non-profit program does not take an equity stake in the companies that participate. In just over one year since its launch, the FinTech Sandbox has received widespread attention and is an example of the power of collaboration in the region among startups and legacy financial firms.

### How important are these trends for your industry and how likely are you to respond (e.g. allocate resources, invest) to them?



Source: PwC Global FinTech Survey 2015.

The size of the bubbles is proportional to the number of related FinTech companies according to PwC's DeNovo platform

## Banking: Spotlight on FinTech

### Banks move toward a renewed digital customer experience

Banks are moving towards non-physical channels by implementing operational solutions and developing new methods to reach, engage and retain customers. As they pursue a renewed digital customer experience, many are engaging in FinTech to provide customer experiences on par with large tech companies and innovative start-ups.

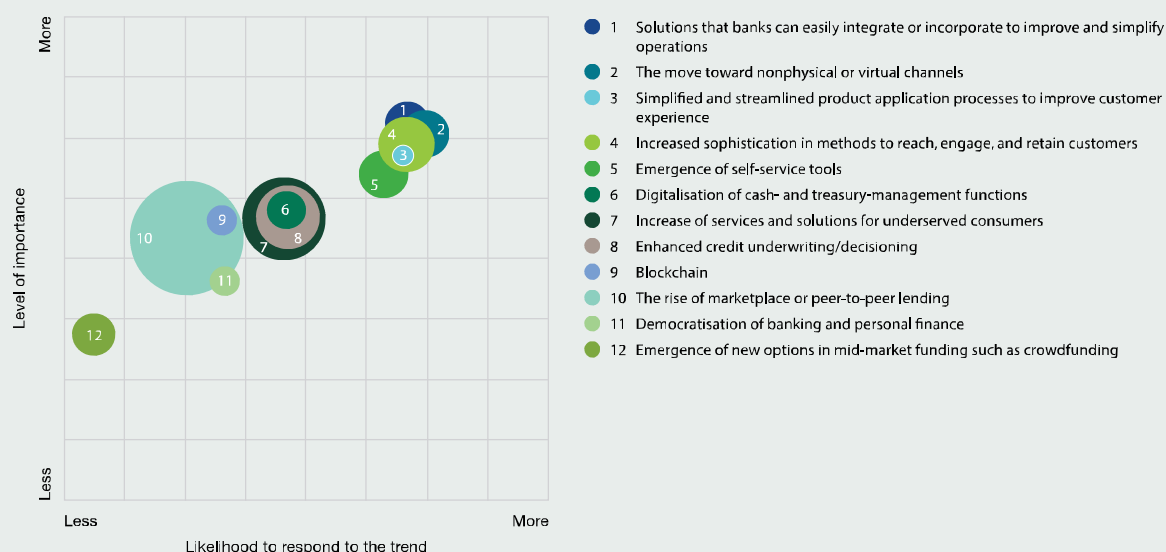
The trends that financial institutions are prioritizing in the banking industry are closely linked (see chart below). Solutions that banks can easily integrate to improve and simplify operations are rated highest in terms of level of importance, whereas the move towards non-physical or virtual channels is ranked highest in terms of likelihood to respond.

### Putting the Customer at the Center of Operations

Traditional banks may already have many of the streamlined and digital/mobile-first capabilities, but they should look to integrate their multiple digital channels into an omni-channel customer experience and leverage their existing customer relationships and scale. Banks can organize around customers, rather than a single product or channel, and refine their approach to provide holistic solutions by tailoring their offerings to customer expectations.

These efforts can also be supported by using newfound digital channels to collect data from customers to help them better predict their needs, offer compelling value propositions, and generate new revenue streams.

### How important are these trends for your industry and how likely are you to respond (e.g. allocate resources, invest) to them?



Source: PwC Global FinTech Survey 2015.

The size of the bubbles is proportional to the number of related FinTech companies according to PwC's DeNovo Platform.

### FinTech's impact on the Banking Sector in New England:

State Street is at the leading edge of exploring distributed ledger technologies (DLT), as the firm believes it can have a significant impact on the services it provides to institutional investor clients. Potential benefits will likely occur in a wide variety of areas, particularly in clearing and settlement and recording of ownership and safekeeping of assets. However, in order to be successful, the



new solutions driven by DLT will need to be properly structured, governed, and regulated. The resulting reductions in costs, lower reliance on manual interventions, better data assurance, higher transparency, reduced settlement risk, and new products and services will all benefit the investing public.

