

RECRUITING TRENDS

1999 - 2000

**Career Services & Placement
Collegiate Employment Research Institute**

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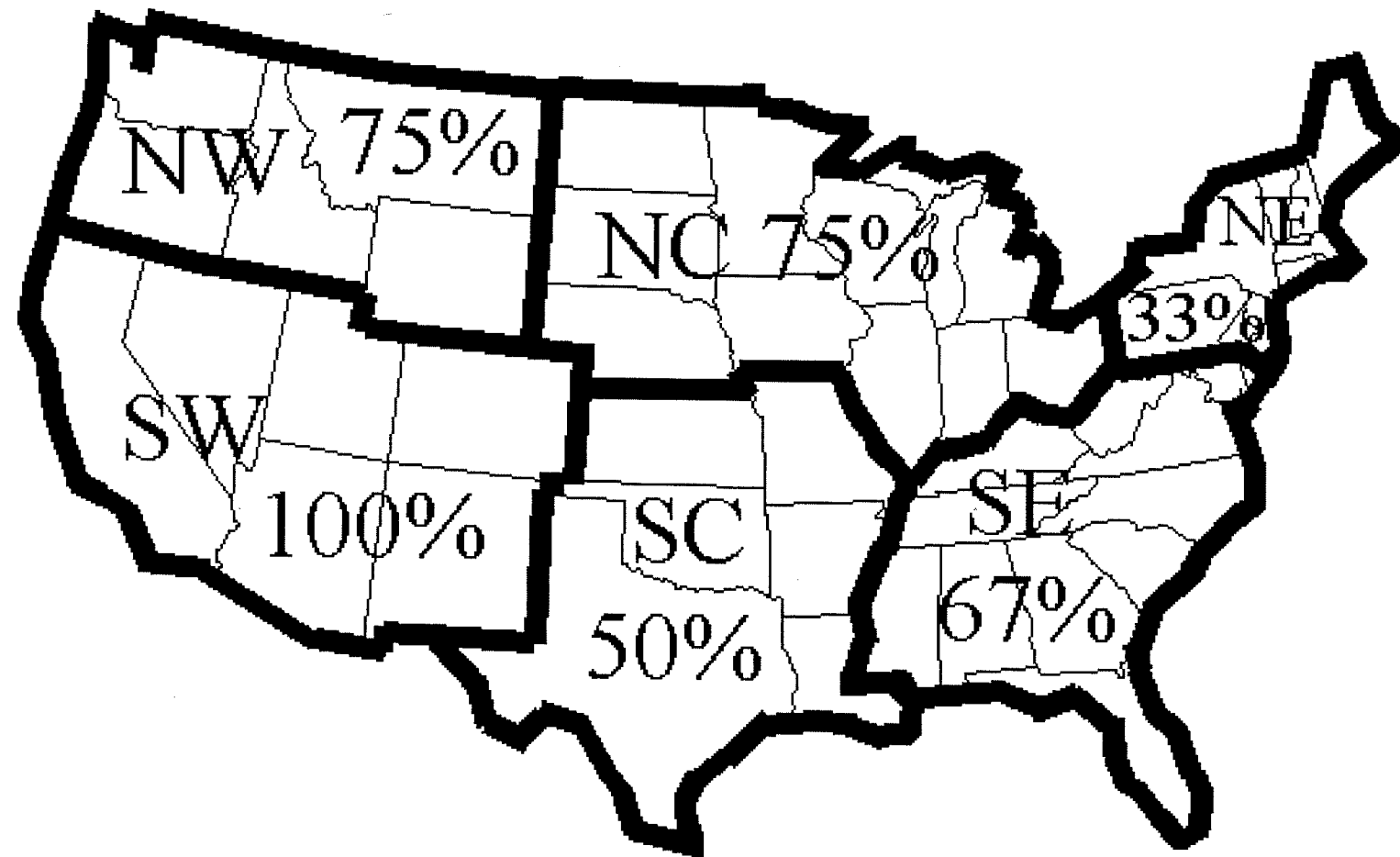
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Regional Labor Markets by Industrial Sector

Public Administration



Percent Very Good to Excellent

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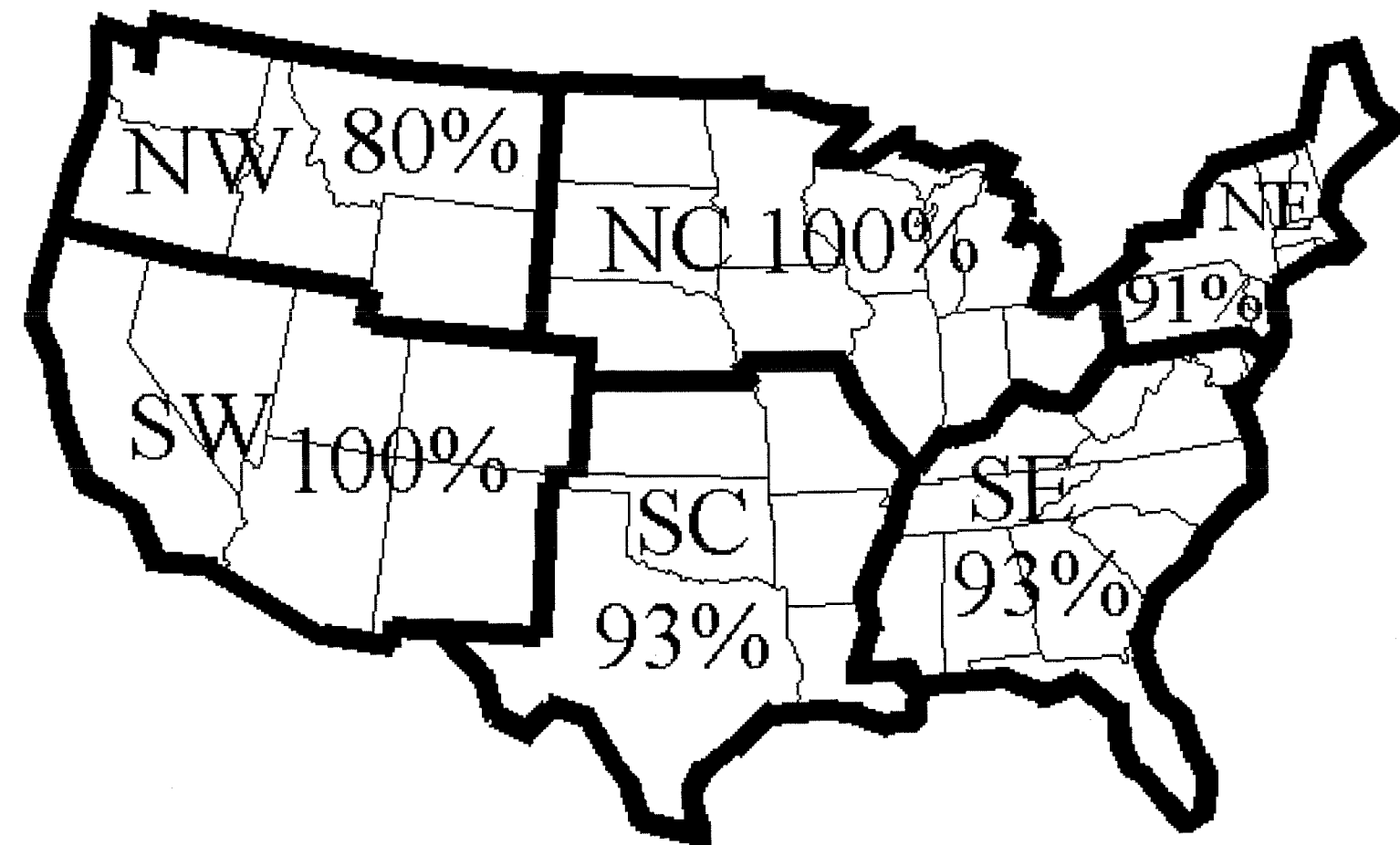
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EXECUTIVE SUMMARY

- Ride the wave! Since the spring of 1977 the hiring of college graduates has occurred at a feverish pace. This year the market will expand by 10% to 15%, overall.
- Employers expressed confidence in the economy – sound financial policies, recovery of Asian economies, and solid stock market performance. Their concern was the competitive labor market; in particular, being able to find experienced workers.
- All sectors of the economy will hire this year. The strongest sectors are manufacturing, financial services, construction, and professional and technical services. The food and lodging sector will be seeking a large number of graduates this year. The agricultural sector appears to be the weakest area nationally.
- The eastern half of the country, especially the southeast, received “very good” to “excellent” ratings from 75% or more of respondents. The only trouble spot was the Pacific Northwest.
- Hiring will be led by engineers and business majors; however, this is a labor market for everyone! Employers who hire liberal arts graduates are expecting to hire substantially more this year.
- Computer science hiring will not be as intense as the past two years; opportunities will expand slightly.
- Large organizations will lead hiring with solid increases; small companies are also expecting to add more staff.
- Employers hope to keep salary increases as close to the inflation rate as possible. Increases will range from 3% to 5% in most cases. Some areas can expect more modest increases. Employers realize that they may have to increase salaries above this level to attract the candidates they want.
- About 30% of the respondents indicated they would use bonuses.
- Employers still want the “total package”. Emerging skills and aptitudes include understanding e-commerce, addition of programming language to computer aptitudes, complex thinking skills, and ability to adapt to constant change.
- The pace remains fast! Less chaotic – but fast!

Regional Labor Markets by Industrial Sector

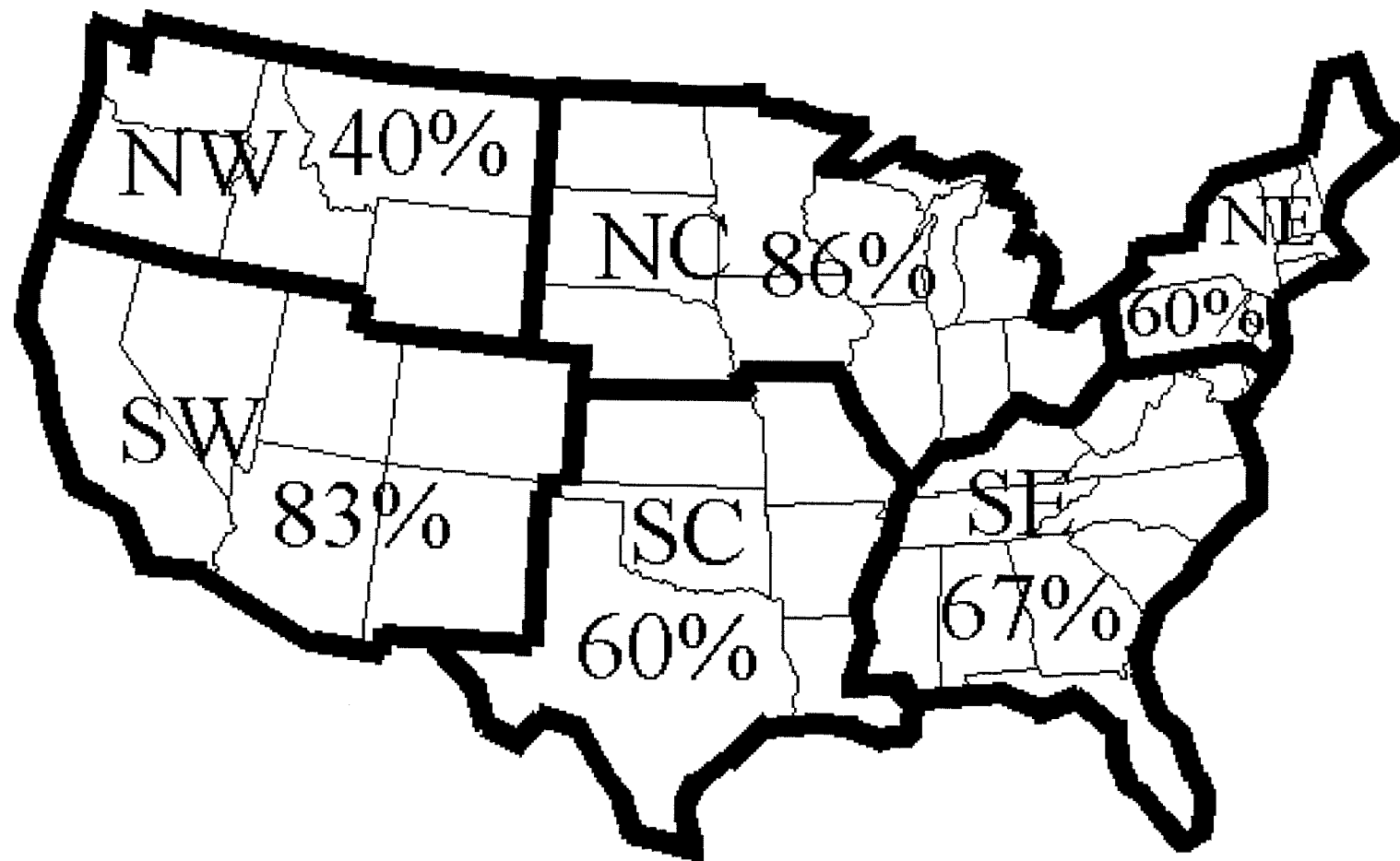
Food and Lodging



Percent Very Good to Excellent

Regional Labor Markets by Industrial Sector

Health



Percent Very Good to Excellent

INTRODUCTION

This December the national economy will enter its 105th (nearly) consecutive month of growth. This growth has occurred with relatively low inflation (only recently has the Federal Reserve raised interest rates) and unemployment. While mergers and restructuring still result in lay-offs and job cuts, 1999 totals pale in comparison to the record levels set in 1998. Other news is equally impressive – holiday shopping is up more than 6% above last year and third-quarter gross domestic product grew at a robust rate. Confidence among consumers has remained high and the stock markets continue to perform well.

