

Business and Finance Industry and Occupations in the Inland Empire

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Over the next three years, business and finance occupations will grow by an estimated 5% in the Inland Empire, adding 2,000 jobs.

– Center of Excellence Study

Introduction

The following report is based on an analysis of the business and finance industry in the Inland Empire, a region in Southern California encompassing Riverside and San Bernardino counties. The study focused on the occupational areas of accounting, business administration, real estate, and banking and finance.

It is expected that the business and finance sector will be impacted by a number of demographic, social, technological and economic shifts in coming years. According to a report by Intuit, the work that accounting practitioners do will dramatically change by 2020.¹ The report predicts that practitioners will work across global borders; and that as a result of new technological advances, accounting professionals will do more consulting and less computation, primarily providing strategic advice and business information to clients.

In addition, the Sarbanes Oxley legislation (SOX) has had far reaching effects on the business and finance industry. Passed in 2002, this legislation was a response to corporate scandals at Enron, Tyco, and WorldCom and sought to prevent accounting fraud and improve financial disclosures.² A Forbes Magazine article on an independent study of the impacts of the legislation reports that “despite high initial costs of the internal control mandate, evidence shows that it has proved beneficial.”³ The article notes that markets can now assess companies more effectively, managers have improved internal processes, and internal control testing has become more cost-effective. This has all had a profound impact on the field of accounting and auditing. The drive to digitize will further influence the future of the banking industry, as will mobile, web, and social commerce, all of which will have an impact on payment processes and the services sought by consumers, according to the article “Top 10 Retail Banking Trends and Predictions for 2014.”⁴ It is also predicted that 15% to 25% of the roughly 7,000 financial institutions in North America could disappear due to consolidation by 2020.⁵ As digital banking takes hold, it is expected that there will be increased competition from non-traditional players and that banks will close branches, as the business model becomes unsustainable.

Just as profound transformations are expected in the banking and accounting industries, so is change in the real estate industry, which is in a phase of correction following an oversupply of licensed real estate agents in the early 2000's.⁶ The Inland Empire was especially affected by the housing market burst and while conditions are slowly improving, conditions remain unsteady. As a result, the labor market for real estate agents and loan officers may not be in large demand for at least the next few years.

¹ “Intuit 2012 Report: Future of the Accounting Profession.” February 2011. Published by Intuit.
http://blog.accountant.intuit.com/wp-content/uploads/2011/02/intuit_corp_vision2020_0111.v51.pdf

² “Sarbanes-Oxley Act Of 2002 – SOX.” Investopedia. Accessed May 17, 2014.
<http://www.investopedia.com/terms/s/sarbanesoxleyact.asp>

³ Hanna, Julia. “The Costs And Benefits Of Sarbanes-Oxley.” March 10, 2014. Forbes Magazine.
<http://www.forbes.com/sites/hbsworkingknowledge/2014/03/10/the-costs-and-benefits-of-sarbanes-oxley/>

⁴ Marous, Jim. “Top 10 Retail Banking Trends and Predictions for 2014.” December 16, 2013. The Financial Brand.
<http://thefinancialbrand.com/36367/2014-top-bank-trends-predictions-forecast-digital-disruption/>

⁵ Marous, Jim. “Traditional Banks At Risk Due to Digital Disruption.” November 13, 2013. The Financial Brand.
<http://thefinancialbrand.com/37334/insight-retail-banking-research-digital-mobile-channel-disruption-accenture/>

⁶ Reyes, Carrie B. “The rise and fall of real estate brokers and agents.” February 20, 2014. First Tuesday Journal.
<http://journal.firsttuesday.us/the-rises-and-declines-of-real-estate-licensees/2983/>

Methodology

An analysis of labor market data and postsecondary completion numbers was conducted for this study. Both quantitative and qualitative data were collected. Primary and secondary data related to occupational employment, proprietary schools, community colleges and four-year institutions of higher education were fundamental to the study's findings.

To derive a more complete understanding of occupational trends, the North American Industry Classification System (NAICS) and the Standard Occupational Classification (SOC) System were used to identify specific occupations and industries related to business and finance. Occupation and industry data were obtained using the Economic Forecaster tool provided by Economic Modeling Specialists, Inc. (EMSI).

The California Community Colleges Chancellor's Office Data Mart System provides data on regional training programs, as does the Integrated Postsecondary Education Data System (IPEDS). Both were utilized for this study. College programs were identified using Taxonomy of Programs (TOP) codes and the Classification of Instructional Programs (CIP) system. For more information on the data sources employed by this study, please refer to Appendix A.

Occupational Overview

For this study, 20 occupations were identified as being relevant to the Business and Finance sector. Overall, these occupations accounted for 87,473 jobs in 2013. Over the next three years, they are expected to grow by 4% on average in the Inland Empire. Total annual openings for the occupations associated with business and finance are estimated at 3,376; openings includes new plus replacement jobs.

