ACE **Issue Brief** **September 2004**

Debt Burden: Repaying Student Debt

Growth in borrowing and increasing student debt through the 1990s and into the new century have fueled the college affordability debate. Student debt is an important indicator of college affordability, but it is only a part of the equation. For those students who attain a degree, higher earnings often accompany student loan debt. A more accurate measure of the student borrowing challenge is debt burden. Debt burden, measured as a percentage of income that must be dedicated to loan payments after graduation, provides a more balanced look at both sides of student borrowing—the debt and the payoff.

This analysis describes the borrowing and repayment experiences of 1992–93 and 1999–2000 bachelor's degree recipients one year after graduation. Debt burden also is of special concern for students who do not complete a degree, as they often face debt repayment without the greater earnings potential a degree affords. This group of borrowers is not the focus of this Issue Brief because no national data set exists to analyze this population. This analysis is based on the 1994 and 2001 Baccalaureate and Beyond Studies (B&B) conducted by the National Center for Education Statistics (NCES). The studies include detailed data on student demographics, education financing, and post-graduate experiences.[1] All debt and income dollar amounts are adjusted for inflation.

Among the highlights:

- Median debt burden—the percentage of monthly income required for student loan payments—for students receiving their baccalaureate degree in the 1990s was manageable and unchanged at 7 percent.
- Debt burden is a growing concern for a subset of students with larger than average debt or lower than average earnings.
- If borrowing levels continue to increase, interest rates rise, or recent graduate salaries decline, debt burden will increase.
- Student loan debt had no discernible impact on graduates' decisions to attend graduate school, live on their own, or marry.

[1] Additional data on debt burden is available from the U.S. Department of Education, *Condition of Education 2004* (Indicator 38) and a forthcoming report from the National Center for Education Statistics (http://nces.ed.gov).

BORROWING

The growth in student loan debt and educational borrowing is twofold. Not only are students borrowing more, but more students are borrowing. Nationally, annual student loan volume increased 76 percent from 1993 to 2000 after adjusting for inflation.[2] The percentage of bachelor's degree recipients who ever borrowed to finance their education increased from 49 percent in 1993 to 65 percent in 2000. It is important to note, however, that changes in eligibility for the federal student loan programs[3] resulted in the most significant increases in the proportion of student borrowing among middle- and upper-income families (see Table 1). For example, the percentage of students from families with income between $50,000 and $80,000 who borrowed increased 32 percentage points, from 35 percent in 1993 to 67 percent in 2000. Despite the increase in the proportion of middle- and upper-income students with student loans, bachelor's degree recipients from families in the lowest income categories were still more likely to borrow.

The median cumulative amount borrowed also increased from 1993 to 2000. In 1993, bachelor's degree recipients borrowed an average of $9,500, compared with $16,500 for 2000 degree recipients.[4] The median amount borrowed varied by family income and type of institution attended and the patterns shifted in the later cohort. In 1993, students from families in the lower and lower-middle income groups borrowed more for their education than their upper-income counterparts. Borrowers from families earning less than $25,000 borrowed a median of $10,557, compared with $8,909 for borrowers from families earning more than $80,000. This pattern reversed for the 2000 graduates. In 2000, bachelor's degree recipients from the families earning less than $25,000 per year borrowed a median amount of $15,000, compared with a median of $16,165 for those graduates from families earning $80,000 or more. One explanation for this reversal may be the expanded availability of unsubsidized loans for higher-income families in 2000.

In both cohorts, independent students—those who finance their own educational costs—at the lower-income levels borrowed higher median amounts than their upper-income counterparts. In 1992–93, 68 percent of the lowest-income independent students graduated with some educational debt, and the median amount they borrowed was $10,453. Forty-one percent of the highest-income independent students borrowed to finance their education and borrowed a median of $8,909 in 1992–93. In 2000, the percentage of independent students earning less than $15,000 who borrowed rose to 79 percent, with a

[2] King, Jacqueline. (2003). *2003 status report on the federal student loan programs*. Washington, DC: American Council on Education.
[3] The 1992 reauthorization of the Higher Education Act expanded federal loan eligibility through the introduction of the unsubsidized loan program. Unsubsidized loans are available up to the authorized loan limits to all students regardless of need.
[4] Median amount of student loan debt will vary from ACE Issue Brief: Student Borrowing in the 1990s. The earlier estimates use a proxy for graduate status because data from the Baccalaureate and Beyond data set were not available at that time.

median debt of $17,500. Fewer than one-half of 1999–2000 independent students earning more than $50,000 borrowed a median of $12,000. Not surprisingly, given the relatively higher tuitions, students who graduated from private, not-for-profit institutions were more likely to borrow and borrowed more than their peers at public institutions (see Table 1).

