# Characteristics of Borrowers with Excessive Debt 

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## EXECUTIVE SUMMARY

Very little is understood about why some students borrow excessive debt. The purpose of this report is to identify characteristics of these borrowers. This might help identify segments of the student population where increased grant aid or targeted counseling would be beneficial.

The most significant characteristics of borrowers with excessive debt include:

- Borrowed Private Student Loans During Senior Year
- Borrowed Federal Education Loans During Senior Year
- Borrowed Any Federal or Private Loans During Senior Year
- Attending a private for-profit or not-for-profit college
- Race African American or Hispanic or more than one race
- Cost of Attendance over $\$ 20,000$
- Independent Student
- Tuition and Fees over \$5,000
- Over age 24
- Pell Grant recipient
- Total income less than or equal to $\$ 50,000$

Other characteristics of borrowers with excessive debt include:

- GPA less than or equal to 3.0
- Independent student with no dependents and unmarried
- Independent student with dependents other than a spouse
- Parent's highest education less than Bachelor's degree
- Parents divorced/separated/single/widowed
- Female
- English is not the primary language

Overall, borrowing private or federal student loans was a very strong predictor of borrowers with excessive debt. Since this correlation is independent of the type of student loan, it would appear that the loans merely enabled students to borrow excessively, as opposed to lenders encouraging overborrowing. ${ }^{2}$ Further analysis demonstrates that the correlation with this characteristic is due to a very strong correlation of average borrowing with college costs. Students who wish to

[^0]minimize debt and minimize the likelihood of overborrowing should therefore attend less expensive colleges.

Students attending private for-profit or private not-for-profit colleges were also much more likely to borrow excessively than students at public colleges, with about a third of students at 4-year private for-profit colleges, about an eighth of students at 2-year private for-profit colleges, and about a tenth of students at 4- and 2-year private not-for-profit colleges borrowing excessively.

One-year debt is predictive of cumulative debt, suggesting that college financial aid administrators should target students who borrow more than $\$ 10,000$ in a single year or who are among the top third of borrowers at the institution for extra counseling concerning debt levels.

Independent and older students are also more likely to borrow excessively because of a need to continue supporting their families while they are pursuing their education. Since the Expected Family Contribution may not go below zero even when income is below the income protection allowance, there is an implicit cap on the amount of grants an independent student can receive. More debt is often their only option.

## METHODOLOGY

The analysis was performed using the data analysis systems for the 2003-04 and 2007-08 National Postsecondary Student Aid Study (NPSAS). ${ }^{3}$ The NPSAS is a large survey conducted every four years by the National Center for Education Statistics at the US Department of Education. The 2003-04 NPSAS surveyed 80,000 undergraduate students and the 2007-08 NPSAS surveyed 114,000 undergraduate students.

Excessive debt was defined as cumulative federal and private education loan debt greater than or equal to $\$ 40,000$ for graduating seniors at 4 -year institutions. ${ }^{4}$ Since the 2007-08 NPSAS does not yet include the COLLGRAD variable to identify graduating seniors, the class level (UGLVL2) was set to $4^{\text {th }}$ and $5^{\text {th }}$ year undergraduates as a reasonable proxy. ${ }^{5}$

## RESULTS

There are two main methods of identifying distinctive characteristics of borrowers with excessive debt. One involves comparing the distribution of borrowers with and without excessive debt among a set of related characteristics, looking for the characteristics that are disproportionately among the borrowers with excessive debt as compared with borrowers who do not have excessive debt. The other involves calculating the conditional probability of a characteristic demonstrating excessive debt and comparing the probability to the average probability of excessive debt in the entire dataset.

The following table compares the percentage of borrowers with and without excessive debt in the 2003-04 NPSAS who demonstrate a particular characteristic. Only those characteristics where

[^1]the percentage of borrowers with excessive debt exceeds the percentage of borrowers without excessive debt are included. The characteristics are sorted according to decreasing spread between the two percentages.