For the purpose of the study, the occupations were broken into four separate groups which were individually analyzed:

- accounting,
- business administration and general business,
- real estate,
- and banking and finance.

Occupations within the accounting subsector will grow on average 5% over the next three years (Table 1). This cluster will add 836 jobs by 2016, expanding from 16,596 to 17,432 workers. Within this group, jobs for tax preparers will increase by 6% over the next three years while bookkeeping, accounting, and auditing clerks and accountants and auditors will grow by 5%. It should also be noted that, out of all the occupations in Table 1, the occupation of bookkeeping, accounting and auditing clerks employs the greatest number of employees, nearly 14,000 in the region.

The projected growth in auditing and accounting can be attributed to several factors. For example, the scope of work conducted by accountants is expected to expand. Rather than number crunching and preparing financial reports, accounting professionals will be tasked with a new role as consultants, primarily advising clients on competitive strategies to succeed in the global marketplace.

In addition, the Sarbanes Oxley legislation (SOX) has had far reaching impacts on accounting and business practices and has created increased demand for forensic accounting due to tighter regulatory scrutiny, according to a report by Echelbarger, Himebaugh, Tamm & Co. (EHTC).⁷ Forensic accounting

⁷ "Five Trends Shaping the Accounting Industry." August 21, 2012. Published by Echelbarger, Himebaugh, Tamm & Co. <http://www.ehtc.com/resources/news-articles/bid/88667/Five-Trends-Shaping-the-Accounting-Industry>

deals with fraud prevention, litigation support, and the detection of financial crimes, such as securities fraud and embezzlement. SOX also has shifted certain consulting services from audit firms to other consulting businesses, such as CPA firms. The report by EHTC notes that with the rise of the global economy, there is greater need for accounting professionals with skills in international accounting, tax treaties, and regulatory requirements.

Table 1 – Accounting occupational employment (by 2013 jobs)

Description	2013 Jobs	2016 Jobs	Change	% Change	Annual Openings	MHE*
Bookkeeping, Accounting, and Auditing Clerks	13,721	14,419	698	5%	354	\$17.17
Accountants and Auditors	8,608	9,080	472	5%	424	\$27.58
Payroll and Timekeeping Clerks	1,856	1,930	74	4%	67	\$18.86
Tax Preparers	1,019	1,083	64	6%	46	\$15.55
Total/Average	16,596	17,432	836	5%	467	\$20.78

Source: Economic Modeling Specialists, Inc., 2014.1 Class of Worker.

*MHE=Median Hourly Earnings

Within the category of business/business administration, occupations on average will grow by 5% over the next three years (Table 2). This cluster employs by far the greatest number of individuals, 45,670, in the region. As a result, expansion in this group, which is expected to add 2,384 jobs, will likely have the greatest impact on the Inland Empire when compared with other business and finance occupation groups. Only one occupation within the business/business administration group is expected to decline, that of cost estimators. This occupation will lose 57 jobs by 2016, a 2% reduction in employment.

General and operations managers comprise the largest number of jobs within the business/business administration cluster; 18,224 jobs in 2013, and will add 877 more positions in the next three years. The occupation of General and operations managers also earned the highest median hourly wages (\$44.92) and has the greatest number of annual openings (647).

The occupation of first-line supervisors will grow by 6% over the next three years, adding 855 positions. This occupation employs 13,337 individuals in the region. The median hourly wage, however, is significantly lower than general and operations managers.

Table 2 – General Business/Business Administration occupational employment (by 2013 jobs)

Description	2013 Jobs	2016 Jobs	Change	% Change	Annual Openings	MHE*
General and Operations Managers	18,224	19,101	877	5%	647	\$44.92
First-Line Supervisors of Office and Administrative Support Workers	13,337	14,192	855	6%	646	\$23.10
Managers, All Other	6,649	6,823	174	3%	206	\$25.15
Management Analysts	5,125	5,660	535	10%	286	\$31.18
Cost Estimators	2,335	2,278	(57)	(2%)	74	\$30.75
Total/Average	45,670	48,054	2,384	5%	1,859	\$33.38

Source: Economic Modeling Specialists, Inc., 2014.1 Class of Worker.

*MHE=Median Hourly Earnings

The real estate cluster is expected to lose jobs over the next three years in the Inland Empire (Table 3). Of the three occupations in this group, real estate agents will have the greatest decline. The occupation is expected to contract by 9% over the next three years, resulting in a loss of 480 jobs. Likewise, the occupation of appraisers and assessors is expected to shrink by 6%. However, this occupation is

substantially smaller than that of real estate agents. Only 686 appraiser and assessor jobs existed in 2013. By 2016, that number will likely number 644, a loss of 42 jobs.

The occupation of loan officers is the only occupation within the real estate subsector that is expected to grow. This occupation will increase by 5% over the next three years, adding 94 jobs. This is also the highest paid occupation within the real estate subsector and it has the highest number of annual openings.