While the median amounts are instructive, they also mask the extremes. To appreciate the full extent and amount of borrowing and subsequent burden, the distribution of students by amount borrowed is also important. In 1993, more than half (52 percent) of all bachelor's degree recipients who had borrowed to finance their education had borrowed less than $10,000. In 2000, that percentage dropped to 23 percent. In contrast, only 15 percent of 1993 baccalaureate recipient borrowers had borrowed more than $20,000, compared with 42 percent of all 2000 baccalaureate recipients who borrowed (see Figure 1).

REPAYING

Borrowers generally begin repaying their student loans six months after they graduate, although they may defer repayment under certain special circumstances, including financial hardship. The standard repayment for federal student loans is 10 years, but alternative repayment options such as graduated, extended, and income-contingent repayment are available depending on the loan program and amount borrowed.[5] These alternatives reduce monthly payments for recent graduates who may be struggling, but also increase the length of repayment and total interest charges paid on the loans.

Monthly student loan payments are calculated based on the interest rate and total loan amount. Because 2000 baccalaureate recipients had borrowed more, on average, than their 1993 counterparts, they also had larger average monthly loan payments. However, 2000 graduates benefited from lower interest rates than 1993 graduates. In 1993, student loan interest rates were between 8 percent and 10 percent. Currently, student loan interest rates are variable and set annually. In 2000, the interest rates on federal student loans were between 6 percent and 7 percent. As a result, while median total amount borrowed increased by 74 percent from 1993 to 2000, average monthly payments increased only 24 percent, from $153 to $190 (see Table 2).

In addition to the more favorable loan terms, 2000 baccalaureate recipients also benefited from lower unemployment and higher salaries. Eighty-three percent of the 1993 graduates and 87 percent of the 2000 graduates were employed full-time one year after graduation. The 2000 baccalaureate recipients

[5] U.S. Department of Education. (2003). *Repaying your student loans*. Washington, DC: Author.

who were repaying their loans one year later had an average annual salary of $34,100 ($2,840 per month) compared with $28,300 ($2,360 per month) for '93 graduates in constant 2001 dollars.

Repayment difficulties are often measured by default rates. Cohort default rates, released annually by the U.S. Department of Education, look at student repayment difficulties by institution attended. The most recent national institutional default rate of 5.4 percent is a historic low and down from a peak default rate of 22.4 percent in 1990.

DEBT BURDEN

Debt burden is defined as the percentage of monthly income required to make the monthly student loan payment under the standard repayment plan. As detailed above, while monthly loan payments one year after graduation have increased from 1994 to 2001, incomes of college graduates also have risen. The net result is that median debt burden did not increase for baccalaureate recipients who borrowed. The median debt burden for both cohorts was approximately 7 percent. Student aid research generally considers monthly debt burden of 8 percent or less "manageable," but recognizes that individual circumstances and responsibilities vary widely.[6]

Overall, the percentage of borrowers facing debt burdens above the 8 percent threshold remained steady at just over one-third between 1994 and 2001 (Figure 2). However, the percentage of borrowers facing larger levels of debt burden did increase for certain groups of students. The proportion of borrowers earning less than $15,000 one year after graduation who were experiencing debt burden in excess of 17 percent increased from 35 percent in 1994 to 60 percent in 2001. Despite an overall increase in salaries for 2001 graduates, a growing gap between lower and higher earners may have resulted in this increasing burden for students in lower-paying jobs.