\(\left.$$
\begin{array}{lrr}\hline \text { 2003-04 NPSAS } & \begin{array}{c}\text { Percentage of } \\
\text { Borrowers } \\
\text { With } \\
\text { Excessive Debt }\end{array} & \begin{array}{c}\text { Percentage of } \\
\text { Borrowers } \\
\text { Without }\end{array}
$$ <br>

Excessive Debt\end{array}\right]\)| Borrower Characteristic | $89.8 \%$ | $47.8 \%$ |
| :--- | :--- | :--- |
| Borrowed Any Loans During Senior Year | $80.6 \%$ | $45.6 \%$ |
| Borrowed Federal Loans During Senior Year | $30.9 \%$ | $6.8 \%$ |
| Borrowed Private Student Loans During Senior Year | $41.9 \%$ | $22.0 \%$ |
| Cost of Attendance > \$20,000 | $63.3 \%$ | $43.9 \%$ |
| Independent Student | $62.2 \%$ | $43.4 \%$ |
| Tuition and Fees > \$5,000 | $42.3 \%$ | $24.3 \%$ |
| Pell Grant Recipient | $42.3 \%$ | $25.2 \%$ |
| Attending a private not-for-profit college | $69.0 \%$ | $52.9 \%$ |
| Total Income $\leq \$ 50,000$ | $30.4 \%$ | $17.6 \%$ |
| Age 30+ | $55.4 \%$ | $44.0 \%$ |
| GPA 3.0 | $28.9 \%$ | $17.7 \%$ |
| Independent, no dependents, unmarried | $59.3 \%$ | $48.2 \%$ |
| Parent's highest education less than Bachelor's degree | $20.4 \%$ | $9.5 \%$ |
| Black or African American | $29.0 \%$ | $20.7 \%$ |
| Age 24-29 | $25.2 \%$ | $17.0 \%$ |
| Independent, with dependents other than a spouse | $10.6 \%$ | $3.5 \%$ |
| Attending a private for-profit college | $30.3 \%$ | $23.3 \%$ |
| Parents divorced/separated/single/widowed | $62.9 \%$ | $57.2 \%$ |
| Female | $14.6 \%$ | $11.0 \%$ |
| English is not the primary language | $11.0 \%$ | $8.3 \%$ |
| Hispanic or Latino |  |  |

The following table compares the percentage of borrowers with and without excessive debt in the 2007-08 NPSAS who demonstrate a particular characteristic. Only those characteristics where the percentage of borrowers with excessive debt exceeds the percentage of borrowers without excessive debt are included. The characteristics are sorted according to decreasing spread between the two percentages.

| 2007-08 NPSAS Borrower Characteristic | Percentage of Borrowers With <br> Excessive Debt | Percentage of Borrowers Without <br> Excessive Debt |
| :---: | :---: | :---: |
| Borrowed Any Loans During Senior Year | 90.2\% | 44.4\% |
| Borrowed Federal Loans During Senior Year | 79.7\% | 39.3\% |
| Borrowed Private Student Loans During Senior Year | 50.8\% | 14.9\% |
| Independent Student | 65.2\% | 44.8\% |
| Pell Grant Recipient | 40.4\% | 22.7\% |
| Total Income $\leq$ \$50,000 | 63.7\% | 47.7\% |
| Cost of Attendance > \$20,000 | 47.1\% | 31.6\% |
| Age 30+ | 33.5\% | 18.1\% |
| Attending a private not-for-profit college | 38.9\% | 26.0\% |
| Tuition and Fees > \$5,000 | 63.5\% | 51.8\% |
| Black or African American | 20.7\% | 9.7\% |
| Independent, with dependents other than a spouse | 28.2\% | 18.1\% |
| Parents divorced/separated/single/widowed | 33.9\% | 24.1\% |
| Independent, no dependents, unmarried | 28.6\% | 19.3\% |
| Attending a private for-profit college | 10.5\% | 2.1\% |
| Age 24-29 | 28.8\% | 21.8\% |
| Female | 61.9\% | 55.0\% |

The percentage of borrowers with excessive debt in the 2003-04 dataset was $4.1 \%$. The percentage of borrowers with a given characteristic that demonstrated excessive debt represents the conditional probability of excessive debt given the characteristics. The following table lists
all the borrower characteristics in the 2003-04 NPSAS that had a probability of excessive debt greater than the overall average, sorted by the probability of excessive debt.