Table 3 – Real Estate occupations employment (by 2013 jobs)

Description	2013 Jobs	2016 Jobs	Change	% Change	Annual Openings	MHE*
Real Estate Sales Agents	5,292	4,812	(480)	(9%)	53	\$12.43
Loan Officers	2,017	2,111	94	5%	88	\$36.20
Appraisers and Assessors of Real Estate	686	644	(42)	(6%)	11	\$19.88
Total/Average	7,995	7,567	(428)	(5%)	152	\$19.33

Source: Economic Modeling Specialists, Inc., 2014.1 Class of Worker. *MHE=Median Hourly Earnings

Overall, the occupations within the banking and finance cluster are expected to grow by 5% over the next three years in the Inland Empire. In 2013, this field employed more than 8,600 individuals, and by 2016, is expected to employ 9,086, the result of the addition of nearly 500 new positions. However, some occupations will expand faster than others.

For example, the occupation of credit counselors will increase by 10%. Likewise, the occupation of credit analysts (the highest paid occupation in the group) will grow by 9%, and the occupation of bill and account collectors will expand by 8%. The occupation of brokerage clerks is expected to remain stagnant over the next three years as will, tax examiners, collectors and revenue agents.

Interestingly, the occupation of tellers is expected to increase by 4% over the next three years. This finding differs from predictions that this job would decline in coming years as a result of branch closures as banks consolidate due to increase competition from non-traditional sources. In 2013, there were 3,837 teller jobs in the Inland Empire. In 2016, that number is expected to reach 4,009. The occupation of tellers also has the highest number of annual openings of all occupations in this subsector.

Table 4 – Banking and Finance occupational employment (by 2013 jobs)

Description	2013 Jobs	2016 Jobs	Change	% Change	Annual Openings	MHE*
Tellers	3,837	4,009	172	4%	249	\$12.80
Bill and Account Collectors	2,572	2,766	194	8%	144	\$16.97
Loan Interviewers and Clerks	1,001	1,059	58	6%	32	\$17.95
Tax Examiners and Collectors, and Revenue Agents	364	367	3	1%	14	\$31.77
Credit Authorizers, Checkers, and Clerks	329	347	18	5%	10	\$16.78
Credit Counselors	241	264	23	10%	14	\$21.31
Credit Analysts	153	167	14	9%	7	\$34.39
Brokerage Clerks	107	107	0	0%	4	\$22.05
Total/Average	8,604	9,086	482	5%	474	\$21.75

Source: Economic Modeling Specialists, Inc., 2014.1 Class of Worker. *MHE=Median Hourly Earnings

Industry Overview

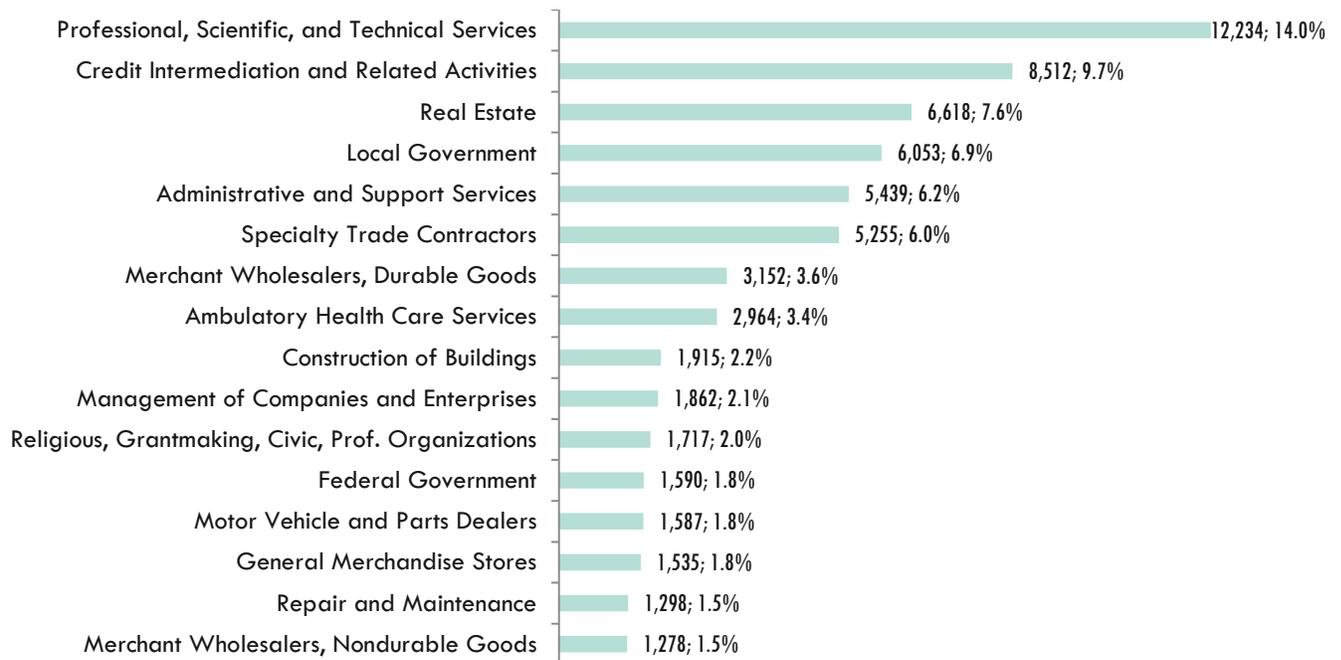
In addition to occupations, industries that employ business and finance occupations were analyzed to identify where employment for the occupations is concentrated. Figure 1 shows that the greatest number of jobs occurs in the professional, scientific and technical services industry (12,234 jobs, 14% of employment). Business establishments within this industry include accounting, tax preparation, bookkeeping, and payroll and management services. Occupations that would likely be employed by this industry sector include tax preparers, accountants, auditors, management analysts, financial analysts, budget analysts, and bookkeeping, accounting and auditing clerks.