The number of students repaying loans increased between the two cohorts. In 1993, 49 percent of the 1.17 million baccalaureate recipients, or approximately 574,000 students, had ever borrowed to finance their education. In 2000, the proportion and number of graduates who had borrowed had increased to 66 percent of the 1.24 million baccalaureate recipients, or 811,000 students. The relatively stable distribution of borrowers by debt burden range masks the overall increase in the numbers of students repaying student debt.

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[6] Several studies have suggested that debt burden levels of 8 percent to 10 percent, depending on income, are acceptable. In addition, mortgage lenders typically use an 8 percent rule for student loan debt. For more information see:
Greiner, K (1996). How much student loan debt is too much? *Journal of Student Financial Aid, 26*(1), 7–16.
Hansen, W.L. & Rhodes, M.S. (1988). Student debt crisis: Are students incurring excessive debt? *Economics of Education Review, 7*(1), 101–112.

OVERBURDENED STUDENTS

While the median debt burden appears to fall within a reasonable range, there are students who are struggling to meet their loan obligations. This population of students requires careful monitoring. Despite higher student loan debt for the 2000 graduates, the combination of favorable interest rates and increasing salaries mitigated the corresponding debt burden. However, any reversal of either of those circumstances will result in higher student loan debt burden.

The proportion of students with the most challenging levels of debt burden declined from 1994 to 2001. In 1994, 21 percent of 1993 baccalaureate recipients who were employed and paying off their student loan debt faced monthly educational debt burden of 13 percent or more, well above the 8 percent threshold considered manageable. In 2001, 17 percent of 2000 graduates faced monthly debt burden in this range. In both cohorts, students who had borrowed large amounts or whose salaries were in the lower income range were more likely to have debt burden of 13 percent or more (see Table 3). In addition, students who attended higher-tuition private, not-for-profit or private, for-profit institutions were more likely to experience debt burden levels in excess of 13 percent.

Nearly two-thirds (60 percent) of 2000 graduates with salaries below $15,000 experienced debt burdens in excess of 17 percent, compared with less than 5 percent of graduates earning more than $30,000. Graduates who had borrowed in excess of $20,000 were more likely to have debt burden greater than 17 percent (16 percent) versus those graduates who had borrowed less than $10,000 (2 percent). Fifteen percent of students who attained their degree at a private, not-for-profit institution or a private, for-profit institution faced a debt burden in excess of 17 percent, compared with 7 percent of graduates of public institutions.

CHOICES

Beyond the financial impact of repaying student debt, policy makers also express concern that increasing levels of student debt dissuade graduates from other life choices including attending graduate school, choosing a public service or other lower-paying career, getting married, or purchasing a home. Higher debt levels did not seem to discourage baccalaureate recipients from any of these choices. In fact, 2000 graduates were more likely than their 1993 counterparts to have enrolled in a graduate or first professional program one year later (see Figure 3). For those graduates who had not yet applied for graduate school but were planning to attend, only 5 percent cited undergraduate debt as the primary reason for delaying entry. Higher debt also did not seem to discourage students from entering teaching or force graduates into jobs unrelated to their career goals. Finally, neither borrowing status nor amount borrowed were found to have any impact on the proportion of baccalaureate recipients who were married, living on their own, or living with parents or family.

CONCLUSION

Policy makers often consider student debt levels a key indicator of student and families' access to college and ability to pay. In addition, debt is often cited as a barrier to certain post-baccalaureate choices. Analysis of graduates one year later found no discernible impact of debt on decisions to attend graduate school, live on their own, or marry. While loans facilitate access by providing immediate funds, they do not decrease the total price of attendance, but rather simply delay payment of the bill. As a result, beyond the size of the bill, the ability to pay that bill—debt burden—is an increasingly important measure of college affordability. While debt burden is a concern for a subset of students with larger than average debt or lower than average earnings, in general debt burden for students receiving their baccalaureate degree in the 1990s was manageable and unchanged at 7 percent. However, if borrowing levels continue to increase, interest rates rise, or recent graduate salaries decline, debt burden will increase.