| 2003-04 NPSAS | Probability of <br> Excessive Debt |
| :--- | ---: |
| Borrower Characteristic (4-Year Colleges) | $17.0 \%$ |
| Borrowed Private Student Loans During Senior Year | $11.3 \%$ |
| Attending a private for-profit college | $8.5 \%$ |
| Black or African American | $7.8 \%$ |
| Cost of Attendance > \$20,000 | $7.5 \%$ |
| Borrowed Any Loans During Senior Year | $7.3 \%$ |
| More than one race | $7.1 \%$ |
| Borrowed Federal Loans During Senior Year | $7.0 \%$ |
| Pell Grant Recipient | $6.9 \%$ |
| Age 30+ | $6.6 \%$ |
| Attending a private not-for-profit college | $6.6 \%$ |
| Independent, no dependents, unmarried | $6.0 \%$ |
| Independent, with dependents other than a spouse | $5.9 \%$ |
| Tuition and Fees > \$5,000 | $5.7 \%$ |
| Age 24-29 | $5.4 \%$ |
| Hispanic or Latino | $5.4 \%$ |
| English is not the primary language | $5.3 \%$ |
| Total Income $\leq \$ 50,000$ | $5.2 \%$ |
| GPA 3.0 | $5.0 \%$ |
| Parent's highest education less than Bachelor's degree | $4.5 \%$ |
| Female |  |

The percentage of borrowers with excessive debt in the 2007-08 dataset was $7.9 \%$. The percentage of borrowers with a given characteristic that demonstrated excessive debt represents the conditional probability of excessive debt given the characteristics. The following table lists all the borrower characteristics in the 2007-08 NPSAS that had a probability of excessive debt greater than the overall average, sorted by the probability of excessive debt.

| 2007-08 NPSAS | Probability of <br> Excessive Debt |
| :--- | ---: |
| Borrower Characteristic (4-Year Colleges) | $29.7 \%$ |
| Attending a private for-profit college | $22.7 \%$ |
| Borrowed Private Student Loans During Senior Year | $17.3 \%$ |
| American Indian or Alaska Native | $15.5 \%$ |
| Black or African American | $14.8 \%$ |
| Borrowed Any Loans During Senior Year | $14.8 \%$ |
| Borrowed Federal Loans During Senior Year | $13.7 \%$ |
| Age 30+ | $13.2 \%$ |
| Pell Grant Recipient | $11.8 \%$ |
| Independent, with dependents other than a spouse | $11.4 \%$ |
| Attending a private not-for-profit college` | $11.3 \%$ |
| Independent, no dependents, unmarried | $11.3 \%$ |
| Cost of Attendance > \$20,000 | $10.3 \%$ |
| Total Income | \$50,000 |

In addition, if the data is segmented by Pell Grant recipient status and institutional control, $10.9 \%$ of Pell Grant recipients at 4 -year public colleges had excessive debt (compared with $4.1 \%$ among non-recipients), $16.8 \%$ of Pell Grant recipients at 4 -year private not-for-profit colleges had excessive debt (compared with $9.7 \%$ among non-recipients) and $27.0 \%$ of Pell Grant recipients at 4 -year private for-profit colleges had excessive debt (compared with $31.4 \%$ among non-recipients). It is curious that at public and not-for-profit colleges the Pell Grant recipients are more likely to have excessive debt than non-recipients.

Overall, it appears that borrowing private student loans is a dominant predictor of borrowers with excessive debt. The leading characteristics of borrowers with excessive debt include:

- Borrowed Private Student Loans During Senior Year
- Borrowed Federal Education Loans During Senior Year
- Borrowed Federal or Private Education Loans During Senior Year
- Attending a private for-profit or not-for-profit college
- Race African American or Hispanic or more than one race
- Cost of Attendance over $\$ 20,000$
- Independent Student
- Tuition and Fees over \$5,000
- Over age 24
- Pell Grant recipient
- Total income less than or equal to $\$ 50,000$

Other characteristics of borrowers with excessive debt include:

- GPA less than or equal to 3.0
- Independent student with no dependents and unmarried
- Independent student with dependents other than a spouse
- Parent's highest education less than Bachelor's degree
- Parents divorced/separated/single/widowed
- Female
- English is not the primary language


## EXCESSIVE 4-YEAR CUMULATIVE DEBT CORRELATES WITH ONE-YEAR DEBT

The following chart, which is based on 2007-08 NPSAS data, demonstrates that the probability of excessive debt at graduation correlates strongly with senior-year debt. Although this may seem obvious, it is important because it provides college financial aid administrators with a practical tool for early identification of students who are likely to borrow excessively. One-year debt is predictive of cumulative debt. Students whose one-year debt is excessive (e.g., over $\$ 10,000)$ are likely to have borrowed excessively by the time they graduate.