Since the spring of 1977 the labor market expanded rapidly; the recruiting pace quickened. Technical needs have lead the hiring frenzy. However, all college graduates have fared well for the past two years. Can the hiring intensity be sustained for another year?

The glass appears to be half-full and rising. The college labor market is poised to expand during the 1999-2000 academic year. If the national economy should slow down, hiring intentions will be re-examined. Nevertheless, all indicators are positive for another good year.

This report attempts to shed light into the state of the college labor market as we reach the midpoint of the academic year.

EMPLOYER PROFILE

This study captured the 1999-2000 hiring intentions of 320 employers who responded to a mail survey. The survey was completed by a designated individual in the human resources or college relations department. The response approached an adjusted return rate of 15%. Complete details on the research strategy and variable definitions can be found in Appendix A.

BASIC PROFILE

These employers were primarily in the manufacturing, finance/insurance, and professional services sectors of the economy, according to the North American Industrial Classification (NAIC) system that they provided or were listed in *Standard and Poor's Register of Corporations, Directors and Executives*. Fifty-two percent (52%) were men representing units that ranged in size from approximately 10 employees to 380,000 employees. While 50% recruited in the northcentral region of the country, 29% recruited across the United States, 18% in the northeast, and 18% in the southeast. These employers were less likely to recruit in the western states, with the exception of California. About 7% recruited internationally.

A variety of recruiting strategies were utilized to find suitable candidates. Approximately 86% used on-campus recruiting, 81% attend job fairs, 75% received resumes referred to them by colleges, 70% utilized their co-op and internship programs, 82% provided web environments for direct applications, and 54% employed Internet/web job listing services. The other strategies commonly employed were advertisements in newspapers and professional journals (61%), coop and internship programs (70%), and employee referrals.

When it came to their most effective or primary strategies, 25% placed on-campus recruiting, 19% job fairs, and 13% co-op/internship programs and organizational web applications at the top. Other strategies which made a modest showing were newspaper ads (9%) and resume referrals (10%).

Each respondent identified the top five academic majors they were seeking this year. Approximately 33% (320) were seeking at least one business major, 8% (98) sought social science or humanities majors, and 30% and 16% were looking for engineers and computer science majors, respectively.

A complete profile of organizations responding to this survey can be found in Appendix B.

EMPLOYMENT OUTLOOK

Labor market requirements are not only framed by the number of current vacancies in the organization, but how the organization perceives the current (short-run) economic climate. Respondents were asked their perceptions on what factors could potentially influence this year's hiring levels.

Positive Factors:

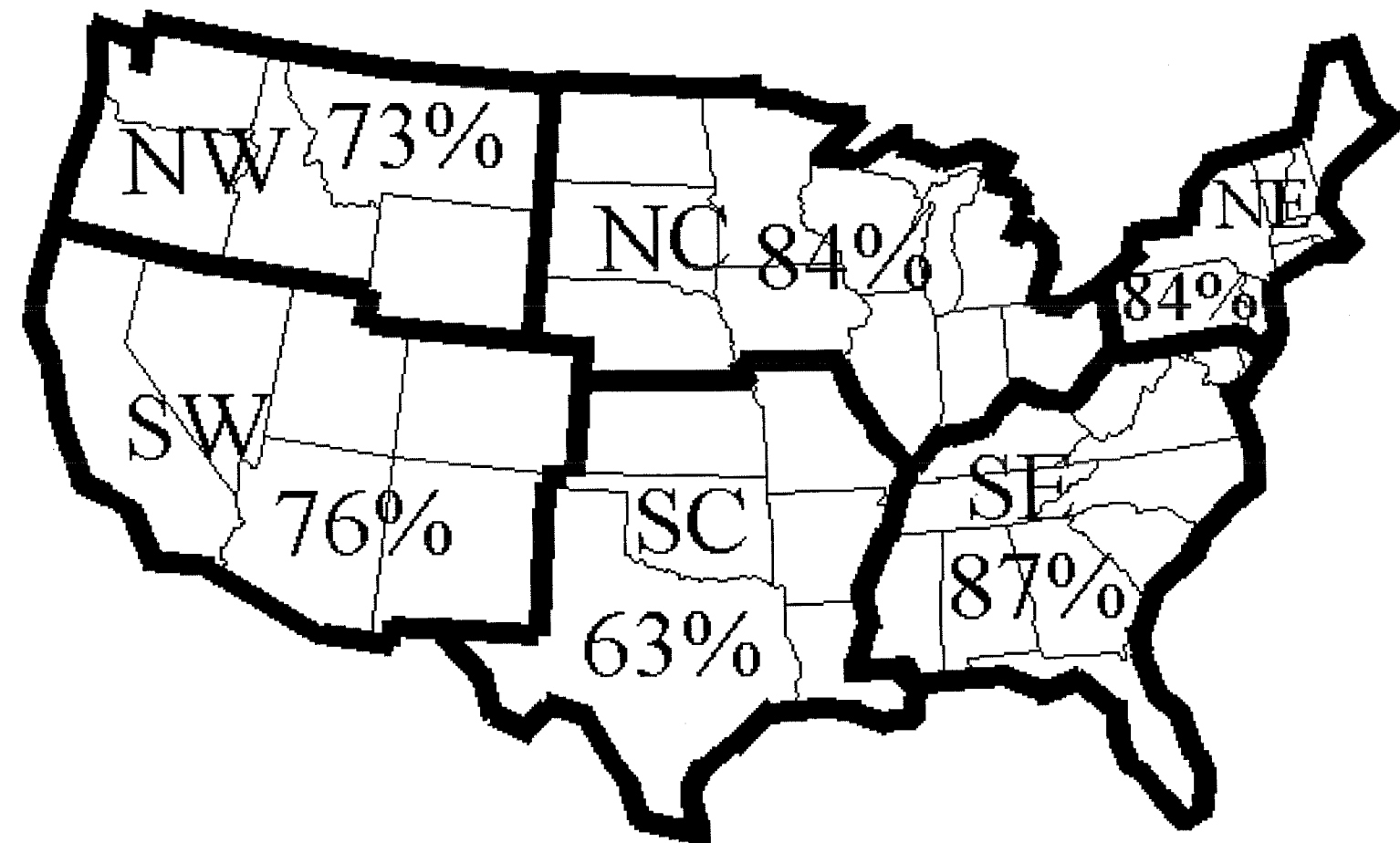
1. Growth and Expansion of Organization. New products being introduced; markets expanding into new areas; acquisitions of companies and new partnerships have made company more competitive; increased productivity; and improvement in services provided to clients.
2. Strong National Economy. Solid financial/capital markets – money available; strong construction demand; controlled interest rates; solid stock market performance; and recovery of Asian economies
3. Shortage of Qualified Workers. Qualified workers are hard to find; retirements are increasing; turnover is also a problem.
4. Technological Advancements. Continued technological advancements which contribute to higher productivity and development of new products and services; more Internet start-ups; and emergence of e-commerce.
5. Stable Funding for Public Sector. Money available for all types of programs including road construction, environmental improvement, and research.

Negative Factors:

1. Downturn in Economy. A slowdown in the national economy could cause interest rates to rise, impacting construction and major purchases; some sectors of the economy already depressed.
2. Competitive Labor Market. Can not find “experienced” employees to sustain organizational competitiveness; salaries will increase faster than anticipated.
3. Organizational Structure. To control costs, labor and consultant costs will be trimmed; organizational structures will be redesigned; mergers will eliminate positions.

Regional Labor Markets by Industrial Sector

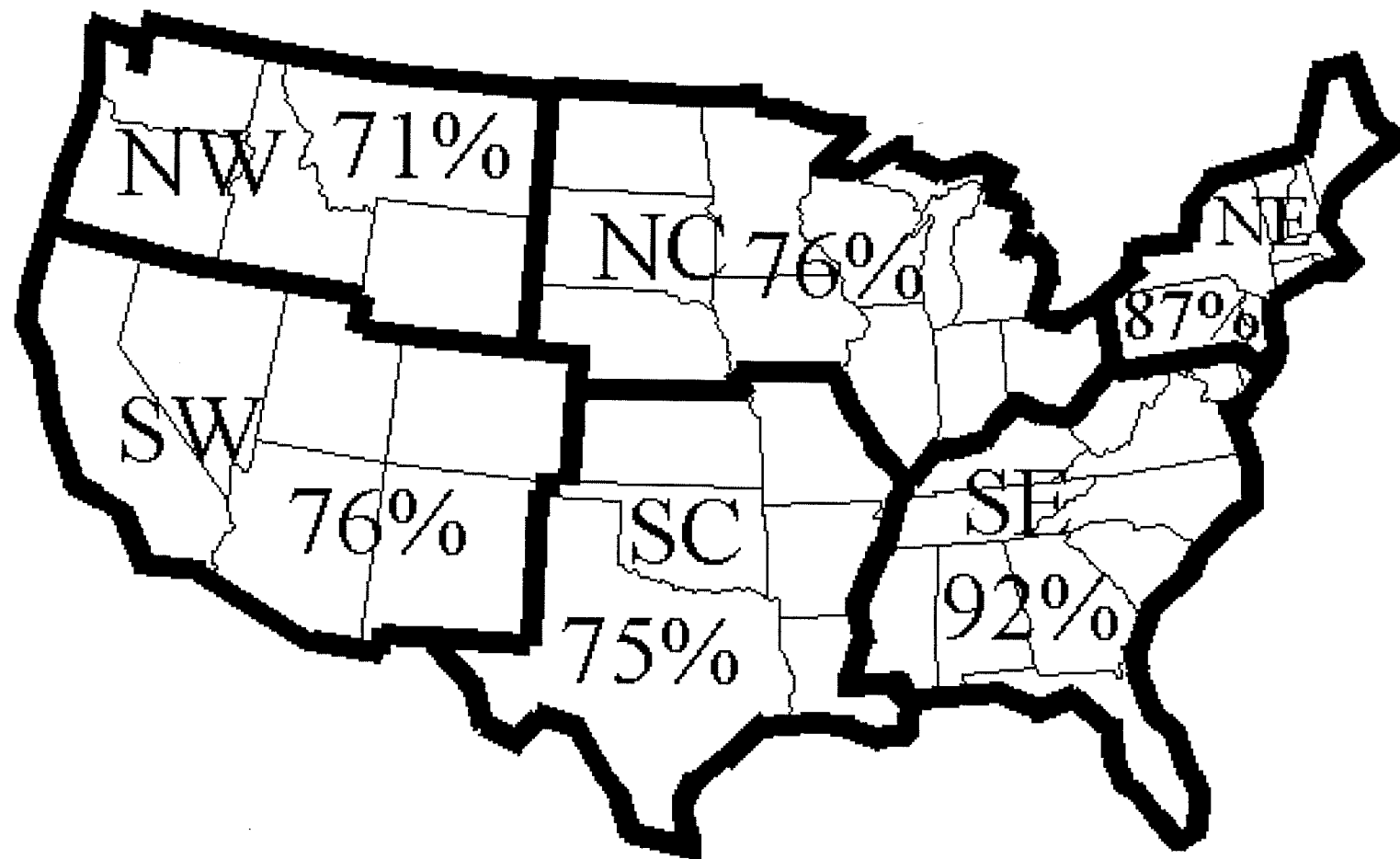
Service



Percent Very Good to Excellent

Regional Labor Markets by Industrial Sector

Finance



Percent Very Good to Excellent

4. Y2K. Consequences still not determined; some programmers will be terminated.
5. Government Spending. Lack of funds for key initiatives or legislative mandates; unfinished deregulation activities.

Overall, these respondents expressed confidence in the economy. Aside from the competition to find qualified employees, competition (in its broader sense) appears to have ebbed or at least become more manageable. The pace that organizations are required to move with regards to new processes and product development, transactions, recruiting strategies and learning continues to be furious. The college labor market appears to be resilient in terms of demand for this year's graduates.

MwACE TEMPERATURE POLL

What's the temperature at the career services office near you?

!! HOT TO VERY HOT !!

PERCEPTIONS OF THE COLLEGE LABOR MARKET

Respondents were asked to provide their impression of the prospects for new college graduates based on their knowledge of national and regional labor markets, particularly with regards to their industry or service sector. They were asked to rate the markets from which their organization recruited as "excellent" (1) to "poor" (5).

OVERALL JOB MARKET

In rating the overall labor market;

- 42% responded that it was excellent; 46% very good.
- The average rating was 1.72 – approaching excellent.
- Construction sector employers reported the best labor market – approaching excellent in all regions except in the Northwest and Southcentral.
- Manufacturing employers were more cautious – with the rating around "very good."
- Size of company did not influence the overall job market ratings.