Table 1: Percentage of 1992–93 and 1999–2000 Bachelor's Degree Recipients Who Borrowed and Median Amount Borrowed (constant dollars)

	Percentage Who Borrowed		Median Amount Borrowed*	
	1992–93	1999–2000	1992–93	1999–2000
Total	49.3	65.4	$9,502	$16,500
Family Income				
Dependent				
Less than $25,000	71.1	72.6	$10,557	$15,000
$25,000–$49,999	58.0	69.3	$10,096	$16,000
$50,000$79,999	34.8	66.7	$9,384	$17,000
$80,000 or more	23.0	49.9	$8,909	$16,165
Independent				
Less than $15,000	67.6	78.9	$10,453	$17,500
$15,000–$29,999	59.6	75.2	$9,146	$16,000
$30,000–$49,999	50.8	67.7	$7,127	$15,000
$50,000 or more	40.9	47.6	$8,909	$12,000
Institution Type				
Public, four-year	46.4	63.3	$8,315	$15,000
Private, not-for-profit, four-year	54.1	69.0	$11,878	$19,600
Private, for-profit, four-year	67.9	79.0	$10,690	$22,000

*Note: Median amount of student loan debt will vary from ACE Issue Brief: Student Borrowing in the 1990s. The earlier estimates used a proxy for graduate incomes because data from the Baccalaureate and Beyond data set were not available at that time.

Source: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Studies 1993/97 and 1999/2000. Analysis by ACE Center for Policy Analysis.

Table 2: Distribution of 1992–93 and 1999–2000 Bachelor's Degree Recipients Repaying Education Loans One Year After Graduation by Amount of Monthly Loan Payment

	Less than $100		$100–$149		$150–$199		$200–$249		$250–$299		$300 or More	
	1994	2001	1994	2001	1994	2001	1994	2001	1994	2001	1994	2001
Total	29.2	16.9	26.2	16.8	15.3	16.8	11.2	19.5	5.2	9.9	12.9	20.1
Student Income One Year After Graduation												
Less than $15,000	30.2	21.5	26	20.7	14.2	16.1	10.1	14.9	5.6	11.5	14.1	15.2
$15,000–$29,999	34.6	22.8	28	17.7	16.2	16.9	9.9	18.4	3.8	8.6	7.4	15.6
$30,000–$49,999	30.7	15.5	27.5	17	18.8	16.8	10.2	22.4	4.3	10.1	8.5	18.3
$50,000 or more	27.2	12.6	29.1	15	13.3	16.8	13.4	17.9	5.9	10.5	11.2	27.3
Total Amount Borrowed for Undergraduate Education												
Less than $10,000	47.5	59.7	25.5	27.5	8.2	4.9	5.6	4.7	2.3	0.8	10.8	2.3
$10,000–$14,999	13.2	15.8	39.2	34	25.7	28.3	10.4	13.1	4.9	3.1	6.6	5.7
$15,000–$19,999	8.6	5.6	14.6	14.3	24.4	25	30.1	32.3	9.1	11.9	13.3	10.9
$20,000 or more	5.7	6.6	16.4	7.5	14.9	11.8	16	21.3	13.6	15.4	33.5	37.5
Institution Type												
Public, four-year	32.6	19.8	25.9	18.8	13	17.7	11.8	18.5	5	10.1	11.8	15.1
Private, not-for-profit, four-year	23.5	11.7	26.2	13.4	19.5	15.2	10.7	21.6	5.7	9.3	14.4	28.9
Private, for-profit, four-year	29.8	15.6	15.1	10.8	28.2	14.6	10	12.4	5	14.4	12	32.1