Credit intermediation and related activities accounted for the second largest concentration of jobs (8,512 jobs, 9.7% of employment) for the occupations identified by this study. The credit intermediation industry is responsible for lending funds raised from depositors and credit market borrowing. Businesses in this industry facilitate lending or issuing credit through mortgage and loan brokerages, clearinghouse services, and check cashing services. Customer service representatives, financial managers, loan interviewers and clerks, loan officers, and tellers comprise the occupations employed by this industry, according to the Bureau of Labor Statistics.

Real estate employment constitutes 7.6% of all employment. While employment in this sector may seem robust, the outlook for employment is not as strong as for occupations in the professional, scientific and technical services industry. Occupations that fall within the real estate industry sector are real estate agents, real estate brokers, appraisers, and assessors.

Additional employment for business and finance occupations can be found in industries like construction, retail, and healthcare which provide opportunities for accounting occupations and business managers and supervisors.

Figure 1– Occupational Employment by Industry



Source: Economic Modeling Specialists, Inc., 2014.1 Class of Worker

Note: This is only a partial list of industry employers, representing only those industries that comprise 1.5% or greater of all occupational employment for the 20 occupations of study.

Education and Training

One of the study's objectives was to catalog available regional education and training programs that prepare students to enter occupations in the fields of business and finance. This information can provide a picture of how postsecondary institutions are meeting employer demand for qualified employees. The analysis of this data also can be of use to community colleges that are developing new programs or seeking to tailor existing programs to specifically target employer needs.

Educational program identification

To quantify the available education and training for business and finance occupations in the region, an inventory of relevant programs from two- and four-year institutions was conducted. Relevant programs were identified using Taxonomy of Programs (TOP) codes and Classification of Instructional Programs (CIP) codes.

Programs included in this inventory are:

TOP Code	Program Name
50100	Business and Commerce, General
50200	Accounting
50400	Banking and Finance
50500	Business Administration
50600	Business Management
50630	Management Development and Supervision
50800	International Business and Trade
51100	Real Estate
51110	Escrow

Regional Occupational Centers and Programs (ROCP)

Regional Occupational Centers and Programs are an important provider of Career and Technical Education (CTE) for high school students. With the completion of ROCP courses students can enter the workforce in entry-level positions or take the next step and continue their CTE education in a postsecondary education institution.

In the Inland Empire, there are a handful of ROCPs course offerings related to the Business and Finance field. For example, Introduction to Banking, Introduction to Finance, Business Technology Lab, and Computer Business Applications can impart necessary training and education to students for pursuing jobs as bank tellers, loan interviewers, and more. See Appendix C for a list of area ROCP programs.

Community college programs

Local community colleges offer students an introduction to the field of business and finance. Two-year education programs in business are often the gateway to Bachelor's level coursework in areas of specialization such as marketing, accounting, advertising, business management, and many more

Alternatively, community colleges can be the education termination point for students who are looking to start a career in real estate or begin entry-level work in accounting. A two-year education in accounting also prepares students to pursue more advanced accounting training in four-year programs.

In the region in 2013, there were 962 program completions in the programs identified for this study. Of those, 298 were certificates and 664 were associate degrees. The most completions occurred in business and accounting programs. Four programs had very low completion numbers (banking and finance, management development and supervision, international business and trade, and escrow) and as a result. Please refer to Appendix C for details.

Twelve community colleges in the Inland Empire offer programs related to business and finance. The most widely offered program is business management (Table 5); nine community colleges have programs in this field.

Despite expectations that global trade will play an increasingly important role in business and finance in coming years, only one community college – Riverside City College – offers a program in international business and trade.