State Street has a multi-pronged approach to blockchain exploration, prototyping and the eventual rollout of services. This involves the coordinated input of, various business units, State Street IT, the company's internal FinTech laboratory and external partners. Also, State Street is a member of various industry consortiums, including R3, the Hyperledger Project, and the Post Trade Distributed Ledger group, and collaborates with other banks on DLT use cases and thought leadership across the globe. State Street's ultimate goal is to enhance its clients' experience through improved services and new product offerings, increase internal operating efficiency, and create the intellectual basis to help fuel a sustained pipeline of ideas and innovation.

Another prominent Massachusetts based bank, Eastern Bank, has launched a FinTech focused enterprise known as Eastern Labs. The venture seeks to incubate new banking focused technology and startups utilizing the banking data of its parent, Eastern Bank. Eastern Bank's investment has quickly earned it recognition when it was named the Model Bank of the Year in 2016 by Celent for their innovation in small business loans with a technology developed by Eastern Labs called Express Business Loan. Express Business Loan allows Eastern Bank to provide small business loans up to \$100,000 in less than five minutes.

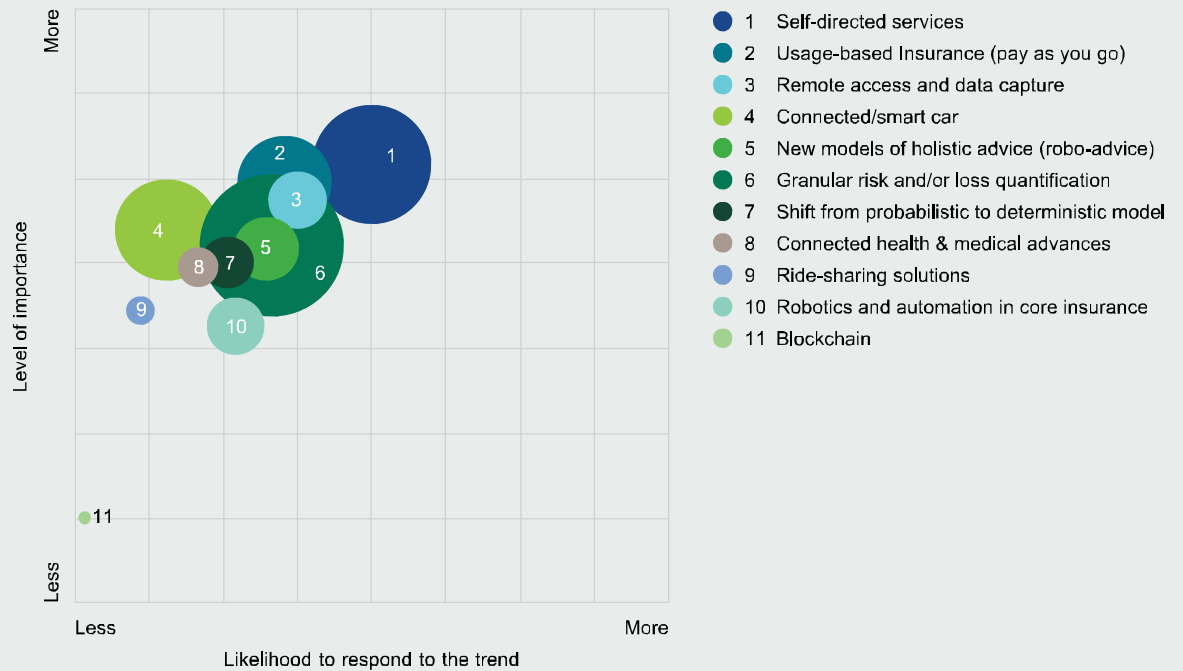
### Insurance: Spotlight on FinTech

#### **Insurers leverage data and analytics to bring personalized value propositions while proactively managing risk**

The insurance sector sees usage-based risk models and new methods for capturing risk-related data as key trends while the shift to more self-directed services remains a top priority in order to efficiently meet existing customer expectations. As is the case in other industry segments, insurance companies are investing in the design and implementation of more self-directed services for both customer acquisition and customer servicing. This allows companies to improve their operational efficiency while enabling online/mobile channels demanded by emerging segments such as Millennials. There have been interesting cases where customer centric designs create compelling user experiences (e.g. quotes obtained by sending a quick picture of the driving license and the car vehicle identification number (VIN)), and where new solutions bring the opportunity to mobilize core processes in a matter of hours (e.g. provide access to services by using "robots" to create a mobile layer on top of legacy systems) or augment current key processes.