INDUSTRY JOB MARKET

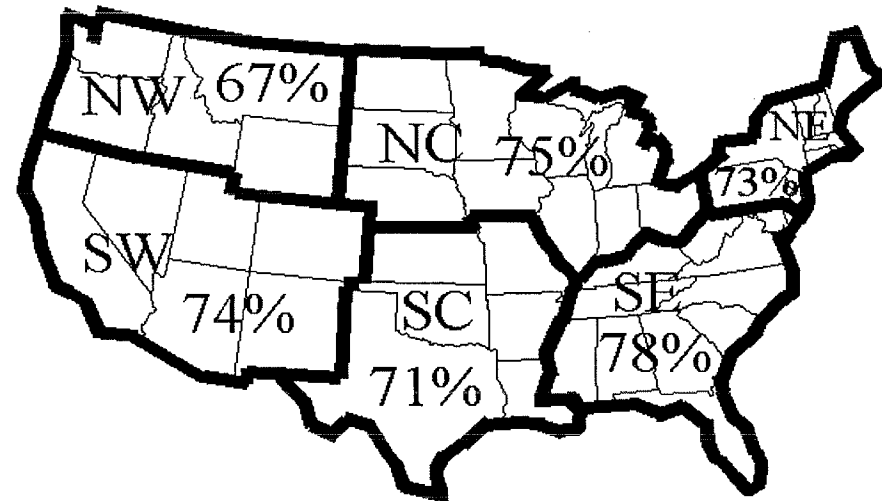
Asked to rate their industry's labor market, respondents were slightly more cautious.

- 39% felt their industry's labor market was excellent; however, the "very good" percentage (39%) dropped and "good" and "fair" gained slightly as compared to the overall market.
- The average of 1.9 still suggested a "very good" labor market across industrial sectors.
- Construction, professional services and finance sectors were the most optimistic with ratings between "excellent" and "very good."

- For manufacturing and, particularly government (federal), the situation was closer to “very good.”

REGIONAL LABOR MARKETS

Asked to rate only regions in which they recruited or hired college graduates, respondents gave the southeast region the strongest labor market (78% “very good” to “excellent”). The other regions clustered together ranging from 71% to 75%. The lowest rated region was the Pacific Northwest; yet 67% felt the climate was “very good” to “excellent”. The appendix contains additional regional labor market maps by industrial sector.



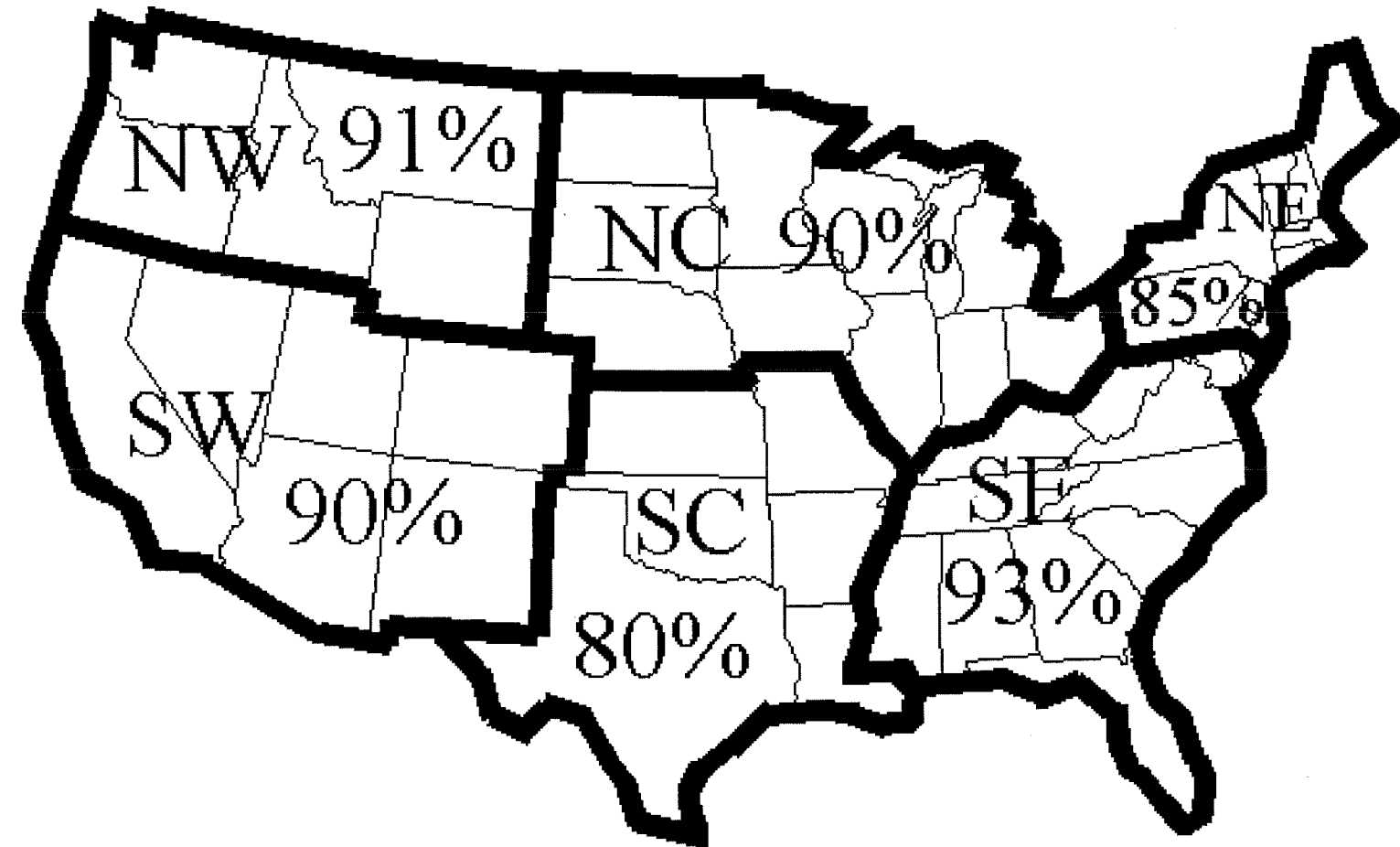
- 78% reported the southeast region to be a “very good” to “excellent” labor market.
- Manufacturing was noticeably stronger in the southeast and south central regions.
- Public administration (federally employed) looked only “very good” except in the south central region.

Table 1. Perceptions of the College Labor Market (%)

	n	Excellent	Very Good	Good	Fair	Poor	Mean
Overall job market	282	42	46	10	2	--	1.72
Job market – industry	280	39	39	16	6	1	1.91
Job market – industry in:							
Northeast	136	35	37	17	9	2	2.04
Southeast	136	36	42	15	6	2	1.95
North central	207	38	37	18	7	--	1.94
South central	122	29	43	24	4	1	2.06
Northwest	109	35	32	21	10	2	2.12
Southwest	121	36	38	16	7	3	2.03

Regional Labor Markets by Industrial Sector

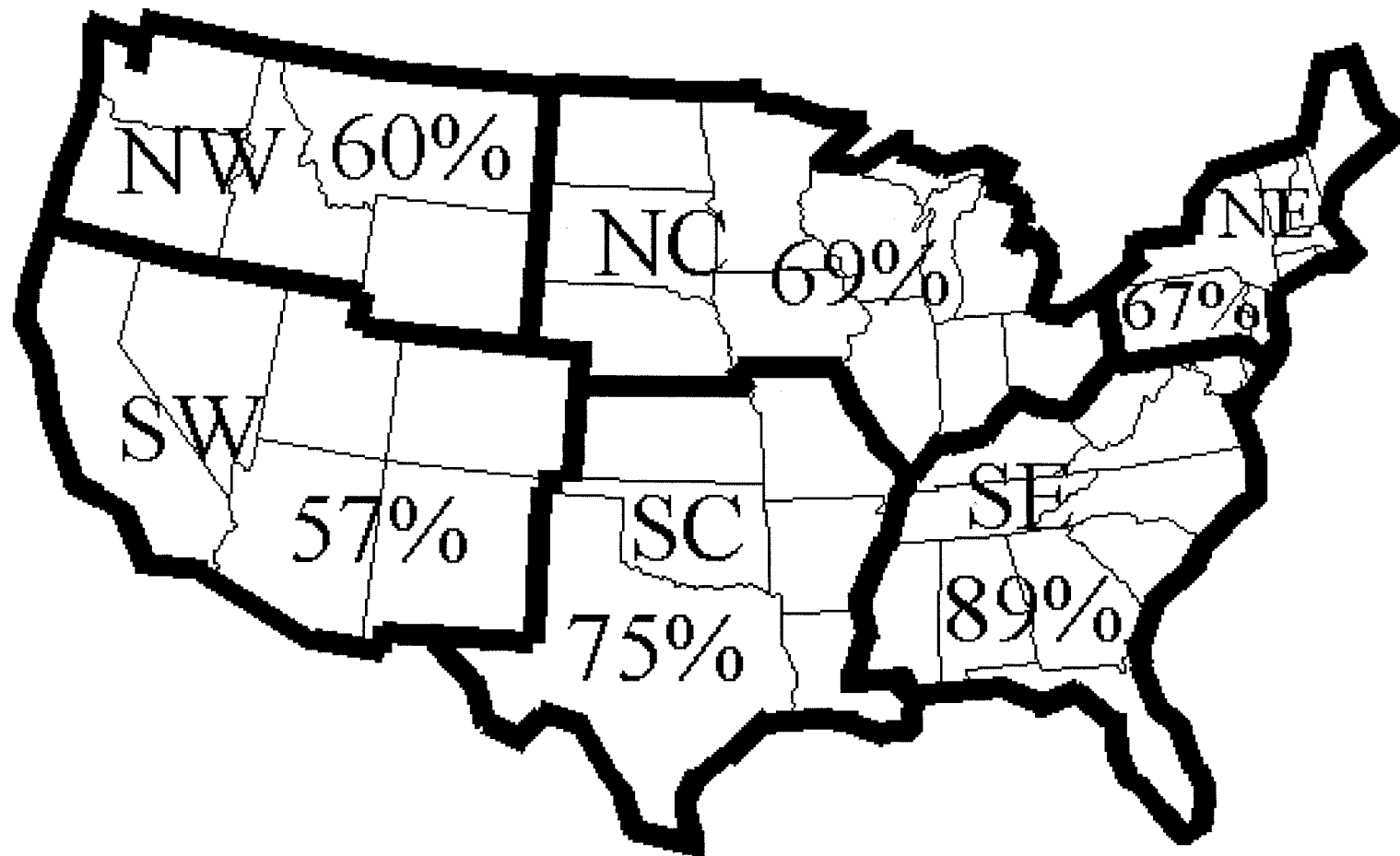
Information



Percent Very Good to Excellent

Regional Labor Markets by Industrial Sector

Transportation



Percent Very Good to Excellent

Table 2. Perceptions from Different Economic Sectors for the College Labor Market (% excellent and very good)

	Construc.	Manuf.	Transp.	Retail	Financial	Prof. Services	Public Admin.
Overall job market	88	84	85	72	88	89	100
Job market – industry	88	69	77	68	71	86	69
Job market – industry in:							
Northeast	100	64	67	57	87	84	33
Southeast	100	69	89	62	92	87	67
North central	100	60	69	63	76	84	75
South central	60	67	75	67	75	63	50
Northwest	60	54	60	60	71	73	75
Southwest	100	64	57	54	76	76	100

	Ag. & Nat. Resources	Utilities	Information	Health Care/Social Services	Accommodation Food Services
Overall job market	100	87	100	88	94
Job market – industry	44	79	96	84	100
Job market – industry in:					
Northeast	0	67	85	60	91
Southeast	33	75	93	67	93
North central	0	77	90	86	100
South central	0	83	80	60	93
Northwest	50	67	91	40	80
Southwest	40	80	90	83	100

MwACE Temperature Poll

Level of Activity in office compared to last year:

50% more active
44% same level

HIRING INTENTIONS

Hiring intentions are based on a comparison of the number hired last year to the expected number of college hires to be made during the 1999-2000 academic year. In 1998-99, the employers who responded to this survey hired 15,134 college students at all degree levels. During 1999-2000, they expect to hire approximately 17,388 college students. Approximately 40 respondents did not reveal their hiring intentions for this year.

The first step was to compare the difference between hiring targets for 1998-99 and 1999-2000. For all graduates, 18% employers were reducing the number of graduates hired; 21% were hiring at the same level; and 61% were hiring more students.

Table 3. Percentage of Employers Decreasing, Increasing, and Hiring at the Same Level Compared to Last Year (%)

	All Graduates	Associates	Bachelors	Masters	PhD/Prof.
Decreasing Hiring	18	20	20	17	5
Hiring same level	21	31	19	38	53
Increasing Hiring	61	49	61	45	42

When examined by degree level, more than three-quarters of employers hiring associate and bachelor degreed graduates will be hiring at or above last year's level. For master's and PhD/Professional graduates looks very promising compared to the situation reported by last year's employers.