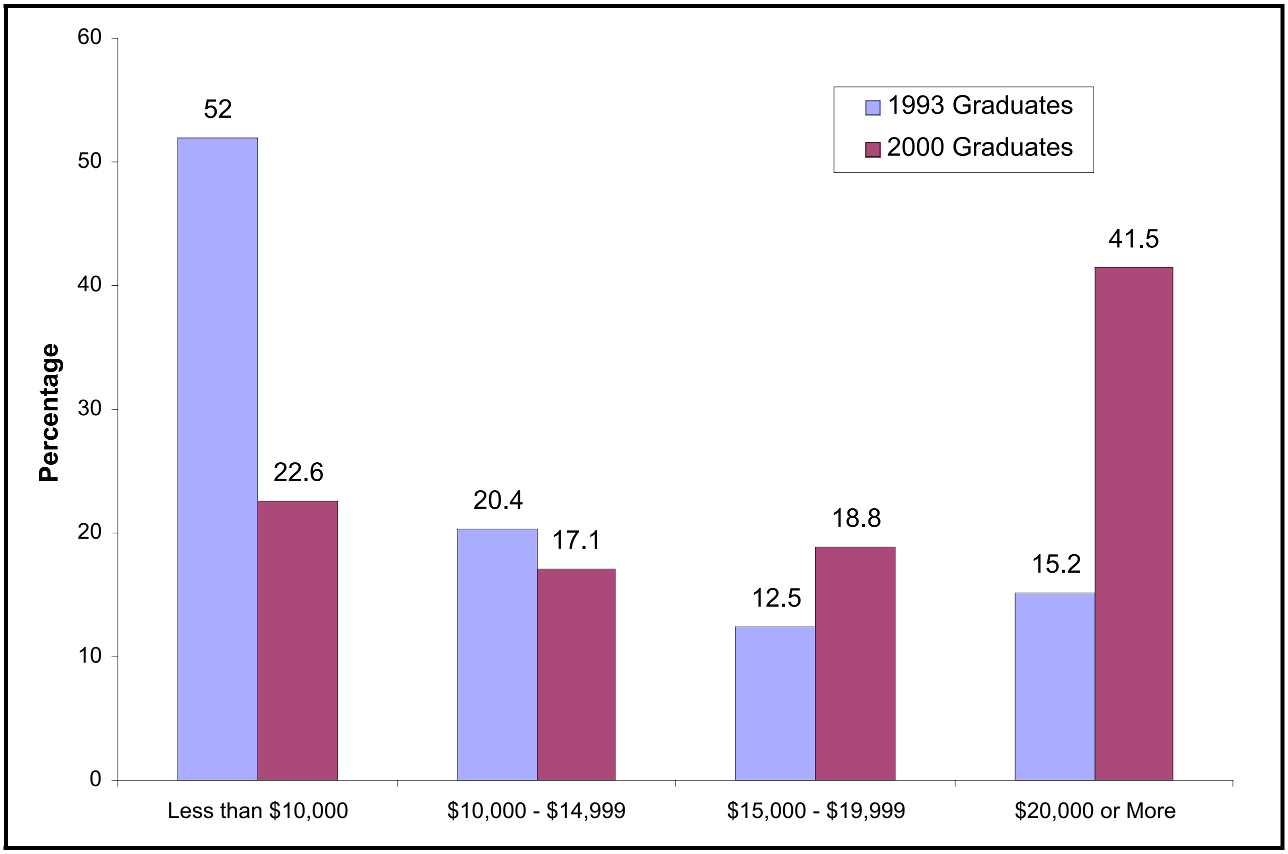
Source: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Studies 1993/97 and 1999/2000. Analysis by ACE Center for Policy Analysis.

Table 3: Distribution of 1992–93 and 1999–2000 Bachelor's Degree Recipients Repaying Education Loans According to Level of Debt Burden and Median Debt Burden

	Less than 5%		5%–8%		9%–12%		13%–16%		17% or More		Median Debt	
	1994	2001	1994	2001	1994	2001	1994	2001	1994	2001	1994	2001
Total	31.1	27.6	32.4	35.9	15.6	19.8	8.7	6.9	12.1	9.8	6.8	6.9
Student Income One Year After Graduation												
Less than $15,000	7.6	2.9	23.8	13.7	19.4	10.7	14.7	13	34.5	59.7	12.2	20.0
$15,000–$29,999	32.3	20.8	37.2	28.1	16.5	29	8.1	9.3	5.9	12.9	6.4	8.6
$30,000–$49,999	55.3	28.5	29.6	44.6	9.1	16.8	3	5.6	2.9	4.4	4.0	6.5
$50,000 or more	69.8	53.7	27.9	34.5	2.3	8.7	0	2.1	0	1	2.9	4.2
Total Amount Borrowed for Undergraduate Education												
Less than $10,000	47.0	72.7	33.2	19.4	10.0	5.0	4.2	1.0	5.6	1.9	4.8	3.3
$10,000–$14,999	12.5	35.3	39.6	43.7	22.4	12.6	11.0	2.8	14.5	5.5	8.3	5.7
$15,000–$19,999	8.7	15.5	28.1	48.2	26.4	22.3	15.7	6.9	21.2	7.2	9.9	7.5
$20,000 or more	14.6	13.8	18.6	33.0	17.8	26.4	18.7	10.9	30.2	15.8	12.0	9.0
Institution Type												
Public, four-year	36.6	31.6	33.1	36.9	14.0	18.8	6.1	5.8	10.2	7.0	6.1	6.5
Private, not-for-profit, four-year	23.7	19.7	28.9	34.3	17.2	22.1	13.5	9.0	16.7	14.9	8.2	8.0
Private, for-profit, four-year	n/a	40.2	n/a	32.3	n/a	11.1	n/a	1.2	n/a	15.2	n/a	5.0