Current trends also show an increasing interest in finding new underwriting approaches based on the generation of deep risk insights. In this respect, usage-based models – rated the second most important trend – are becoming more relevant.

**How important are these trends for your industry and how likely are you to respond (e.g. allocate resources, invest) to them?**



Source: PwC Global FinTech Survey 2015.

The size of the bubbles is proportional to the number of related FinTech companies according to PwC's DeNovo Platform

### **Differentiating, personalizing and leveraging new data sources**

Customers with new expectations and the need to build trusted relationships are forcing incumbents to seek value propositions where experience, transaction efficiency and transparency are key elements. As self-directed solutions emerge among competitors, the ability to differentiate will be a challenge.

Similarly, usage-based models are emerging in response to customer demands for personalized insurance solutions. The ability to access and capture remote risk data will help to develop a more granular view of the risk, thus enabling personalization. Leveraging new data sources to obtain a more granular view of the risk will not only offer a key competitive advantage in a market where risk selection and pricing strategies can be augmented, but will also allow incumbents to explore unpenetrated segments. In this line, new players that have generated deep risk insights are also expected to enter these unpenetrated segments of the market; for example, life insurance for individuals with specific diseases.

# Conclusion

The financial services industry is a driver of job creation, economic growth, and upward mobility in the New England region. While it is a diverse industry, these commonalities exist in all of the subsectors. As such, The New England Council's hope is that this report provides the readers with key data that underscores the importance of the industry to the region, and helps explain the critical role that financial services plays.

The story of financial services is engrained in our everyday lives. We rely on banks and credits unions to keep our hard earned money safe and accessible upon demand; we entrust the dedicated employees of the asset management industry to help us prepare for retirement; we expect insurers to protect our homes, vehicles, and treasures in the event of tragedy; and we depend on financial firms of all stripes to participate in building and strengthening our communities, from providing a start-up loan to an aspiring entrepreneur, to insuring a new job-creating office complex in a major city, to offering employees the opportunity to volunteer their time to clean up a park. Nearly every facet of our everyday lives is supported, in some way, by the financial services industry.

To policymakers, we ask that, when considering legislation and actions that impact the financial services industry, you be mindful of the constituents employed by financial firms, and the economic input – direct, indirect, and induced – that this industry brings to bear in your states and districts. And to the general public, our hope is that you have gained a greater understanding of the positive role that this critical sector plays right here in New England. Your neighbors and friends are bank tellers, brokers, and insurance agents; they are safeguarding your savings, managing your investments, processing your claims, and looking out for your financial well-being. While no industry is without flaws, the 375,000 hardworking, dedicated direct employees of the financial services sector are the lifeblood of an industry that is helping make life better for you and your family.

# Appendix A: Methodology

Data on direct employment and wages in the financial services industry and the banking, asset management, and insurance sectors is based on data from the Quarterly Census of Employment and Wages (QCEW), which is administered by the Bureau of Labor Statistics (BLS) and data from the Bureau of Economic Analysis (BEA). For the purposes of this report, the financial services industry was defined using the following NAICS codes:

NAICS Code	Sector	Description
<b>52</b>		Financial Services
<b>521</b>	Banking	Monetary Authorities-Central Bank
<b>522</b>	Banking	Credit Intermediation and Related Activities
<b>5231</b>	Banking	Securities and Commodity Contracts Intermediation and Brokerage
<b>5232</b>	Banking	Securities and Commodity Exchanges
<b>5239</b>	Asset Management	Other Financial Investment Activities
<b>524</b>	Insurance	Insurance Carriers and Related Activities
<b>525</b>	Asset Management	Funds, Trusts, and Other Financial Vehicles

The QCEW is a near comprehensive census of employment and wages at the national, state, and county levels for workers covered by state unemployment insurance laws and federal workers covered by the Unemployment Compensation for Federal Employees program. It does not include the self-employed, unpaid family workers, or private household employees. Jobs are counted regardless of full-time or part-time status. Individuals who hold more than one job may be counted more than once. In order to protect the confidentiality of firms' information, the Bureau of Labor Statistics does not disclose data that would be easily identifiable to individual participating companies. We relied on employment data from the Bureau of Economic Analysis to impute QCEW data that was not disclosed at the state level. The QCEW data on wages does not include the cash value of benefits. Wage data from the BEA was used to supplement the QCEW wage data in order to estimate benefits.