Chaffey College and Riverside Community College offer the greatest number of programs. Each offers 10 programs. Moreno Valley, Norco, and San Bernardino Valley community colleges also offer a substantial number of programs.

Table 5 - Community college programs related to business and finance

Program/Institution	Barstow	Copper Mountain	Chaffey	Crafton Hills	Desert	Moreno Valley	Mt. San Jacinto	Norco	Palo Verde	Riverside	San Bernardino	Victor Valley
Accounting	AS	C	AS, C	C	C	AS, C		AS, C		AS, C	AA, C	
Banking and Finance										AS		
Business Administration		AA	AS, C	AS	AA		AS, C				AA, C	
Business and Commerce, General	AS	AA			AA	AS, C		AS, C		AS, C		AS
Business Management	ASC		AS, C	AA, AS, C		AS, C	AS	AS, C	AS, C	AS, C		C
Escrow											AA	AS
International Business and Trade										C		
Management Development & Supervision			AS, C									
Real Estate			AS, C			AS, C	AS, C	AS, C		AS, C	AA, C	C

Note on abbreviations: AA=Associate of Arts; AS=Associate of Science; and C=Certificate.

Proprietary education institutions

Student completions for related programs at proprietary schools (defined as for-profit businesses providing training and vocational instruction) were also collected and analyzed. The findings indicate that proprietary schools in the Inland Empire award fewer certificates and degrees than community colleges and offer fewer fields of study in this area.

In total, there were 143 proprietary certificates and degrees earned by students; 28 certificates, 64 Associate degrees, and 51 Bachelor’s degrees (Appendix C). Most completions were for business related programs.

Five proprietary schools in the region offer programs in business administration and management: Argosy University, Everest College, ITT Tech San Bernardino, Mayfield College, and Westwood College (Table 6).

Only one proprietary school offers a program in accounting and bookkeeping – Everest College. This proprietary school is also the only one in the region to offer a program in business, management, marketing and related support services.

Table 6 - Proprietary education programs related to business and finance

Program/Institution	Argosy University	CET-Rancho Temecula	CET-San Bernardino	Everest College	ITT Tech San Bernardino	Mayfield College	Milan Institute	Summit College	Westwood College
Accounting		TC	TC						
Accounting and Related Services, Other							TC	TC	
Accounting Technology/Technician and Bookkeeping				TA					
Business Administration and Management, General	TB			TB	TB	TC			TB
Business, Management, Marketing and Related Support Services				TA					

Note on abbreviations: TC =Technical Certificate; TA=Technical Associate Degree; TB =Technical Bachelor’s Degree.

Four-year institutions

To further develop an understanding of postsecondary education in the Inland Empire, student completions in business and finance degree programs at four-year institutions were considered. In 2012, 1,840 bachelor’s degrees were issued by four-year educational institutions in related fields (Appendix B). There were 1,531 completions in business administration and management, 266 completions in business/commerce, and 43 accounting awards conferred.

Five institutions of higher education in the region offer degrees in business administration and management: California State University, San Bernardino, La Sierra University, University of California, Riverside, and the University of Redlands (Table 7).

Table 7 - Four-year programs related to business and finance

Program/Institution	Cal Baptist University	CSU San Bernardino	La Sierra University	UC Riverside	University of Redlands
Accounting	BA		BA		BA
Business Administration and Management, General		BA	BA	BA	BA
Business/Commerce, General	BA				BA

Note on abbreviations: BA=Bachelor’s Degree

Workforce gap

The study sought to determine whether educational providers are meeting industry demand for business and finance occupations. Using the clusters identified in the occupational overview, the number of college completions was compared to the number of annual openings. This analysis was conducted for the following areas: accounting, business administration and general business, real estate, and banking and finance.

Accounting Cluster

Occupations in the accounting cluster are entry-level roles as payroll clerks, bookkeepers, and tax preparers and a higher level occupation of accountant. For the entry-level position, the Bureau of Labor Statistics notes moderate-term on-the-job training as an education requirement although two-year education programs do provide training for these occupations. Higher level positions such as accountant necessitate further education at a four-year institution.

The findings detailed in Table 6 indicate that four-year education institutions are not meeting workforce demand for accounting occupations. The analysis revealed that there is an undersupply of 381 workers for accountant and auditor occupations requiring a bachelor's degree. There also is an undersupply of workers for occupations related to tax preparation, bookkeeping and payroll.

Table 8 - Accounting Occupational Employment and Education

Occupation	Education Level	2013 Jobs	Annual Openings	2012 Completions	Over/(Under) Supply
Accountants and auditors (13-2011)	Bachelor's degree	8,608	424	43	(381)
Tax preparers (13-2082)	Moderate term OTJ training	1,019	46	207	(260)
Bookkeeping, accounting, and auditing clerks (43-3031)	Moderate term OTJ training	13,721	354		
Payroll and timekeeping clerks (43-3051)	Moderate term OTJ training	1,856	67		
Total		25,204	891	250	(641)

In addition to a formal education, employers also require industry specific certifications for employment as an account. The most desirable being a Certified Public Accountant (CPA) certificate. A search of regional employer job postings resulted in some of the most common on-the-job titles for occupations in accounting. Some of the most frequently posted job advertisements are for accounting clerk, bookkeeper, accounts payable clerk, accounts receivable clerk, payroll specialist, accounting assistant, and entry level tax preparer.