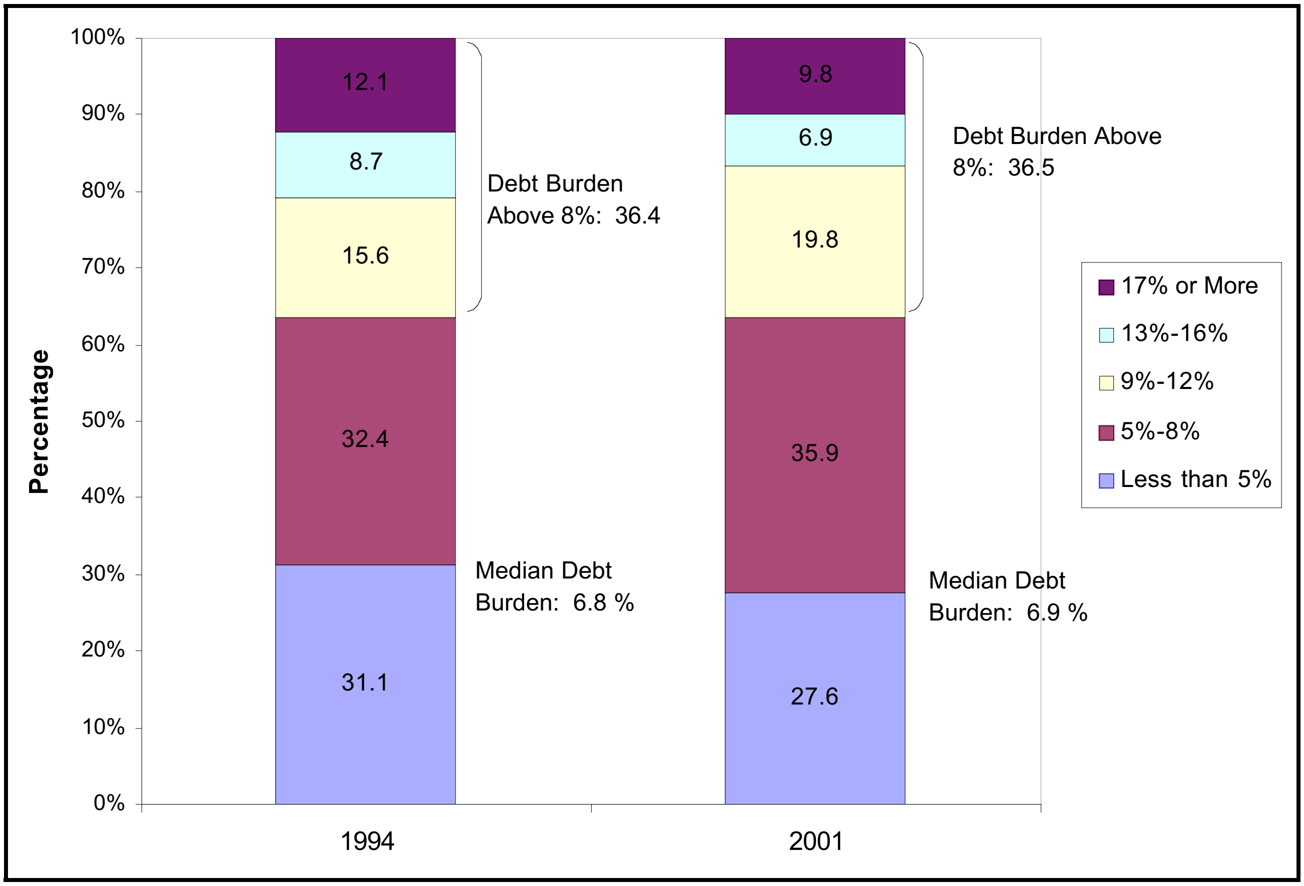
Source: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Studies 1993/97 and 1999/2000. Analysis by ACE Center for Policy Analysis.