Because several employers reported hiring levels for 1999-2000 but not their 1998-99 hires, the hiring figures had to be averaged to make the second comparison. The average number of all new hires per company will be 64.2 this year, compared to 57.8 last year. The market will expand at about 11% for this group of employers.

Employers were asked to separate their total hires by degree level. Not all respondents did this calculation (about 25% depending on the mix of majors they typically hired). Based on this information, hiring at the associate level will be up 18% from last year. Bachelor's degree hires will expand at about 19%. Master's level hires will improve by 14%. Doctoral graduates and professionals will increase by about 16%.

Table 4. Average Hiring Comparisons Between 1998-99 and 1999-2000

All Responses	n	1998-99 Average Hired	n	Average Expected Hires 1999-2000	Percent Change
All graduates	262	57.8	271	64.2	+11
Associates	52	13.2	53	15.6	+18
Bachelors	240	42.3	245	50.5	+19
Masters	104	13.3	101	15.2	+14
PhD/Prof.	27	6.7	29	7.8	+16

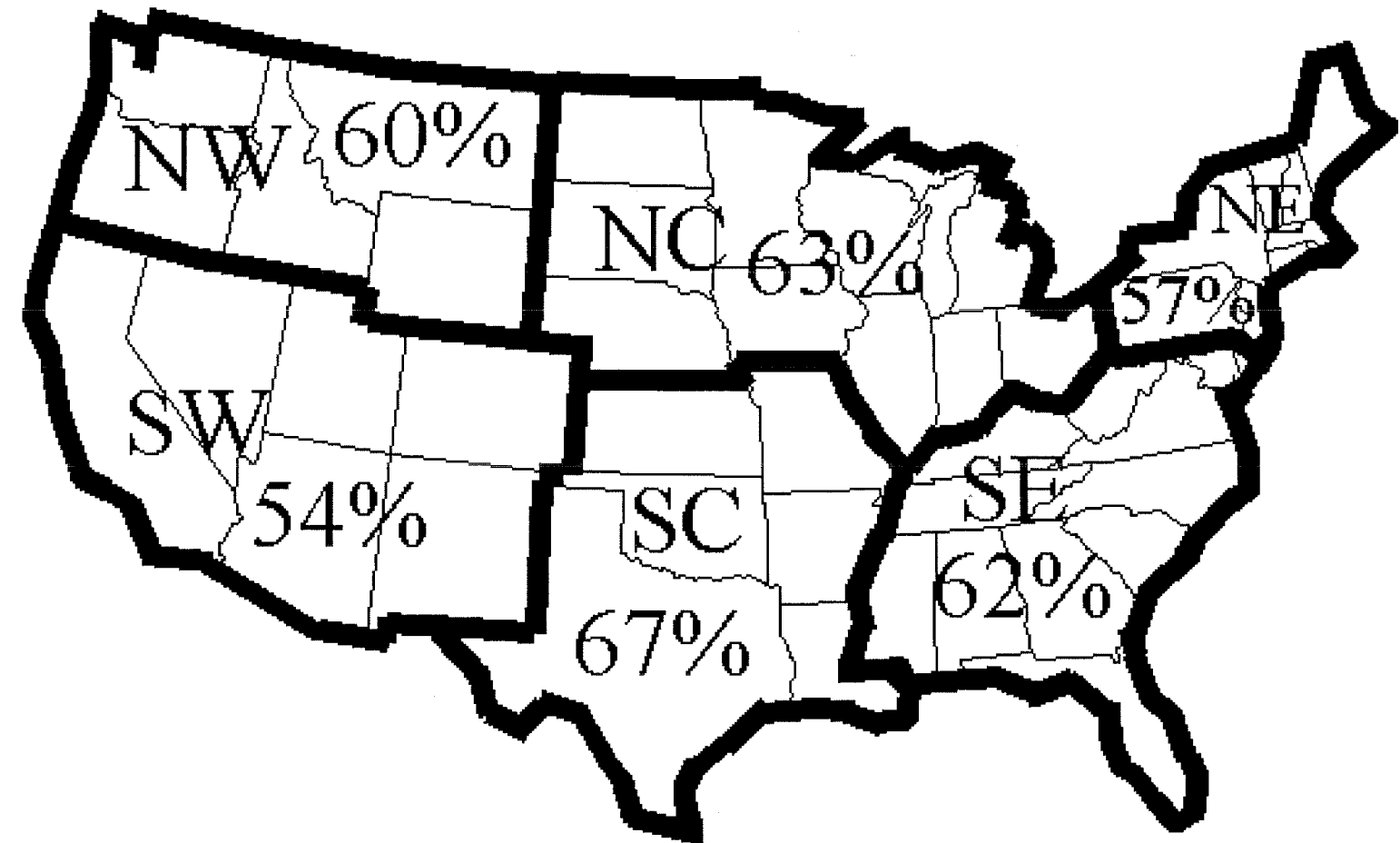
SIZE OF FIRM: Impact on Hiring

Examination of hiring by company size revealed:

- Hiring units under 750 employees will hire more graduates (all) at rates between 2% and 26% above last year. This offsets a decline in hiring among the medium sized units (751-4,625) of about 2%.
- The largest employers (>4,626) are expecting to expand hiring by 21%; this increase appears across all degree levels.

Regional Labor Markets by Industrial Sector

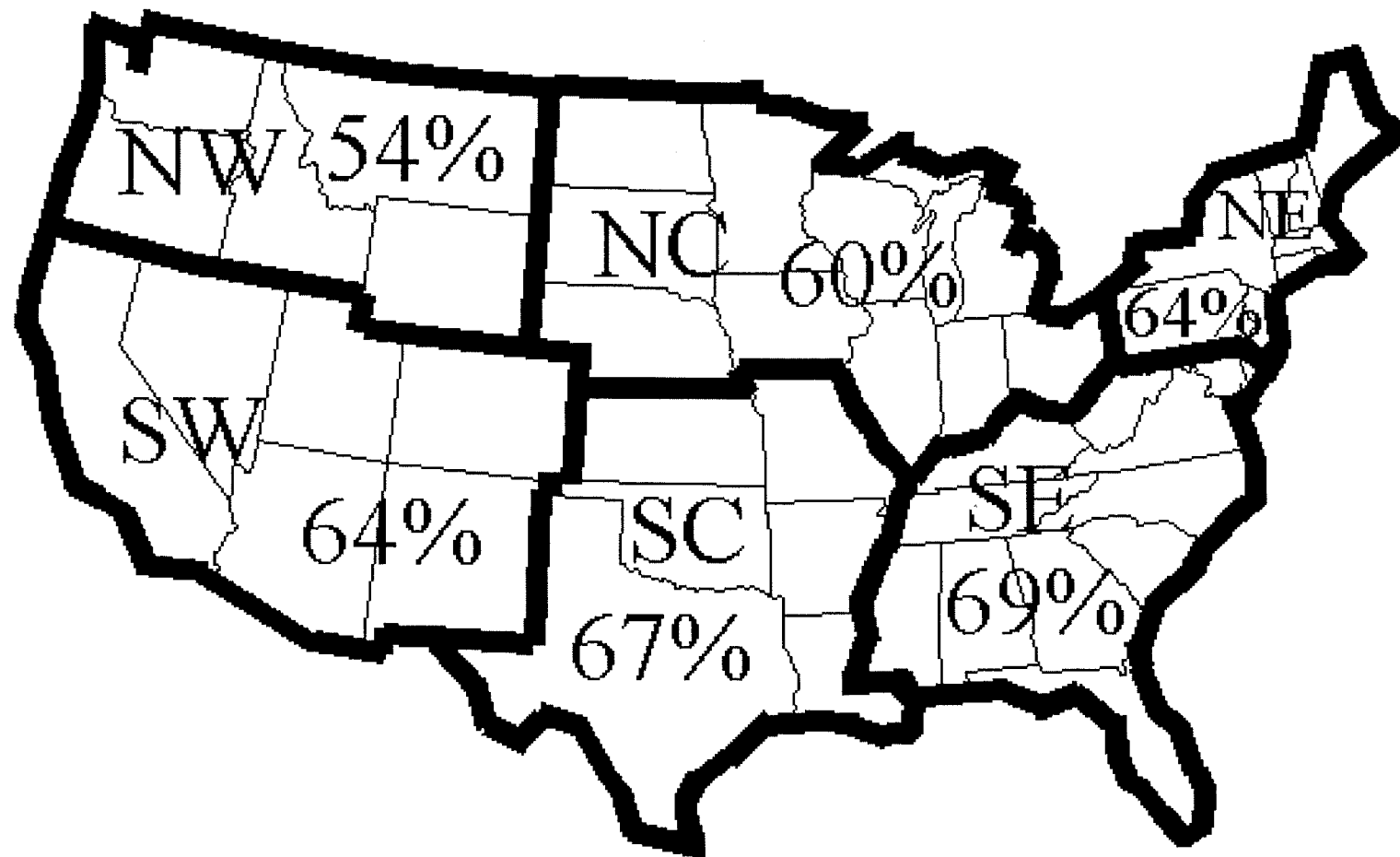
Retail



Percent Very Good to Excellent

Regional Labor Markets by Industrial Sector

Manufacturing



Percent Very Good to Excellent

- Where employers broke-out their expected hires by degree level, it would appear that the smallest establishments are the most volatile. (Does not take much of a shift in hiring to produce dramatic percentage swings).
- Mid-sized units (751-4,625) appear to be more consistent in their hiring intentions.
- The largest firms, however, still intend to hire approximately 145 graduates, on average, this year. This is an increase of about 25 hires on average.

Table 5. Change in Hiring Expectations Between 1998-99 and 1999-2000 Based on Size of Organizational Unit Respondent Recruiting For (%)

	<125	126-750	751-4,625	>4,626
All Graduates	+2	+26	-2	+21
Associates	+93	+15	+4	+25
Bachelors	+19	+25	+4	+22
Masters	+40	+11	+15	+15
PhD/Professional	--	-11	-19	36

INDUSTRIAL SECTOR

- Transportation and government employers are cutting back in their hiring, but only slightly.
- Manufacturing companies are expanding at a robust rate of around 20%.
- Financial and insurance services are also increasing at the bachelor's and master's levels.
- The retail, construction, and professional sectors are carrying the market by making significant hiring gains this year.

Table 6. Change in Hiring Expectations Between 1998-99 and 1999-2000 Based on Economic Sector (%), NH = not hiring, NC = no change

	All Graduates	Associates	Bachelors	Masters	PhD/Professional
Ag & Nat Resources	+8	-67	+3	+100	+100
Utilities	+41	+63	+97	+55	NH
Construction	+9	+100	+18	+100	NH
Manufacturing	+18	+28	+11	+25	+36
Retail	+18	NC	+25	+60	NH
Transportation	-1	+75	+12	-7	NC
Information	NC	+31	+8	+21	+10
Finance	+21	-7	+29	+112	+20
Prof. Services	+12	+16	+19	-13	-54
Health Care	-14	+4	+12	+13	NH
Lodging & Food Serv.	+35	NC	+26	+100	NH
Public Admin.	-2	-8	+1	+18	+56

ACADEMIC MAJOR

- Communications and telecommunications major hires are up significantly among those employers who target these graduates. Business majors will be hired at slightly higher levels than last year.
- Engineers will have a strong labor market throughout the economy.
- Computer science hiring appears softer than in past years, but hiring will be up.
- Liberal arts, humanities, and social sciences majors are eagerly being sought by companies who hire these types of graduates.