Business Administration and General Business Cluster

In the business administration and general business cluster, the occupations of study are mostly manager and supervisor level positions. These jobs require a four-year degree and several years of work experience. Community colleges can provide the foundation for a higher level education and four-year institutions offer programs in general business and business management. Four-year business programs typically offer an area of specialization that allows students to apply management and business skills across many industries.

Just as for accounting, there appears to be an undersupply of workers for occupations related to business administration (Table 9). The number of program completions totals 1,647 while the number of annual openings totals 1,859, a difference of 212. The majority of the undersupplied positions in this cluster fall within occupations at the management and supervisory levels.

Table 9 - Business administration and General Business Occupational Employment and Education

Occupation	Education Level	2013 Jobs	Annual Openings	2012 Completions	Over/(Under) Supply
Cost Estimators (13-1051)	Bachelor's degree	2,335	74	924	(83)
General and Operations Managers (11-1021)	Bachelor's degree	18,224	647		
Management Analysts (13-1111)	Bachelor's degree	5,125	286		
Managers, All Other (11-9199)	Work experience in a related occupation	6,649	206	723	(129)
First-line Supervisors of Office & Administrative Support Workers (43-1011)	Work experience in a related occupation	13,337	646		
Total		45,670	1,859	1,647	(212)

In the Inland Empire, employers who posted the most job openings for business managers and supervisors were Kaiser Permanente, University of California, Riverside, Rent-A-Center, Environmental Systems Research Institute, the Home Depot, and Inland Empire Health Plan. These same job postings mostly advertised for the jobs of assistant manager, office manager, project manager, operations manager, and general manager.

Real Estate Cluster

The labor market in the Inland Empire has been unstable in recent years. At its peak, the market attracted a labor force eager to meet the demand for real estate agents and loan officers. The downturn of the housing market has left a large supply of available workers but the uncertainty may be a detractor for students considering real estate education programs.

As in the previous groups, there appears to be an undersupply of graduates for occupations related to real estate (Table 10). There are 152 annual openings, but only 87 completions. This subsector has relatively fewer openings when compared to the three other subsectors related to business and finance. For this reason and because of the continued uncertainty in the local housing market, the undersupply may be insignificant over the next few years.

Table 10 - Real Estate Occupational Employment and Education

Occupation	Education Level	2013 Jobs	Annual Openings	2012 Completions	Over/(Under) Supply
Appraisers and assessors of real estate (13-2021)	Associate degree	686	11	87	(65)
Loan Officers (13-2072)	Moderate term OTJ training	2,017	88		
Real estate sales agents (41-9022)	Postsecondary award	5,292	53		
Total		7,995	152	87	(65)

Real estate agents and loan officers are occupations that require a specific skill set for employability. Employers of these occupations advertise job openings that require skills such as sales, mortgage lending, underwriting, leasing, Nationwide Mortgage Licensing System (NMLS), financial analysis, and mortgage loan origination, to name a few.

Banking and Finance Cluster

Banking and finance occupations run the gamut from occupations that do not require a formal education to those that require a bachelor's degree for employment. In this cluster, bill and account collectors account for the most jobs in 2013. Training for credit related occupations can be provided by business administration or general business programs. Training for entry-level occupations in the banking field is provided by area ROCP programs (see Appendix C for available courses).

In the Inland Empire, there was only one reported student completion in a banking and finance program. The undersupply for the banking and finance subsector is mostly for jobs that require less than a college degree – bill and account collectors and brokerage clerks (Table 11). Of importance to note is that four-year business program completions do not specify the specialization studied by students; the completions reported here are only an estimate of relevant supply of qualified students.

Table 11 - Banking and Finance Occupational Employment and Education

Occupation	Education Level	2013 Jobs	Annual Openings	2012 Completions	Over/(Under) Supply
Credit Counselors (13-2071)	Bachelor's degree	241	14	924	889
Credit analysts (13-2041)	Bachelor's degree	153	7		
Tax examiners and collectors, and revenue agents (13-2081)	Bachelor's degree	364	14		
Bill and account collectors (43-3011)	Moderate term OTJ training	2,572	144	1	(147)
Brokerage clerks (43-4011)	Moderate term OTJ training	107	4	N/A	N/A
Tellers (43-3071)	Short-term OTJ training	3,837	249		
Credit authorizers, checkers, and clerks (43-4041)	Short-term OTJ training	329	10		
Loan interviewers and clerks (43-4131)	Short-term OTJ training	1,001	32		
New accounts clerks (43-4141)	Short-term OTJ training	436	17		
Total		8,604	491	925	742

According to job postings in the region, the largest employers of banking and finance occupations are Bank of America, Citi, Wells Fargo, U.S. Bancorp, JP Morgan Chase Company, Union Bank, and Altura Credit Union. Job advertisements for this group of occupations listed desired skills of cash handling, sales, product sale and delivery, mathematics, accounting, personal computers, and data collection.