Employment and wage data from the QCEW and BEA were used in conjunction with the IMPLAN economic model (2013 database) to quantify direct, indirect, and induced employment, wage, value added, and output impacts of the industry in New England. IMPLAN is a well-known modeling system developed by the Minnesota IMPLAN Group for estimating economic impacts and is similar to the Regional Input-Output Modeling System developed by the U.S. Department of Commerce. The model is primarily based on government data sources. It can address a wide range of impact topics in a given region (county, state, or the country as a whole). IMPLAN is built around an "input-output" table that relates the purchases that each industry has made from other industries to the value of the output of each industry. To meet the demand for goods and services from an industry, purchases are made in other industries according to the patterns recorded in the input-output table. These purchases in turn spark still more purchases by the industry's suppliers, and so on. Meanwhile, employees and business owners make personal purchases out of the additional income that is generated by this process, sending more new demands rippling through the economy.

# Author and Contributors

## Author



The Council is a non-partisan alliance of businesses, academic and health institutions, and public and private organizations throughout New England formed to promote economic growth and a high quality of life in the New England region. The New England Council's mission is to identify and support federal public policies and articulate the voice of its membership regionally and nationally on important issues facing New England. The Council works to foster positive working relationships between its members and key federal policy makers, including members of Congress and leaders of key federal agencies. As a non-partisan organization, the Council has forged strong relationships with leaders on both sides of the aisle, and has won the respect of Democrats and Republicans alike.

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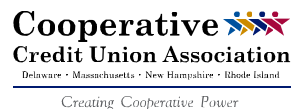
## Contributors



PwC's professional services include audit and assurance, tax and consulting that cover such areas as cybersecurity and privacy, human resources, deals and forensics. PwC's purpose is building trust in society and solving important problems. PwC's global network is supported by more than 223,000 people in 157 countries. Financial services is a distinctive business practice that provides audit, technical accounting, tax, regulatory, compliance, risk management, outsourcing, securities processing, payments, information risk and security, data quality, M&A and other services.



Connecticut Insurance and Financial Services (CT IFS), formed in 2003, is a statewide initiative of the MetroHartford Alliance comprised of 32 member companies in Connecticut's insurance and financial services sector. CT IFS' Board of Directors engages around a shared vision: to create competitive advantages in business attraction and retention, to sustain recruitment and education of a trained workforce and to increase public awareness of the industry's critical economic importance. Learn more at [www.connecticutIFS.com](http://www.connecticutIFS.com).



The Cooperative Credit Union Association is a credit union trade group with a heritage distinguishing it as the oldest continually operating trade group in the United States. While proud of this heritage, the Association serves its member credit unions throughout Massachusetts, New Hampshire, Rhode Island, and Delaware as their legislative and regulatory advocate, as a liaison to vendors and business partners, and as a resource for training and education, and industry news.



The Federal Home Loan Bank of Boston provides highly reliable wholesale funding, liquidity, and a competitive return on investment to more than 440 member financial institutions in New England. The Bank develops and delivers financial products, services, and expertise that support housing finance, community development, and economic growth, including programs targeted to lower-income households.



In business since 1912, and headquartered in Boston, Massachusetts, Liberty Mutual is a diversified insurer with operations in 29 countries and economies around the world. It is the fifth largest property and casualty insurer in the U.S. based on 2015 direct written premium data as reported by the National Association of Insurance Commissioners. It also ranks 73rd on the Fortune 100 list of largest corporations in the U.S. based on 2015 revenue. Liberty employs over 50,000 people in more than 800 offices throughout the world.





Mass Insight Global Partnerships creates competitive advantages for Massachusetts' organizations through leadership groups, policy initiatives and partnerships that expand market opportunities and supports the region's leadership. Through the Boston Financial Services Leadership Council, Mass Insight promotes the financial services sector locally, nationally, and internationally, including release annually of a Sector Impact Report. The Council recently launched Financial Technology Boston, its major initiative to capture FinTech talent and innovation and connect leading firms, startups, the investor community and universities.