Table 7. Change in Hiring Expectations Between 1998-99 and 1999-2000 Based on Academic Majors (%)

	Bus.	Eng.	Comp. Sci.	Liberal Arts	Comm.	Ag./ Const.	Humanities/ Soc Sci.	Allied Health
All Graduates	+6	+18	+4	+11	+13	+16	+9	+21
Associates	+33	+18	+2	-47	+100	+4	+25	+18
Bachelors	+10	+25	+8	+11	+20	+15	+22	+20
Masters	NC	+3	-4	+21	+11	NC	+11	+67
PhD/Profess.	+25	+20	-12	+15	NC	NC	NC	NH

PREVIOUS RESPONDENTS

A comparison was made between respondents who had responded to the 1998-99 survey (30%) and those respondents who were responding for the first time. As Table 8 shows:

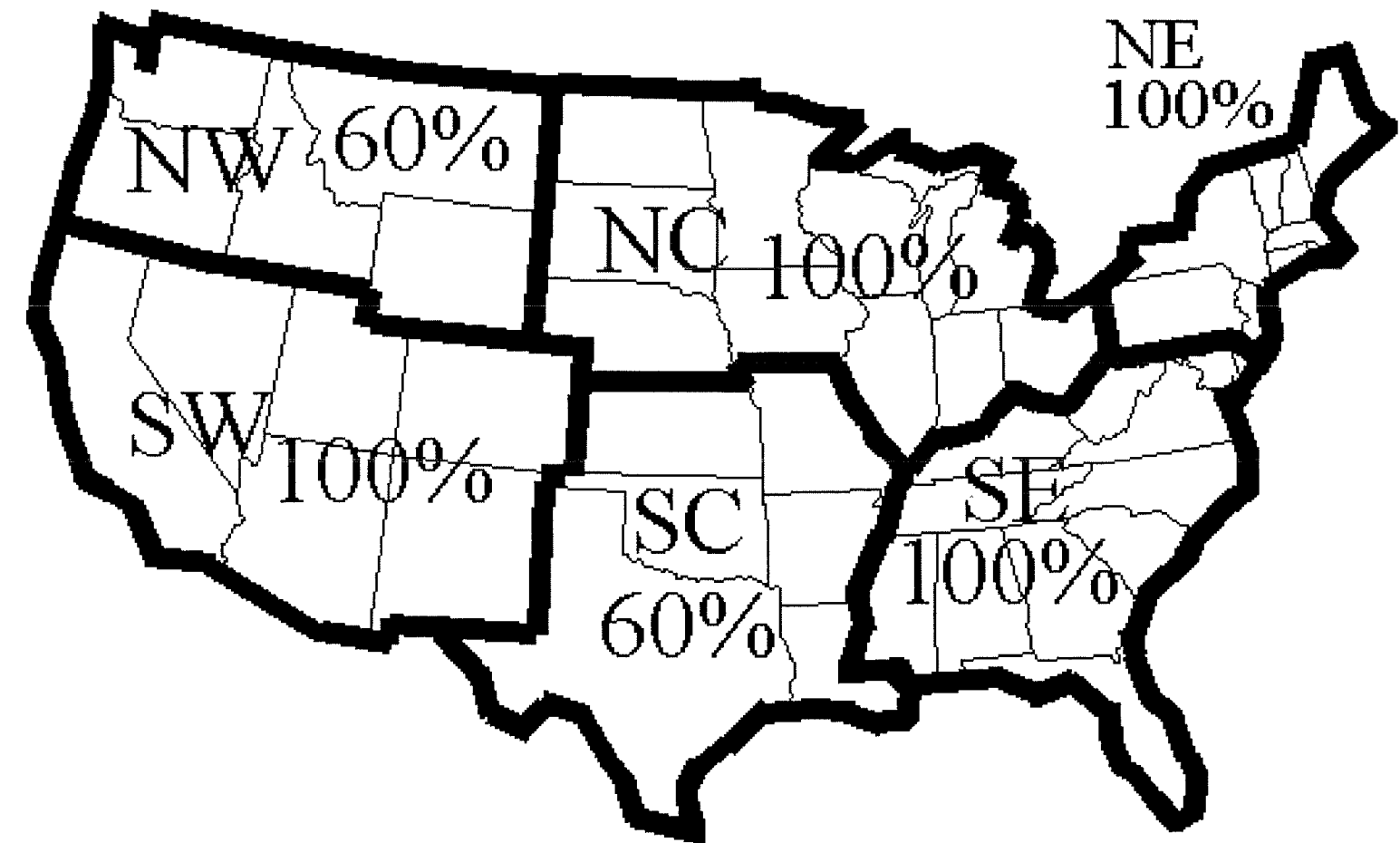
- Last year’s respondents expect to hire at slightly above last year’s level – 4% overall. However, they will hire, on average, more new employees.
- Both groups will increase their hires at the associates’ level by 13% to 20%.
- Bachelor’s hiring will be more robust for those who did not respond last year.
- Last year’s respondents will cut the number of hires at the master’s level.

Table 8. Comparison in Hiring of Respondents who Participated in 1998-99 to Respondents Participating for First Time

	Average Hires 1998-99	Average Expected Hired 1999-2000	% Change in Hires
Past participants: All	66.8	69.5	4
First time: All	53.5	61.7	15
Past participants: AA	14.3	17.1	20
First time: AA	12.2	13.8	13
Part participants: BA	49.8	53.8	8
First time: BA	38.7	48.9	26
Past participants: MA	18.2	12.4	-32
First time: MA	10.3	16.8	63
Past participants: PhD	3.4	8.2	+144
First time: PhD	8.0	7.6	-6

Regional Labor Markets by Industrial Sector

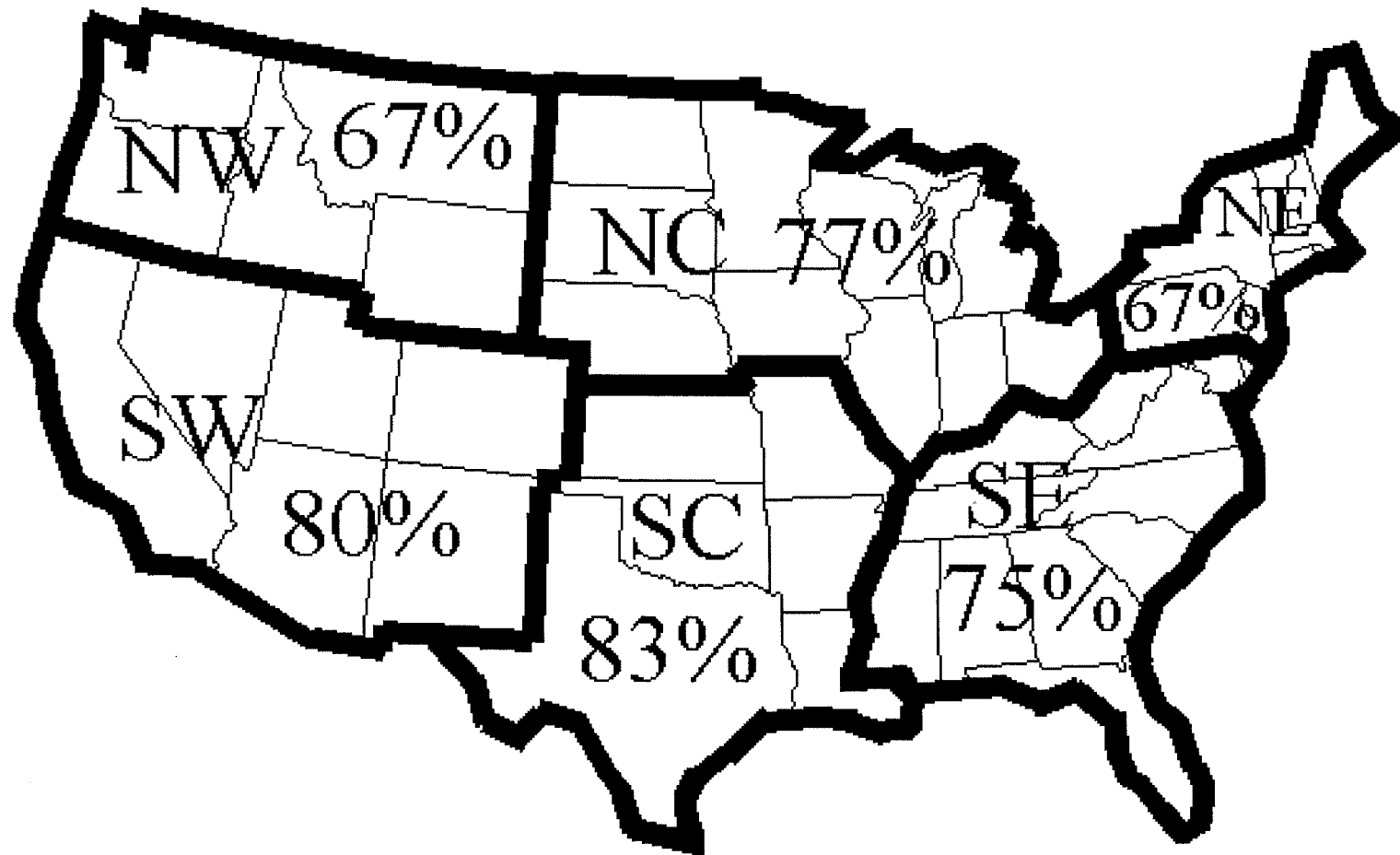
Construction



Percent Very Good to Excellent

Regional Labor Markets by Industrial Sector

Public Utilities



Percent Very Good to Excellent

A FINAL LOOK AT HIRING

A final series of statistical procedures drew a box (called the confidence interval) around the average percentage change expected this year. We wanted to see if 0% - or the no change point - was found within the box. If it was, then the respondents within the interval will be recruiting this year at approximately the same level as last year. In other words, we focus our attention on the main body of respondents and isolate those employers who are making major changes at the extremes (either cutting or hiring in large numbers). During the 1999-2000 academic year, the responding employers will expand hiring beyond last year's level.

Based on these findings we summarize:

- Overall the college labor market will expand by 11% to 15% from last year which was a very, very, good year. If the economy can sustain this growth, hiring at the bachelor's level will be robust for the third consecutive year.
- Size of the parent organization will play an important role in hiring this year.
 - *The smallest companies (under 750) will increase hiring slightly across all levels.
 - *The largest companies (over 4,625) will generate the largest gains.
 - *Medium sized companies will keep hires to levels similar to last year.
- Sectors of the economy are hiring at different rates.
 - *Manufacturing will increase with strong growth in electronics and computer equipment.
 - *Hiring growth is strongest among retail, financial, and professional service sectors with bachelor's degrees being the beneficiaries
- All academic majors that will benefit from increased hiring include:
 - *Computer science with a softer market, but still have more jobs.
 - *Business majors at both the bachelor's and master's levels.
 - *Engineers at the bachelor's level.
 - *Communications majors.
 - *Liberal arts majors, including humanities, with more opportunities.

These results show how important the extreme can be in influencing the final figures. Major shifts in hiring at the extremes can have a big impact on total hires. However, the firms acting within the confidence interval will establish the initial hiring parameters for the job market.

MwACE Temperature Poll

What is the pace of recruiting activity you are experiencing?

SST	14%
Chicago taxi	68%
Cruise ship	10%
Cubs game	8%

SALARY EXPECTATIONS

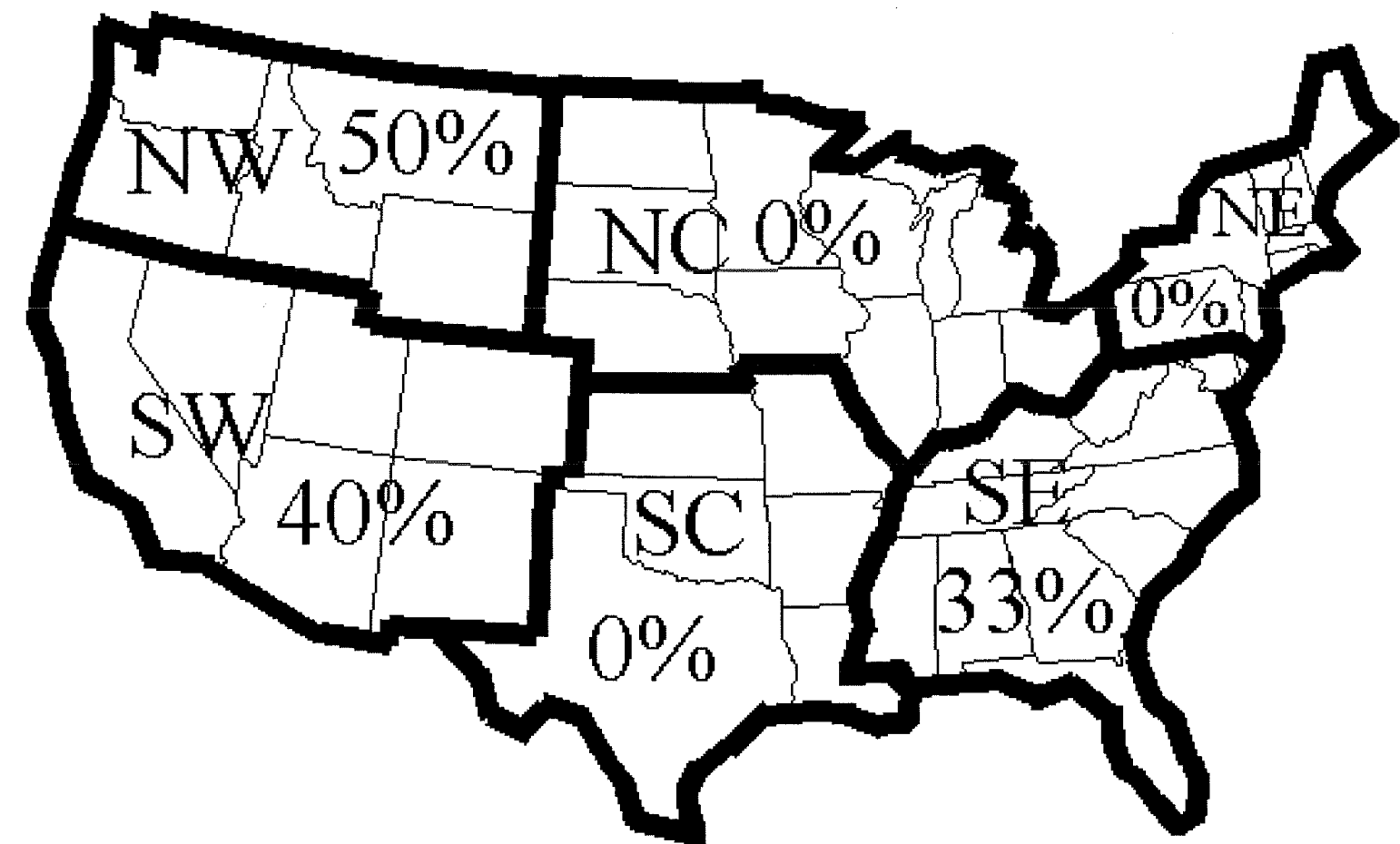
Respondents were asked to provide the starting salary ranges offered in 1998-99 and expected in 1999-2000 for the five key majors that they recruit. They were further asked to provide salary ranges by degree level (associates, bachelors, masters, and Ph.D.). Tables have been prepared for associate, bachelor, and master salaries. Specific majors are included where the number of reported salaries was sufficient to provide stable statistics. Where the observations (n's) are small, caution must be taken in interpreting the salary range. The percentage increase column reflects the midpoint between the shift in the low end of the range and the high end of the range.