Conclusions & Recommendations

One of the most surprising aspects of this study is that the projections for a number of business and finance occupations do not follow the trend anticipated by experts in published articles. This could be because the Inland region may traditionally lag slightly behind others in adopting new technology.

One example of projections not matching predicted trends has to do with the occupation of bank tellers, which is estimated to expand by 4% in the region in the next three years. The occupation of tellers also has the highest number of annual openings of all occupations in banking and finance subsector. This contradicts the trend of branch closures predicted in media reports.

It should also be noted that given the generality of the titles of business programs offered by four-year colleges and universities, it is difficult to gauge for which career paths these institutions of higher education are preparing students. It appears that business students could enter a myriad of occupations having earned degrees in business administration or business/commerce.

A number of the occupations identified by this study require additional certifications. This is the case for accountants, who usually go on to become Certified Public Accountants; real estate agents and brokers who must be licensed to conduct business; and financial advisors who must pass an exam offered by the CFP Board to become Certified Financial Advisors.

Additional key research findings from this study:

- Business and finance occupations account for nearly 90,000 jobs in the Inland Empire and are estimated to grow by 4% over the next three years, adding more than 3,000 jobs.
- Occupations related to business administration and general business employ the greatest number of workers in the region, 45,670. Occupations in this area include managers, management analysts, cost estimators, and supervisors.
- General and operations managers comprise the largest number of jobs (18,224) within the business administration subsector, and will add 877 more positions in the next three years.
- The greatest number of jobs related to business and finance occur in the professional, scientific and technical services industry (12,197 jobs).
- The most community college program completions were in business administration programs, followed by business and commerce, business management, and accounting. The most widely offered community college program in the Inland Empire is business management.

Recommendations:

1) As local business begins to further expand to incorporate more international business, community colleges have an opportunity to offer more courses and/or programs in international business to provide students a background into the field. Currently, there are very limited offerings in this area.

2) As the local housing market continues to work on stabilization, community colleges could increase completions in related programs in order to meet the demand for workers in the labor market.

3) Regional ROCP programs and community colleges should partner to create seamless education pathways in the areas of accounting and business to develop students who are interested in developing skills to attain higher level occupations in these areas.

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Appendix A: How to use this report

This report is designed to provide current labor market information to:

- Understand the factors impacting business and finance occupations and their effect on the workforce in the Inland Empire, and;
- Provide information on advanced manufacturing-related education and training programs related to business and finance in the region

The information in this report has been validated by industry professionals and community colleges and includes a listing of programs being offered by colleges to address workforce needs. In some instances, the labor market information and industry validation will suggest that colleges might not want to begin or add programs, thereby avoiding needless replication and low enrollments.

The Centers of Excellence (COE), in partnership with business and industry, deliver regional workforce research customized for community college decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Technical Education (CTE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts. More information about the Centers of Excellence is available at www.coecc.net.

Important Disclaimer

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

Explanation of Data Sources

Industry Data

In order to capture a complete picture of industry employment, EMSI basically combines covered employment data from Quarterly Census of Employment and Wages (QCEW) produced by the Department of Labor with total employment data in Regional Economic Information System (REIS) published by the Bureau of Economic Analysis (BEA), augmented with County Business Patterns (CBP) and Nonemployer Statistics (NES) published by the U.S. Census Bureau. Projections are based on the latest available EMSI industry data, 15-year past local trends in each industry, growth rates in statewide and (where available) sub-state area industry projections published by individual state agencies, and (in part) growth rates in national projections from the Bureau of Labor Statistics.

Occupation Data

Organizing regional employment information by occupation provides a workforce-oriented view of the regional economy. EMSI's occupation data are based on EMSI's industry data and regional staffing patterns taken from the Occupational Employment Statistics program (U.S. Bureau of Labor Statistics). Wage information is partially derived from the American Community Survey.

Education Program Data

Community college education programs were extracted from the California Community Colleges Chancellor's Office Inventory of Approved Programs. This inventory lists credit degrees and certificates approved by the Chancellors office and offered by California community colleges. California

Community Colleges approved programs are identified by the Taxonomy of Programs (TOP), a system of nomenclature for designating programs in the California Community Colleges system. The complete TOP manual can be viewed on the Chancellor's office website at http://www.cccco.edu/Portals/4/TopTax6_rev0909.pdf

Program and completion data for four-year education institutions and technical/proprietary institutions was compiled using the Integrated Postsecondary Education Data System (IPEDS). IPEDS gathers information from every college, university, and technical and vocational institution that participates in the federal student financial aid programs. The Higher Education Act of 1965, as amended, requires that institutions that participate in federal student aid programs report data on enrollments, program completions, graduation rates, faculty and staff, finances, institutional prices, and student financial aid.