Natixis Global Asset Management serves thoughtful investment professionals worldwide through our Durable Portfolio Construction® approach: applying risk-minded insights to empower more intelligent investing. Uniting over 20 specialized investment managers globally (\$897 billion AUM<sup>1</sup>), Natixis is ranked among the world's largest asset management firms.<sup>2</sup>

<sup>1</sup> Net asset value as of 9/30/16. Assets under management (AUM) may include assets for which non-regulatory AUM services are provided. Non-regulatory AUM includes assets which do not fall within the SEC's definition of "regulatory AUM" in Form ADV, Part 1. <sup>2</sup>Cerulli Quantitative Update: Global Markets 2016 ranked Natixis Global Asset Management, S.A. as the 16th largest asset manager in the world based on assets under management as of December 31, 2015.



Putnam has helped individuals and institutions pursue successful investment strategies for more than 75 years. Driven by commitment to our clients, we have practiced an active, research-intensive approach to investing while embracing innovation since the launch of our first fund in 1937. Today, Putnam provides investment services across a range of equity, fixed income, absolute return, and alternative strategies. A global asset manager serving individuals, institutions, and retirement plan sponsors, Putnam distributes its services largely through intermediaries via offices and strategic alliances in North America, Europe, and Asia.



State Street Corporation is an American worldwide financial services holding company. The company's headquarters are in Boston and it has offices in 29 countries around the world. State Street is organized into three main divisions: the Global Services business is a custodian bank. The Global Advisors business provides investment management services. The Global Markets business offers investment research and trading services to institutional investors.



TD Bank, N.A., America's Most Convenient Bank, is one of the 10 largest banks in the U.S., providing more than 8 million customers with a full range of retail, small business and commercial banking products and services at approximately 1,300 convenient locations throughout the Northeast, Mid-Atlantic, Metro D.C., the Carolinas and Florida.



The Travelers Companies is an American insurance company. The company has field offices in every U.S. state and several countries; its largest office is in Hartford, Connecticut. Travelers, through its subsidiaries and approximately 14,000 independent agents and brokers, provides commercial and personal property and casualty insurance products and services to businesses, government units, associations and individuals.



The Vermont Captive Insurance Association is the largest trade association for captive insurance in the world. Established in 1985, the Association has grown to provide legislative leadership and advocacy on both the state and federal levels for its nearly 500 member companies. In addition, it hosts and supports professional education and networking opportunities for the industry at large.