General findings, based on the employer's salary information:

- Employers expressed concerns about a tight labor market putting upward pressure on salaries. While employers hoped to keep salary increases close to the inflation, they acknowledge that they may have to make higher offers in order to attract qualified candidates.
- Typically the lower end of salary ranges will move up faster than the top end.
- Overall: Associates' salaries can be expected to increase by 2.5%.
Bachelors' salaries can be expected to increase by 4.0%.
Masters' salaries can be expected to increase by 4.0%.
- By type of degree earned at the bachelors' level:
Business will increase by 5% overall.
Engineering will increase by 6.5% overall.
Computer Science will increase by 4.5% overall.
Social Science/Humanities will increase by 4.5% overall.
Sciences will increase by 4.5% overall.
- By type of degree earned at the master's level:
Business will increase by 3.5% overall.
Engineering will increase by 4% overall.
Computer Science will increase by 3% overall.
Social Science/Humanities will increase by 2.5% overall.
Sciences will increase by 2.5% overall.
Human Resources/LIR will increase by 1.0% overall.
- By type of degree earned at the associate's level:
Humanities/Social Science will increase by 0.5% overall.
Business will increase by 4.5% overall.
Engineering will increase by 1.0% overall.
Computer Science will increase by 5.5% overall.

Regional Labor Markets by Industrial Sector

Agriculture/Natural Resources



Percent Very Good to Excellent

**Average Number of Hires in 1998-99 and Expected in 1999-2000
by Everyone Who Recruited at Least One Major from These Categories**

Academic Major	Average Hires Made 1998-99	Average Hires Expected 1999-2000	% Change
All graduates			
Business	(165) 72.4	(168) 76.9	6
Engineering	(137) 49.6	(140) 58.5	18
Computer Science	(100) 62.8	(102) 65.3	4
Liberal Arts	(56) 76.9	(57) 83.0	8
Science	(30) 68.4	(31) 75.9	11
Ag/Construction	(19) 78.3	(20) 90.6	16
Allied Health	(9) 48.2	(9) 58.2	21
Communication	(30) 113.0	(31) 127.9	13
Associates			
Business	(33) 11.8	(31) 15.6	32
Engineering	(29) 9.7	(29) 11.5	19
Computer Science	(19) 15.3	(18) 15.6	2
Liberal Arts	(16) 27.8	(15) 34.7	25
Science	(5) 13.0	(7) 8.9	-32
Ag/Construction	(5) 11.2	(7) 11.7	4
Allied Health	(5) 17.4	(5) 20.6	18
Communication	(4) 15.0	(4) 31.5	110
Bachelors			
Business	(148) 55.0	(150) 60.5	10
Engineering	(129) 38.5	(129) 48.2	25
Computer Science	(90) 51.0	(90) 55.3	8
Liberal Arts	(54) 61.4	(54) 74.9	22
Science	(27) 55.2	(29) 61.5	11
Ag/Construction	(18) 71.9	(19) 82.6	15
Allied Health	(9) 37.2	(9) 44.6	20
Communication	(24) 72.3	(25) 86.6	20
Masters			
Business	(67) 15.8	(58) 15.7	NC
Engineering	(70) 15.9	(67) 16.4	3
Computer Science	(48) 22.0	(49) 21.1	-4
Liberal Arts	(20) 5.3	(19) 5.8	9
Science	(16) 13.6	(16) 16.6	22
Ag/Construction	(7) 14.4	(8) 14.4	NC
Allied Health	(3) 4.0	(2) 10.0	150
Communication	(7) 11.6	(6) 12.8	10

() Number of respondents providing information.

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College graduates at all degree levels can expect salary increases to exceed slightly the yearly inflation rate as currently being estimated.

- From Table 12, starting salaries by industry sector show:
 - Highest salaries in professional services
 - Highest salary increases at the bachelor's level will be in the public utilities (9%) and food and lodging (8%) sectors.
 - Governmental agencies are not anticipating any changes in salary.

**Table 9. Associates Degree
1999-2000 Expected Starting Salary Range Compared to 1998-99 Salary Range (\$)**

Seeking	n	Starting Salary Range 1998-99 (\$)	n	Starting Salary Range 1999-2000 (\$)	% Increase
Humanities/Social Science (all)	18	22,500-24,400	17	22,500-24,600	0.5
Liberal arts – any major	3	23,100-25,500	3	23,800-26,400	3.5
Psychology	3	21,300-23,400	3	22,000-24,400	3.5
Social Work	4	21,000-22,000	4	21,500-22,500	2.0
Sciences	4	24,300-27,300	4	24,800-27,800	2.0
Business (all)	47	24,200-28,300	53	25,300-29,500	4.5
Business – any major	4	22,000-26,800	4	23,300-29,000	7.0
Accounting	8	21,300-26,500	9	22,500-27,600	5.0
Business Administration	9	24,500-27,200	11	24,900-28,000	2.5
Finance	4	26,200-32,300	4	26,900-33,300	3.0
Hospitality	5	27,600-31,000	5	28,000-31,200	6.5
Logistics/Supply Chain Mgt	3	26,000-29,300	3	27,600-31,000	3.5
Marketing	8	23,200-27,800	10	24,800-29,400	1.0
Engineering (all)	26	28,900-33,000	24	29,700-32,700	1.0
Computer	4	30,100-32,300	4	30,600-33,100	2.0
Electrical	6	31,200-34,700	6	32,500-36,000	4.0
Engineering Tech.	4	27,300-36,300	3	30,000-33,000	0.5
Mechanical	4	29,300-33,300	4	29,700-34,000	1.5
Computer Sciences (all)	13	30,800-36,600	13	32,500-38,300	5.5
Computer Science	8	30,300-34,200	8	32,200-36,000	5.5
Communication	5	22,800-27,600	6	23,800-29,200	5.0
Agriculture/Construction	8	23,400-25,000	8	24,100-26,100	3.5
Health	3	29,000-33,100	3	30,900-35,000	6.5
All reported salaries	125	25,600-29,500	129	26,400-30,200	2.5

**Table 10. Bachelor's Degree
1999-2000 Expected Starting Salary Range Compared to 1998-99 Salary Range (\$)**

Seeking	n	Starting Salary Range 1998-99 (\$)	n	Expected Starting Salary Range 1999-2000 (\$)	% Increase
Humanities/Social Science (all)	85	25,400-27,700	82	26,100-29,300	4.5
Any major	14	26,700-29,300	13	27,300-30,100	2.5
Liberal arts – any major	20	26,800-30,100	19	27,700-31,100	3.0
Psychology	10	23,000-25,900	9	23,300-26,200	1.0
Social Work	16	24,700-27,300	16	25,500-28,200	3.0
Sciences	31	36,200-38,600	32	37,800-40,600	4.5
Mathematics	12	38,000-41,000	14	39,700-43,700	5.5
Business (all)	284	30,100-33,400	288	31,600-35,100	5.0
Business – any major	35	27,200-30,800	34	28,400-32,500	4.5
Accounting	56	32,500-35,000	55	33,000-36,200	2.5
Business Administration	55	29,500-31,000	53	30,600-33,900	6.5
Economics	9	32,500-33,400	9	34,300-36,500	7.5
Finance	35	32,800-37,400	36	35,000-39,100	6.0
Hospitality	13	28,200-31,600	12	29,100-33,200	4.0
Human Resources	9	30,900-31,700	11	32,900-34,200	7.0
Logistics/Supply Chain Mgt.	19	31,000-33,400	20	32,700-35,200	5.0
Marketing	39	28,400-32,300	42	30,100-34,400	6.5
Engineering (all)	310	40,100-42,600	289	41,700-44,400	4.0
Technical – any major	5	32,300-37,500	5	33,000-38,200	2.0
Civil	21	36,200-38,300	19	37,000-39,500	2.5
Chemical	19	45,500-45,800	18	47,300-49,200	5.5
Computer	35	43,000-45,900	35	45,200-48,000	5.0
Electrical	68	40,600-43,700	63	42,500-45,600	4.5
Engineering Tech.	14	38,400-41,900	13	40,400-44,600	5.5
Industrial	19	38,900-41,400	19	39,200-41,600	0.5
Mechanical	76	39,900-42,300	68	41,400-43,900	4.0
Computer Sciences (all)	128	40,600-44,100	130	42,500-45,900	4.5
Computer Science	60	41,200-44,700	59	43,200-46,800	5.0
Information Sciences	21	41,100-44,800	19	44,100-47,200	6.0
Management Info. Systems	29	39,400-42,500	32	40,500-44,100	3.5
Programming	16	40,000-44,300	18	42,400-46,900	6.0
Communication/Telecomm.	45	26,400-29,300	44	25,600-30,500	0.5
Allied Health	11	31,400-34,000	9	31,700-35,000	2.0
Agriculture/Construction	25	31,800-34,200	24	33,300-34,900	3.5
All Reported salaries	919	34,500-37,500	898	35,900-39,100	4.0

Masters			
Ag/Nat. Res.	(5) 7.6	(4) 15.3	101
Utilities	(9) 4.4	(9) 6.9	57
Construction	(2) 2.5	(3) 5.0	100
Manufacturing	(54) 6.6	(46) 8.3	26
Transportation	(4) 9.0	(8) 7.3	-19
Information	(6) 4.0	(6) 4.8	20
Finance	(13) 18.9	(14) 40.2	127
Service	(36) 31.1	(45) 27.2	-13
Health	(14) 7.0	(17) 6.5	-7
Food and Lodging	(6) 6.0	(5) 14.0	133
Public Admin.	(6) 17.7	(6) 19.7	11

() Number of respondents providing information. Some sectors were not included at some degree levels because observations were insufficient for reliable results.

**Average Hires in 1998-99 and Expected in 1999-2000 by Economic Sector
(number of observations)**

Economic Sector	Average Hires Made 1998-99	Average Hires Expected 1999-2000	% Change
All graduates			
Ag/Mining	(8) 57.8	(8) 62.3	8
Utilities	(16) 29.5	(16) 41.6	41
Construction	(7) 25.7	(8) 28.1	9
Manufacturing	(111) 34.6	(114) 40.9	18
Wholesale	(7) 205.9	(7) 303.3	47
Retail	(26) 91.7	(26) 107.9	18
Transportation	(14) 168.0	(16) 178.9	6
Information	(23) 57.3	(23) 57.0	No Change
Finance	(46) 77.2	(47) 93.3	21
Service	(74) 74.0	(81) 82.8	12
Health	(22) 77.5	(25) 58.2	-25
Food and Lodging	(15) 54.3	(17) 68.9	27
Public Admin.	(10) 82.6	(11) 81.2	-2
Associates			
Manufacturing	(21) 6.2	(19) 7.9	27
Wholesale	(5) 22.2	(5) 47.0	118
Retail	(2) 50.0	(2) 100.0	100
Transportation	(5) 8.0	(5) 14.0	75
Information	(4) 4.0	(4) 5.3	33
Finance	(5) 15.2	(5) 14.2	-7
Service	(12) 6.8	(14) 7.9	16
Health	(11) 28.6	(11) 29.8	4
Public Admin.	(3) 40.7	(3) 37.3	-8
Bachelors			
Ag./Nat. Res.	(8) 50.9	(8) 52.5	3
Utilities	(14) 23.9	(14) 33.1	38
Construction	(7) 24.3	(7) 28.6	18
Manufacturing	(105) 27.0	(107) 31.7	17
Wholesale	(7) 189.3	(7) 269.0	42
Retail	(23) 72.3	(23) 65.6	-9
Transportation	(14) 162.4	(15) 181.6	12
Information	(20) 12.2	(19) 12.6	3
Finance	(39) 51.1	(40) 66.0	29
Service	(36) 31.1	(45) 27.2	-13
Health	(20) 42.5	(23) 41.5	-2
Food and Lodging	(12) 33.4	(13) 52.6	57
Public Admin.	(10) 56.4	(11) 57.1	1