Figure 1: Distribution of 1993 and 2000 Bachelor's Degree Recipients by Cumulative Amount Borrowed for Education



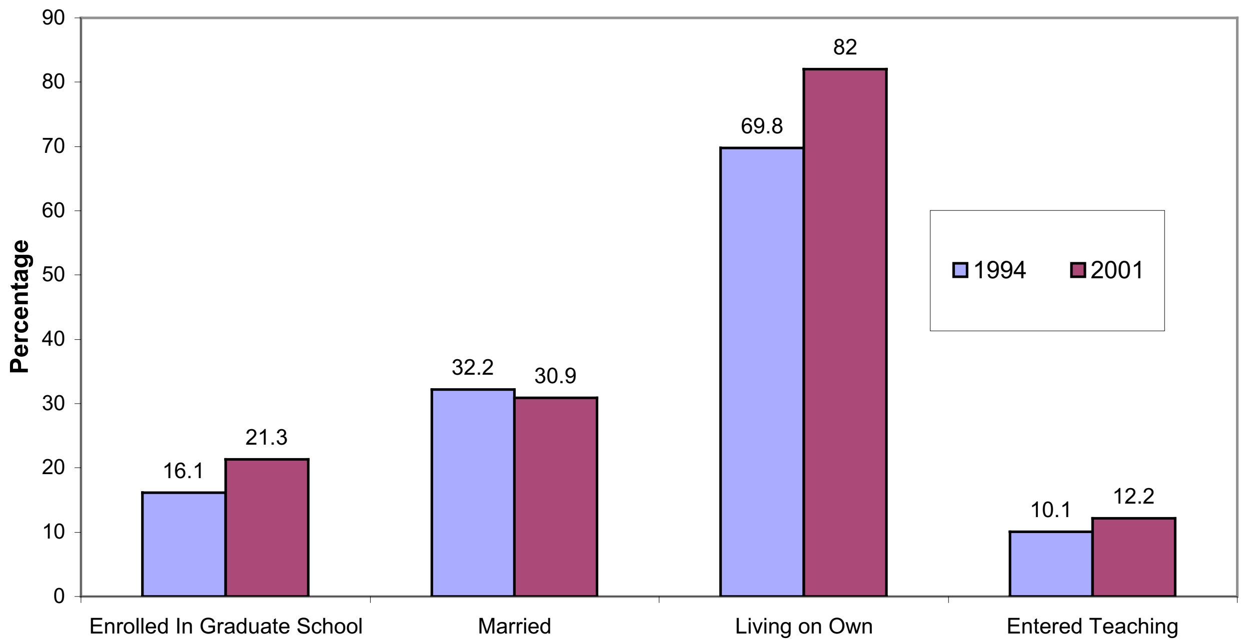
Source: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Studies 1993/97 and 1999/2000. Analysis by ACE Center for Policy Analysis.

Figure 2: Distribution of 1993 and 2000 Bachelor's Degree Recipients by Level of Debt Burden: 1994 and 2001



Source: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Studies 1993/97 and 1999/2000. Analysis by ACE Center for Policy Analysis.

Figure 3: Percentage of 1993 and 2000 Bachelor's Degree Recipients Reporting Post-Baccalaureate Arrangements One Year Later



Source: U.S. Department of Education, National Center for Education Statistics, Baccalaureate and Beyond Longitudinal Studies 1993/97 and 1999/2000. Analysis by ACE Center for Policy Analysis.