# Endnotes

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- <sup>1</sup> Armstrong, D., et al., “85 Innovations 1917 – 1938,” *Forbes*, 23 December 2002. Available at: <http://www.forbes.com/forbes/2002/1223/124.html>; McWhinney, J.E., “A Brief History of the Mutual Fund,” *Investopedia*, Available at: <http://www.investopedia.com/articles/mutualfund/05/mfhistory.asp>.
  - <sup>2</sup> [www.mfs.com](http://www.mfs.com)
  - <sup>3</sup> Strategic Insight/Simfund, December 2015.
  - <sup>4</sup> <https://www.selectusa.gov/financial-services-industry-united-states>
  - <sup>5</sup> Simpson, S.D., “A Brief History of Exchange-Traded Funds,” *Investopedia*, Available at: <http://www.investopedia.com/articles/exchangetradedfunds/12/brief-history-exchange-traded-funds.asp>; Davidson, L., “The History of Exchange-Traded Funds (ETFs),” *Morningstar*, 14 February 2012, Available at: [http://www.morningstar.co.uk/uk/news/69300/the-history-of-exchange-traded-funds-\(etfs\).aspx](http://www.morningstar.co.uk/uk/news/69300/the-history-of-exchange-traded-funds-(etfs).aspx).
  - <sup>6</sup> History of the Division of Banks, <http://www.mass.gov/ocabr/utility/history-of-the-division-of-banks.html>
  - <sup>7</sup> National Credit Union Association, “History of the Credit Union System” available at: <https://www.ncua.gov/About/Pages/history.aspx>
  - <sup>8</sup> “Vermont’s Captive Industry Celebrates 30<sup>th</sup> Anniversary,” available at: <http://www.vermontcaptive.com/press-room/news-releases/vermonts-captive-insurance-industry-celebrates-30th-anniversary.html>; “History of Captives” available at: [http://www.captiveexperts.com/History\\_of\\_Captives.html](http://www.captiveexperts.com/History_of_Captives.html).
  - <sup>9</sup> *Ibid.*
  - <sup>10</sup> “2010 Insurance Department Resources Report, Volume I” NAIC, 2011. Includes some RRGs that are formed as Captive Insurance Companies.
  - <sup>11</sup> U.S. Census Bureau, Population Division. Table 1. Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico.
  - <sup>12</sup> PwC analysis of BLS and BEA data.
  - <sup>13</sup> PwC analysis of BLS and BEA data. Wages includes wages and salaries and benefits.
  - <sup>14</sup> U.S. News & World Report, 2016, <http://colleges.usnews.rankingsandreviews.com/best-colleges>
  - <sup>15</sup> *Ibid.*
  - <sup>16</sup> *Ibid.*
  - <sup>17</sup> Ruiz, N.G., “The Geography of Foreign Students in the U.S. Higher Education: Origins and Destinations,” *Brookings Institute*, 29 August 2014. Available at <http://www.brookings.edu/research/interactives/2014/geography-of-foreign-students#/M10420>.
  - <sup>18</sup> National Center for Education Statistics, *2015 Digest of Education Statistics*, Table 309.10. Available at: [http://nces.ed.gov/programs/digest/d15/tables/dt15\\_309.10.asp](http://nces.ed.gov/programs/digest/d15/tables/dt15_309.10.asp).
  - <sup>19</sup> Employees of monetary authorities make up less than 1% of jobs in the banking subsector in New England.
  - <sup>20</sup> Direct employment is defined as the number of payroll jobs. Indirect/induced employment includes both paid and self-employment.
  - <sup>21</sup> Direct labor income includes wages and salaries and benefits. Indirect/induced wages includes wages and salaries and benefits, as well as proprietors’ income.
  - <sup>22</sup> Direct employment is defined as the number of payroll jobs. Direct labor income includes wages and salaries and benefits.
  - <sup>23</sup> Indirect/induced employment includes both paid and self-employment. Indirect/induced wages include wages and salaries and benefits, as well as proprietors’ income.
  - <sup>24</sup> *Ibid.*
  - <sup>25</sup> PwC analysis of BLS and BEA data.
  - <sup>26</sup> *Ibid.*
  - <sup>27</sup> *Ibid.*
  - <sup>28</sup> *Ibid.*
  - <sup>29</sup> *Ibid.*
  - <sup>30</sup> *Ibid.*

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- <sup>31</sup> PwC analysis of BLS and BEA data. Wages include wages and salaries and benefits.
- <sup>32</sup> Ibid.
- <sup>33</sup> Ibid.
- <sup>34</sup> Ibid.
- <sup>35</sup> Ibid.
- <sup>36</sup> PwC calculations using IMPLAN modeling system (2013 database).
- <sup>37</sup> Ibid.
- <sup>38</sup> Ibid.
- <sup>39</sup> Ibid.
- <sup>40</sup> Ibid.
- <sup>41</sup> Ibid.
- <sup>42</sup> FDIC, American Bankers Association Analysis. Note: aside from deposits, the information is based on banks headquartered in those states. For example, the number of employees are not necessarily the number of bank employees in that state, but the number of employees employed by banks headquartered in that state.
- <sup>43</sup> Ibid.
- <sup>44</sup> Credit Union National Association analysis.
- <sup>45</sup> Ibid.
- <sup>46</sup> Ibid.
- <sup>47</sup> Credit Union National Association analysis. This is an estimate of the amount spent by credit unions with local businesses – not in any way related to small business lending. The estimate is based on the sum of several types of expenditures based on the following assumptions for each credit union headquartered in each state: 1) 100% of office occupancy expense; plus 2) 100% of office operations expense; plus 3) 20% of travel/conference expense; plus 20% educational/promotional expense; plus 20% of professional/outside service expense.
- <sup>48</sup> The noncurrent loan metric measures the amount of risky loans in a portfolio and is calculated as the median ratio of the sum of loans and leases 90 days or more past due or in nonaccrual status divided by total loans. The nonperforming asset metric compares the level of bad loans and foreclosed properties to the total assets a bank has on its books and is calculated by dividing nonaccrual loans, loans and leases overdue 90 or more days and other real estate owned by total assets.
- <sup>49</sup> U.S. Banking Industry Aggregates (and by state) for 06/16 Q; SNL.com
- <sup>50</sup> Ibid.
- <sup>51</sup> Ibid.
- <sup>52</sup> Ibid.
- <sup>53</sup> Ibid.
- <sup>54</sup> Ibid.
- <sup>55</sup> Ibid.
- <sup>56</sup> Deposit Summary by State for all states for 2015; SNL.com
- <sup>57</sup> U.S. Banking Industry Aggregates (and by state) for 06/16 Q; SNL.com
- <sup>58</sup> Deposit Summary by State for all states for 2015; SNL.com
- <sup>59</sup> U.S. Banking Industry Aggregates (and by state) for 06/16 Q; SNL.com
- <sup>60</sup> Ibid.
- <sup>61</sup> Ibid.
- <sup>62</sup> Compiled from the data available at <https://www.ffiec.gov/craadweb/aggregate.aspx>
- <sup>63</sup> PwC analysis of BLS and BEA data.
- <sup>64</sup> Calculations based on information from: Kenney, J.B and Taub, S., “The 2014 Hedge Fund 100,” Institutional Investor, Inc.
- <sup>65</sup> Thomson Reuters, Investment Analytics Report, Companies involved in All Private Equity Deals from 1/1/2011 to 12/31/2015.
- <sup>66</sup> Strategic Insight/Simfund, December 2015.
- <sup>67</sup> Calculations based on information from: Kenney, J.B and Taub, S., “The 2014 Hedge Fund 100,” Institutional Investor, Inc.
- <sup>68</sup> Strategic Insight/Simfund, December 2015.
- <sup>69</sup> Thomson Reuters, 2015.
- <sup>70</sup> Pensions and Investments – May 2016.