**Table 11. Master's Degree
1999-2000 Expected Starting Salary Range Compared to 1998-99 Salary Range (\$)**

Seeking	n	Starting Salary Range 1998-99 (\$)	n	Starting Salary Range 1999-2000 (\$)	% Increase
Humanities/Social Science (all)	27	30,100-33,100	26	30,500-33,600	1.5
Social Work	6	30,700-34,100	6	31,100-34,500	1.0
Sciences	16	44,400-47,000	17	45,700-48,100	2.5
Business (all)	78	44,500-51,000	82	46,500-52,500	3.5
Business – any major	7	36,000-41,400	7	38,000-45,300	7.5
Accounting	14	44,300-48,100	14	45,900-50,200	4.0
Business Administration	15	50,100-58,200	17	50,300-57,100	-0.1
Finance	13	47,500-54,600	15	51,800-57,200	6.5
Human Resources	6	49,500-51,800	6	50,200-52,500	1.0
Marketing	8	42,100-52,700	8	43,200-54,000	2.5
Engineering (all)	104	46,600-49,800	103	48,500-51,800	4.0
Civil	10	39,700-42,700	10	40,000-43,500	1.5
Chemical	6	49,200-51,100	6	51,800-54,700	6.0
Computer	15	50,300-53,800	17	52,600-56,200	4.0
Electrical	26	48,900-52,700	25	51,300-54,800	4.5
Mechanical	22	45,800-48,500	19	46,700-49,700	2.0
Computer Sciences (all)	53	50,100-55,300	57	52,100-56,800	3.0
Computer Science	26	51,000-55,500	27	52,500-56,900	3.0
Information Science	9	52,300-60,100	9	53,700-59,800	1.0
Management Info. Systems	8	45,200-48,600	9	48,900-52,200	7.5
Programming	8	49,800-55,800	10	51,900-57,500	3.5
Communication	8	29,700-32,800	9	31,200-36,200	7.5
Agriculture/Construction	8	31,100-34,800	8	32,500-36,600	5.0
All reported salaries	295	44,200-48,500	303	46,100-50,300	4.0
All Ph.D.	4	69,200-69,700	4	75,600-76,200	9.0

Table 12. Expected Starting Salary Range for Industrial Classification

Seeking	n	Starting Salary Range 1998-99 (\$)	n	Expected Starting Salary Range 1999-2000 (\$)	% Increase
Agriculture/Natural Resource					
AA	1	25,000-26,000	1	26,000-27,000	4
BA	9	33,900-35,500	8	35,000-36,600	4.5
MA	5	40,000-43,500	5	41,300-44,700	3
Public Utilities					
AA	1	22,800-26,000	1	23,800-27,000	3
BA	17	35,300-38,700	16	37,800-42,300	9
MA	10	45,200-52,400	9	47,000-56,700	7.5
Construction					
AA	1	23,000-25,000	1	25,000-27,000	8.5
BA	7	37,400-38,400	6	39,200-39,900	4.5
MA	2	50,000-53,500	3	48,700-55,000	9
Manufacturing					
AA	11	28,000-30,700	12	28,300-31,000	3.5
BA	113	37,000-39,700	107	38,500-39,800	4.5
MA	35	49,200-53,600	36	50,300-54,800	4.5
Wholesale Trade					
AA	--	-----	--	-----	--
BA	6	29,800-32,500	6	30,700-33,200	3
MA	2	50,000-55,000	2	50,000-55,000	NC
Retail Trade					
AA	4	22,400-27,800	3	21,300-27,800	NC
BA	22	28,800-31,900	28	26,500-31,700	5.5
MA	3	30,800-35,000	2	29,300-35,500	NC
Transportation					
AA	7	28,300-29,900	7	25,000-31,400	3
BA	13	30,400-33,900	13	31,800-35,700	3
MA	8	35,900-40,500	8	38,400-47,100	11
Information					
AA	4	26,300-29,800	4	27,300-30,800	3.5
BA	21	33,400-39,000	22	36,600-38,800	2
MA	8	50,500-52,400	10	53,800-55,700	3
Finance/Insurance					
AA	8	27,000-32,900	8	27,700-33,700	2
BA	38	31,200-25,400	35	32,000-36,400	4
MA	17	47,600-53,500	17	49,200-55,100	3
Professional Services					
AA	12	24,100-29,700	12	25,800-29,600	5
BA	79	36,200-38,900	78	38,200-41,000	5
MA	43	47,400-51,800	46	49,500-53,600	3.5
Health					
AA	12	24,200-27,700	12	25,100-28,500	3
BA	23	27,400-31,700	23	28,500-34,300	4
MA	11	31,300-37,800	11	32,000-38,400	2.5

APPENDIX D

Additional Data Tables and Figures

Hiring Patterns for Firms of Various Sizes by Degree Level

Firm Size	Average Hires Made 1998-99	Average Hires Expected 1999-2000	Expected Change (%)
All graduates			
<125	(57) 13.3	(64) 13.5	2
126-750	(64) 27.9	(65) 35.1	26
751-4625	(64) 72.1	(63) 70.4	-2
>4625	(64) 121.4	(65) 146.5	1
Associates			
<125	(8) 2.5	(6) 4.8	92
126-750	(14) 16.1	(17) 18.5	15
751-4625	(19) 10.6	(20) 11.1	5
>4625	(7) 30.4	(6) 38.2	26
Bachelors			
<125	(52) 6.2	(54) 7.4	19
126-750	(61) 20.6	(61) 25.6	24
751-4625	(56) 41.6	(55) 43.4	4
>4625	(60) 102.3	(63) 124.6	22
Masters			
<125	(14) 1.6	(13) 2.3	44
126-750	(23) 3.5	(21) 3.9	11
751-4625	(20) 9.4	(20) 10.9	16
>4625	(40) 26.6	(38) 30.7	15

() Number of respondents reporting a figure.

Food and Lodging					
AA	8	26,800-28,800	8	27,900-29,800	4.5
BA	14	28,400-31,600	14	30,100-34,400	8
MA	7	33,000-35,700	7	33,100-38,600	5
Public Administration					
AA	15	22,300-30,100	4	22,600-25,600	NC
BA	13	33,000-36,200	12	33,500-35,600	NC
MA	7	41,800-47,300	6	41,700-46,500	NC

RECRUITING ISSUES

DIFFICULTY IN RECRUITING CANDIDATES

****Technical Graduates Remain the Hardest To Find****

Employers seeking entry level associates degree graduates reported moderate difficulty (56%) to no difficulty (26%) in finding them. Bachelors' graduates were also somewhat to moderately difficult to find (63%). The labor market was tighter for technical graduates with 20% of employers indicating that these graduates were "very" to "extremely difficult" to find. The supply of MBA was also somewhat limited – 27% of employers found it "very difficult" to find them. Management positions were more likely to be moderately (66%) difficult to find though 19% reported difficulty in finding these graduates.

No differences were found by size of company though the largest companies found it slightly easier to find MBAs and management personnel than smaller organizations.

Table 13. Difficulty in Recruiting Candidates (%)

	Not Difficult	Somewhat to Moderately Difficult	Very to Extremely Difficult
Entry associates: Technical	29	56	14
Entry associates: Non-Technical	46	46	8
Entry bachelors: Technical	16	63	20
Entry bachelors: Non-Technical	30	62	7
MBA/Masters	19	53	27
Management	15	66	19

MwACE TEMPERATURE POLL

How many bodies can be crammed into a job fair?

Heavily attended 30%
Well attended 36%

By all types of employers and students

SIGNING BONUSES

- 30% will utilize signing bonuses, ranging from 1% to 33% of base salary – 3% to 10% being the typical range.
- Majors more likely to receive bonuses include Computer Engineers (50% of companies recruiting them), Civil Engineers (42%), Electrical Engineers (55%), and Computer Science majors (75%). Accounting and finance majors are more likely than other business majors to see bonuses.
- Manufacturing sector (35%) will pay bonuses this year.
- The smallest companies do not often use bonuses (only 20% reported using them) while approximately 55% of firms over 4625 employees use bonuses. If small firms offer bonuses the percentage of base pay seldom exceeds 5%; larger firms were likely to pay 8% to 10%.

Table 14. Use of Bonuses in 1999-2000 Recruiting Year

Number utilizing bonuses:	30% of respondents
Range of bonus:	3% to 10% (low 1%, high 33%)
Sector:	35% of manufacturing companies 33% of financial organizations 20% of transportation/utilities 41% of professional services
Recipients:	Engineers – Computer (50%), Electrical (55%), Civil (42%), Computer Science and MIS (75%), Business – Accounting (45%), Finance (55%), Food/Lodging (33%)

COSTS OF RECRUITING CANDIDATES

Excluding the costs associated with headhunters and other external recruiters, respondents were asked to provide the cost of recruiting a new employee. Costs ranged from \$1700 to \$2900 for associate degrees, \$2300 to \$4300 for non-technical bachelor degrees, \$2900 to \$4900 for technical bachelor degrees, and \$2600 to \$6100 for MBA and master degrees. External recruiters were used in the searches for MBAs and managers.

APPENDIX C

These average salaries by major serve as benchmarks for comparing the bachelor salary ranges respondents from this study expect to offer this year.

Average Salary Bachelor Degree Only Benchmarks: NACE and MSU

Academic Majors	NACE ¹ 1999 Salaries (\$)	MSU ¹ 1999 Estimates (\$)
Accounting	34,500	35,800
Business Administration	33,800	30,400
Finance	34,900	
Marketing	31,500	32,960
Hospitality	26,250	29,500
Human Resources (not LIR)	29,600	32,800
Logistics/Supply Chain Mgt.	-----	40,066
Merchandising	29,600	29,400
Advertising	25,300	24,000
Communications	27,500	28,200
Chemical Engineering	47,100	44,600
Civil Engineering	36,100	35,500
Computer Engineering	45,200	46,000
Electrical Engineering	45,100	47,000
Industrial Engineering	43,000	-----
Mechanical Engineering	43,300	44,000
Engineering Technology	37,100	-----
Packaging	-----	41,700
Computer Science	44,300	43,500
Information Sciences	39,200	-----
Management Information Systems	41,000	-----
Construction	33,500	36,600
Mathematics	38,100	-----
Chemistry	34,500	35,500
Biological Sciences	28,200	-----
Political Science	29,300	32,300
Psychology	26,300	28,100

¹Taken from National Association of Colleges and Employers. Salary Survey: A study of 1998-99 beginning offers. July, 1999, Vol. 38(3). Bethlehem, PA 18017 and Career Services and Placement. The Salary Report for 1998-99 Graduates: An Interim Report. October, 1999. Michigan State University, E Lansing MI 48824. Averages have been rounded for convenience.

- Employers seeking business and liberal arts graduates at the associate level spent more than other employers.
- Employers seeking engineers and business graduates spent more finding suitable bachelor candidates.
- Expenditures across industrial sector varied widely, generally the transportation and food and lodging sectors paid the highest except for retail employers seeking MBA candidates.

Table 15. Costs Associated with Recruiting A Candidate (\$, range)

	Technical Associates (\$)	Non-Technical Bachelors (\$)	Technical Bachelors (\$)	MBA/ Masters (\$)	Management (\$)
All	1710-2896	2339-4274	2880-4883	2616-6119	3484-6456
% Use Consultant	8	8	9	13	10
Manufacturing	1152-2356	2477-5273	2609-4559	3933-7010	4875-9637
Retail	2000-3000	1174-2100	375-1500	5125-8500	----
Transportation	300-750	3481-5875	4740-8740	1000-3000	----
Information	1183-2894	1556-3006	2396-4225	2675-5342	1683-4017
Finance	4792-6308	3060-5355	4325-6725	5792-9242	----
Professional Services	1512-2732	2693-4350	2814-4737	4535-6782	5700-7700
Food/Lodging	6837-8225	3511-4867	8783-10,733	775-2450	----
Public Admin.	275-375	375-625	4036-4136	7750	----
Computer Science	1299-2894	1848-3812	2620-4932	3283-6169	3393-5620
Business	2169-3576	2652-4914	3262-5575	3585-6269	3768-8422
Engineers	1193-2268	2542-4155	2954-4919	4417-6915	5311-7275
Health	1810-2860	1445-2162	2542-3383	3112-3500	3200
Ag./Construction	883-1367	1446-2550	1436-2955	375-750	1750-2750
Sciences	1555-2910	1932-3150	3322-5628	4523-7091	7000-13,300
Humanities/Soc. Sci.	2085-2568	1696-2909	2467-3755	3792-4942	810-2950

CANDIDATE CHARACTERISTICS

Last year respondents described the candidates they wanted in terms of the “total package”. Not only do candidates have to be prepared academically, they needed to possess sound communication skills, computer aptitude, leadership, teamwork, interpersonal abilities, and personal accountability. This year employers were probed as to what new skills or skill combinations were emerging that college students need to anticipate as they prepare for the workplace.

In responding to this question, many respondents stuck with the “total package”. They desired increased proficiency in communication (public speaking and presentations) and interpersonal skills. What did emerge were several new competency areas and the upgrading of existing skill packages. Highlighting future skills:

- Higher level of computer proficiency, particularly the ability to use a language such as JAVA as well as graphic programs.
- Understand the concepts of e-commerce.
- Shift thinking and creating new knowledge that can be used by the organization; requires “strategic” or “breakthrough” thinking – another way of saying higher levels of complex, critical thinking.
- Ability to adapt to changing systems – flexible to handling multiple tasks (“multi-skilled”).
- Demonstrated commitment to learning.

MwACE TEMPERATURE POLL

Who was that person?