Appendix B: Occupational Employment Statistics

SOC	Description	2013 Jobs	2016 Jobs	Change	% Change	Annual Openings	Median Hourly Earnings	Required Education Level
11-1021	General and Operations Managers	18,224	19,101	877	5%	647	\$44.92	Bachelor's plus work experience
43-3031	Bookkeeping, Accounting & Auditing Clerks	13,721	14,419	698	5%	354	\$17.17	Moderate-term OTJ training
43-1011	First-Line Supervisors of Office and Administrative Support Workers	13,337	14,192	855	6%	646	\$23.10	Work experience in a related occupation
13-2011	Accountants and Auditors	8,608	9,080	472	5%	424	\$27.58	Bachelor's degree
11-9199	Managers, All Other	6,649	6,823	174	3%	206	\$25.15	Work experience in a related occupation
41-9022	Real Estate Sales Agents	5,292	4,812	(480)	(9%)	53	\$12.43	Postsecondary certificate
13-1111	Management Analysts	5,125	5,660	535	10%	286	\$31.18	Bachelor's plus work experience
43-3071	Tellers	3,837	4,009	172	4%	249	\$12.80	Short-term OTJ training
43-3011	Bill and Account Collectors	2,572	2,766	194	8%	144	\$16.97	Moderate-term OTJ training
13-1051	Cost Estimators	2,335	2,278	(57)	(2%)	74	\$30.75	Bachelor's degree
13-2072	Loan Officers	2,017	2,111	94	5%	88	\$36.20	Moderate-term OTJ training
43-3051	Payroll and Timekeeping Clerks	1,856	1,930	74	4%	67	\$18.86	Moderate-term OTJ training
13-2082	Tax Preparers	1,019	1,083	64	6%	46	\$15.55	Moderate-term OTJ training
43-4131	Loan Interviewers and Clerks	1,001	1,059	58	6%	32	\$17.95	Short-term OTJ training
13-2021	Appraisers & Assessors of Real Estate	686	644	(42)	(6%)	11	\$19.88	Associate degree
13-2081	Tax Examiners and Collectors, and Revenue Agents	364	367	3	1%	14	\$31.77	Bachelor's degree
43-4041	Credit Authorizers, Checkers, and Clerks	329	347	18	5%	10	\$16.78	Short-term OTJ training
13-2071	Credit Counselors	241	264	23	10%	14	\$21.31	Bachelor's degree
13-2041	Credit Analysts	153	167	14	9%	7	\$34.39	Bachelor's degree
43-4011	Brokerage Clerks	107	107	0	0%	4	\$22.05	Moderate-term OTJ training
	Total	87,473	91,219	3,746	4%	3,376	\$23.84	

Appendix C: Business and Finance programs by type of credential

Table C1 - Regional Occupation and Centers Programs

Course	School District	ROCP
Banking and Financial Services I	Desert Sands USD	Riverside County ROCP
Banking and Financial Services I	Palm Springs USD	Riverside County ROCP
Business Communications	Chino USD	Baldy View ROCP
Business Technology Lab	Snowline USD	San Bernardino County ROCP
Computer Business Applications	Barstow USD	San Bernardino County ROCP
Computer Business Applications	Hesperia USD	San Bernardino County ROCP
Computer Business Applications	Needles USD	San Bernardino County ROCP
Computer Business Applications	Rim of the World USD	San Bernardino County ROCP
Financial Literacy	Val Verde USD	Riverside County ROCP
Introduction to Banking	Palm Springs USD	Riverside County ROCP
Introduction to Finance	Palm Springs USD	Riverside County ROCP
Introduction to Banking	Temecula Valley USD	Riverside County ROCP
Introduction to Finance	Temecula Valley USD	Riverside County ROCP
Professional Business Communications	Sherman Indian HS	Riverside County ROCP

Table C2 - Two year and Four Year Education Programs

Program/College	Certificates	Associate degrees	Technical Certificates	Technical Associate degrees	Technical Bachelor's degrees	Bachelor's degrees
Business and Commerce, General	24	158				266
Accounting	79	91				43
Banking and Finance	0	1				
Business Administration	14	296				
Business Management	102	101				
Management Development and Supervision	4	2				
International Business and Trade	9	0				
Real Estate	61	14				
Escrow	5	1				
Accounting and Related Services, Other			15	0	0	
Accounting Technology/Technician and Bookkeeping			0	22	0	
Business Administration and Management, General			13	0	51	1,531
Business, Management, Marketing and Related Support Services			0	42	0	
Total	298	664	28	64	51	1,840