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- <sup>71</sup> Thomson Reuters, May 2015.
- <sup>72</sup> Strategic Insight/Simfund, December 2015.
- <sup>73</sup> Calculations based on information from: Kenney, J.B and Taub, S., “The 2014 Hedge Fund 100,” Institutional Investor, Inc.
- <sup>74</sup> Thomson Reuters, 2015.
- <sup>75</sup> Thomson Reuters, Investment Analytics Report, Companies involved in All Private Equity Deals from 1/1/2011 to 12/31/2015.
- <sup>76</sup> Bureau of Labor Statistics, OCC Code 15-2011, May 2015.
- <sup>77</sup> PwC analysis of BLS and BEA data.
- <sup>78</sup> 144<sup>th</sup> Annual Report of Insurance Commissioner; a Condensed Financial Overview of Insurance Companies Doing Business in the State in 2014 – March 30, 2016.
- <sup>79</sup> Ibid.
- <sup>80</sup> Ibid.
- <sup>81</sup> Bureau of Labor Statistics, OCC Code 15-2011, May 2015.
- <sup>82</sup> CERC calculation of Moody’s Analytics data, NAICS 5241. August 2016.
- <sup>83</sup> Ibid
- <sup>84</sup> Bureau of Economic Analysis, gross domestic product by state, 2014.
- <sup>85</sup> Insurance Information Institute, Captives by State.
- <sup>86</sup> Ibid.
- <sup>87</sup> PwC analysis of BLS and BEA data. IMPLAN model (2013 database). Wages include wages and salaries and benefits.
- <sup>88</sup> Ibid.
- <sup>89</sup> Ibid.
- <sup>90</sup> Ibid.
- <sup>91</sup> PwC analysis of BLS and BEA data.
- <sup>92</sup> Ibid.
- <sup>93</sup> Ibid.
- <sup>94</sup> PwC analysis of BLS and BEA data. Wages include wages and salaries and benefits.
- <sup>95</sup> Boston Business Journal, Top Charitable Companies in Massachusetts
- <sup>96</sup> Ibid.
- <sup>97</sup> PwC analysis of BLS and BEA data. IMPLAN model (2013 database). Wages include wages and salaries and benefits.
- <sup>98</sup> Ibid.
- <sup>99</sup> PwC analysis of BLS and BEA data.
- <sup>100</sup> Bureau of Economic Analysis, gross domestic product by state, 2015.
- <sup>101</sup> PwC analysis of BLS and BEA data. IMPLAN model (2013 database). Wages include wages and salaries and benefits.
- <sup>102</sup> Ibid.
- <sup>103</sup> PwC analysis of BLS and BEA data.
- <sup>104</sup> Bureau of Economic Analysis, gross domestic product by state, 2014.
- <sup>105</sup> PwC analysis of BLS and BEA data. IMPLAN model (2013 database). Wages include wages and salaries and benefits.
- <sup>106</sup> Mattermark.