93% reported that many of the employers recruiting on-campus are new

CO-CURRICULAR ACTIVITIES

Students are encouraged to participate in various co-curricular activities that allow them to gain experience applying their learning in different situations. Overseas study and service learning programs have expanded throughout the 1990’s as vehicles to engage students in multicultural environments and to increase their awareness of community needs and their role beyond work and school. Unfortunately, these employers placed very little importance on overseas study and only moderate importance on service learning during the initial selection process.

Involvement in a student organization was very important to 28% of these employers with 66% believing membership in a student organization was moderately important. Employers reserved their highest importance for work-related experiences such as internships, co-ops, and summer employment (career-related).

Table 17. Importance of Co-Curricular Activities to Employers

Co-Curricular	% None	% Some-Moderate	% Great Deal-Extremely
Overseas study	57	40	3
Community service	13	71	16
Student organization membership	6	66	28
Internship (credit)	6	33	61
Internship (no credit)	6	35	59
Co-op	14	37	48
Career-related employment	2	16	82
Athletic participation	42	52	6
Leadership in organization	7	53	40
Diversity training	22	62	16

Majors Sought: Respondents could identify the top five academic majors they were seeking in 1999-2000. An employer could be in five different classifications, depending on the mix of majors.

<u>Academic Major Sought</u>	<u>n</u>	<u>% of Total</u>
Computer Science	186	16
Engineering	355	30
Business	385	33
Liberal Arts	98	8
Science	43	4
Agriculture/Construction	31	3
Allied Health	15	1
Communication	54	5

Recruiting Territory: Respondents were asked which areas of the United States that their organizations recruited candidates. They were allowed to check all the areas that applied.

<u>Recruiting Areas</u>	<u>%</u>
International	7
Entire United States	29
Northeast	18
Southeast	18
Northcentral	50
Southcentral	14
Northwest	6
Southwest	10

Techniques and Strategies Used to Recruit College Graduates. Each respondent was asked to check the strategies that their organization used to find qualified college candidates for employment. The following list provides the percentage that utilized the strategy. Employers use a variety of techniques to identify candidates – the most common being “on-campus recruiting.”

<u>Recruiting Technique/Strategy</u>	<u>% Utilizing</u>
On-campus recruiting	86
Organizational web/Internet postings	82
Resume referral by college	75
Job fairs	81
Job listing service (Web)	54
Ads in papers, professional journals	61
Co-op/internship program	70
External staffing prof./consultants	17

Then they were asked to select only one strategy as their primary strategy. About 50 provided two answers so a total list was compiled and weighted. Accordingly 60% indicated that their primary strategy was on-campus recruiting and job fairs. The other strategies were not widely used.

<u>Primary Strategy</u>	<u>%</u>
On-campus recruiting	25
Job fairs	19
Organizational Web/Internet posting	13
Co-op/internship program	13
Resume referrals	10
Ads in papers, professional journals	9
Job listing service (Web)	7
External staffing prof./consultants	2
Other strategies	2

PRIORITIZING CANDIDATE INFORMATION

Faced with choosing from among widely different college students, respondents were asked to rank six characteristics or experiences found on a resume. The most important factor was rated “1” and the rating descended to “6”. Respondents were asked not to give equal ranking to skills – no matter how vigorously they argued. The top rated factors were academic major and internship experience. Computer aptitude came in at the bottom.

Table 18. Ranking of Key Candidate Characteristics

	Mean	% Rated 1 or 2
Academic major	2.51	58
Internship experience	2.59	58
Leadership experience	3.19	39
Grade point average	3.44	25
Basic computer skills	3.99	19
Technical computer skills	4.49	22

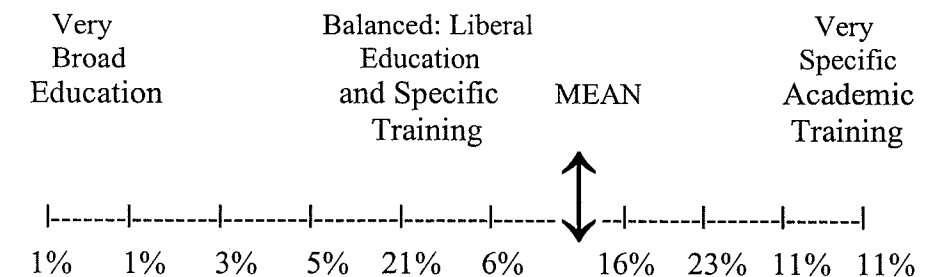
MwACE TEMPERATURE POLL

Can you follow the job icon?

- 53% of career services units provide a range of workshops on how to use Web for job search.
 - 42% provide handouts or URL references.
 - Just a little better than pointing to a computer.

PERCEPTION OF LIBERAL ARTS

In evaluating the value a candidate can add to an organization, employers were asked to compare a liberally educated individual to one specifically trained in a discipline. The respondents were asked to rate how their organization values education from very broad to very specific. This group of employers held a position above “balanced”. Approximately 45% favored specific education; 32% favored a balanced academic experience.



MwACE TEMPERATURE POLL

How well are your lost-in-space – oops – liberal arts students doing?

55% Very well to outstanding
37% Okay

PROFICIENCY CERTIFICATES

Certification in various software or hardware applications are becoming popular as a mechanism to enhance employment opportunities. Some students are leaving school to obtain a series of certificates and then find employment. Certification for liberal arts in “critical thinking” and “computer aptitudes” became available after this survey was sent out. A number of respondents did not know what proficiency certificates were; 62% reported that their company did not accept or use certificates. For those that did, these certificates were sited frequently:

Microsoft	
Exchange server	11%
Windows 2000	17%
SQL server	13%
Site server	5%
UNIX	15%
JAVA	11%
Netscape	11%
Novel	10%

ADJUSTING TO A TIGHT LABOR

The economic laws of supply and demand would suggest that employers faced with stiff competition for workers would find comparable substitutes, restructure recruiting strategies, and offer higher wages. Respondents were asked to consider whether they agreed or disagreed with a series of statements on the labor market.

RECRUITING STRATEGIES

- 61% disagreed that job fairs were becoming outdated; in fact, employers prefer job fairs where they can connect with many potential candidates. Variations of the traditional job fair will emerge, for example the virtual job fair.
- 67% agreed that on-line recruiting will be the major strategy of the future to find new employees.

**APPENDIX B
EMPLOYER PROFILE**

The characteristics of the 320 responding establishments to this study are provided in this appendix. These employers have a definite Midwest, manufacturing, slant though every section of the country and major industrial sector are represented in the set of responses.

Respondents' Gender: 48% female, 52% male

Location (mailing state) or organization by region:

	<u>% Received</u>
Northeast	15
Southeast	8
Northcentral	55
Southcentral	12
Northwest	3
Southwest	7

Size of Parent Organization (number of employees) that has been grouped into five categories:

<u>Organizational Size</u>	<u>%</u>
<125	25
126-750	25
751-4625	25
>4625	25

Industrial Sector: Each respondent was allowed to list three major North American Industrial classifications (NAIC) codes that reflected their organizations' products and services. A computer manufacturer may build components (manufacturing) and sell computers (retail), for example. Only about 33% of these employers in this pool listed multiple NAIC codes that crossed industrial sectors. According to their responses, the group represented these industrial sectors:

Industrial Sector	%
Ag/Mining/Nat Resource	2
Public Utilities	4
Construction	2
Manufacturing	29
Wholesale	2
Retail	6
Transportation	4
Information	6
Finance, Insurance	9
Professional Services	21
Business Support Services	<1
Health	6
Performing Arts	<1
Food & Lodging	4
Other Services	1
Public Administration	3

- b. Regions of the United States:
- Northeast-Mid-Atlantic: Maine, Vermont, New Hampshire, Massachusetts, New York, Rhode Island, Connecticut, Delaware, New Jersey, Pennsylvania, and Maryland
- Southeast: Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, and Kentucky
- Northcentral: Ohio, Indiana, Michigan, Illinois, Wisconsin, Minnesota, Iowa, Nebraska, North Dakota, and South Dakota
- Southcentral: Missouri, Arkansas, Louisiana, Texas, Oklahoma, and Kansas
- Southwest: Colorado, New Mexico, Arizona, Utah, California, and Hawaii
- Northwest: Wyoming, Montana, Idaho, Oregon, Washington, and Alaska

- c. North American Industrial Classification (taken from Standard Industrial Classification):
- Agriculture and Natural Resources Services:* Establishments engaged in agricultural production, agricultural services, mining activities, forestry and logging, and oil and gas extraction.
- Accommodation and Food Services:* Hotels; motels; food services; drinking establishments.
- Other Services:* religious; civic; private households.
- Arts and Entertainment:* Performing arts; museums, amusement and recreation industries.
- Construction:* Includes contractors and operative builders engaged in construction of residential, industrial, and commercial buildings; heavy construction, such as highways, bridges, etc. are also included; special trade contractors and service providers associated with construction.
- Health Care:* Hospitals; ambulatory care services; nursing and residential care facilities; social assistance.
- Information:* Publishing industry; broadcasting and telecommunication; motion pictures and sound recording; information services and data processing services.
- Management of Companies:* Administrative and support services; waste management; travel services; investigation and security services; services to buildings/dwellings.
- Manufacturing:* Establishments engaged in the mechanical or chemical transformation of materials or substances into new products; also include assembling of component parts and blending of materials.
- Transportation and Warehousing:* All types of transportation services (air, rail, water, and truck), includes support services for transportation; couriers and messengers; storage services.
- Wholesale Trade:* Establishments engaged in selling merchandise to retailers, other wholesalers, or business/industrial users.
- Retail Trade:* Establishments engaged in selling merchandise for personal or household consumption and rendering services incidental to the sale of the goods.
- Finance:* Establishments operating primarily in the fields of finance, insurance, and real estate.
- Professional Services, Scientific and Technical Services:* Provide services to businesses and individuals including legal, accounting, architectural, engineering, design (computer systems and specialized), management consultants; marketing research, including public opinion polls; environmental consulting; scientific research; advertising.
- Public Administration:* Includes activities of federal, state, and local governments, including research by public agencies (space).
- Utilities:* Electric power generation; national gas distribution.

- d. Company size. Respondents were asked to provide the size of the unit that they recruited. The range was reduced to four groups with each group containing approximately 25% of the sample.

MwACE TEMPERATURE POLL

Does the Web really produce jobs?

53% rated effective
47% have some doubts

SUBSTITUTES

- Only 13% agreed that proficiency certificates will replace a college degree. (Students have to grow-up someplace).
- 60% disagreed that technical graduates with an associate's degree are as qualified as four-year college graduates for many positions in the organization.
- 36% agreed that a college degree is not needed to be successful in their organization.
- 32% agreed that academic majors were becoming less important as college students gain technical competencies.
- 32% agreed that employers should have their companies work with high school students and offer them scholarships and training.

ENVIRONMENT

- 80% disagreed that the only way to retain good employees is to pay higher salaries.
- 95% agreed that employees stay because of an engaging, creative, and supportive environment.
- 35% agreed and 40% disagreed that, once Y2K compliant, an over-supply of computer programmers/technicians will emerge in the labor market.

All the analyses were conducted using the SPSS statistical package. Access to the data can be requested from the senior investigator, Dr. Phil Gardner.

APPENDIX A RESEARCH METHODS

A list of potential employer contacts was constructed from employers who had responded to the *1998-99 Recruiting Trends* survey, and employer members listed in the directories of the Midwest Association of Colleges and Employers and the National Association of Colleges and Employers. The initial contact list totaled slightly more than 3,000 companies.

The initial mailing was sent in mid-September. After concerted efforts to track down bad addresses or identify appropriate contacts, the final list was about 2,800 contacts. Also deleted from the list were a few companies that declined to participate because of company policy.

A final contact effort was made telephone. From this effort, it was estimated that 30% to 40% of the contacts were either no longer in the identified position, or telephone numbers had changed, or the company was no longer in the location listed in the directory.

After adjusting the list of employers, approximately 2,400 to 2,600 employers were contacted that could potentially respond. Thus the response of 320 employers which represented a 14% response rate.

The survey that employers completed contained four sections, presented on four pages. The first section asked for background about their organization or unit for which they had recruiting responsibility (size, industrial sector, respondent location, recruiting territory, recruiting techniques, and the five key academic majors they recruited). The second section concerned their perceptions of the national and regional labor markets, hiring intentions for 1999-2000 and their actual hires from 1998-99, and the starting salary ranges offered last year and expected this year. The third section covered recruiting issues that employers were concerned about, such as signing bonuses, difficulty in finding certain types of candidates, and the cost of recruiting. The final section focused on issues raised by college members, including critical candidate competencies, employers' perception of liberal arts graduates, and possible shifts in credentialing to off-set shortage of candidates.

One factor that affected the response rate was the decision this year to accept only complete surveys. To tell a complete story, employers were asked to complete as many questions as possible, realizing some companies may not have set hiring expectations or want to reveal salaries.

Key variable definitions that were used in this report are included to clarify the text.

- a. Academic majors: The list was taken from the National Association of Colleges and Employers major categories (a list familiar to many professionals). Added to the list were categories for "all majors," "liberal arts," "all majors in selected categories," (technical, business, etc.) and majors omitted from their list, such as packaging engineer and supply chain management.