Excessive Debt vs Total Debt Senior Year, 2007-08


About a quarter ( $23.6 \%$ ) of college seniors who borrow $\$ 10,000$ or more in the senior year have excessive debt. College seniors who borrow $\$ 10,000$ or more in the senior year represent $17.3 \%$ of college seniors and $35.7 \%$ of college seniors who borrow. The figure increases to about a third ( $32.7 \%$ ) for college seniors borrowing $\$ 15,000$ or more in the senior year and about half ( $48.3 \%$ ) for college seniors borrowing $\$ 25,000$ or more in the senior year. Colleges should target students who borrow more than $\$ 10,000$ in a single year or whose one-year debt is in the top third of students who borrow for extra counseling on their debt levels. Such students should perhaps be attending a less expensive college.

## PROBABILITY OF EXCESSIVE DEBT BY MAJOR AT 4-YEAR COLLEGES

The following table lists the probability of excessive debt according to major for 30 fields of study using 2003-04 NPSAS data for graduating seniors at 4 -year colleges. ${ }^{6}$ The overall average probability was $4.1 \%$, so anything over that percentage is more likely to result in excessive debt. Some of these majors lead to careers in fields that can clearly support a somewhat higher debt level, such as health professions, computer science and physical sciences. But others are in fields that are much less likely to involve salaries sufficient to support high levels of debt.

|  | Percent <br> 2003-04 Field of Study/Major |
| :--- | ---: |
| Public administration and social services | $8.9 \%$ |
| Health professions and related sciences | $7.3 \%$ |
| Social sciences, other | $6.8 \%$ |
| Computer and information sciences | $6.3 \%$ |
| Physical sciences | $6.1 \%$ |
| Sociology | $5.7 \%$ |
| Family and consumer/human sciences | $5.4 \%$ |
| Foreign languages and literatures | $5.1 \%$ |
| Criminal justice | $5.0 \%$ |
| Liberal arts, sciences and humanities | $4.8 \%$ |
| Political science and government | $4.6 \%$ |
| Visual and performing arts | $4.5 \%$ |
| Education | $4.3 \%$ |
| Theology and religious vocations | $4.0 \%$ |
| Communication and journalism | $3.8 \%$ |
| Mathematics and statistics | $3.6 \%$ |
| Engineering | $3.5 \%$ |
| Engineering technologies/technicians | $3.5 \%$ |
| English language and literature/letters | $3.5 \%$ |
| Business, management, and marketing | $3.5 \%$ |
| History | $3.5 \%$ |
| Parks, recreation, and fitness studies | $3.2 \%$ |
| Biological and biomedical sciences | $2.2 \%$ |
| Economics | $2.1 \%$ |
| Philosophy and religious studies | $1.9 \%$ |
| Psychology | $1.8 \%$ |
| Agriculture and related sciences | $0.0 \%$ |
| Natural resources and conservation | $0.0 \%$ |
| Architecture and related services | $0.0 \%$ |
| Communications technologies/technicians | $0.0 \%$ |
|  |  |

## STUDENT LOAN DEBT CORRELATES WITH 4-YEAR COLLEGE COSTS

Given that borrowing private or federal education loan debt was the strongest predictor of excessive debt, and college costs were also strong predictors, it is worthwhile to investigate whether these two variables are correlated. The following tables, which are based on 2007-08 NPSAS data for undergraduate students at 4-year institutions, demonstrate a very strong correlation between college costs and average undergraduate education loan debt (including federal and private student loans as well as the Parent PLUS loan). The percentage of students borrowing education loans and the average debt increases linearly and almost monotonically with increases in either tuition and fees or total cost of attendance. ${ }^{7}$ The conclusion is that borrowers can limit the amount of debt for their undergraduate education and the likelihood of

[^2]excessive debt by attending a less expensive institution. Every $\$ 2,500$ increase in the cost of attendance translates into a $\$ 725$ increase in annual debt.

Correlation of Cost of Attendance with Average Debt


Correlation of Cost of Attendance with Percentage Borrowing


Correlation of Tuition and Fees with Average Debt


Correlation of Tuition and Fees with Percent Borrowing


Similar correlations also occur with private student loan debt.
Correlation of Cost of Attendance with Average Private Student Loan Debt


Correlation of Cost of Attendance with Percent Borrowing Private


Correlation of Tuition and Fees with Average Private Student Loan Debt


Correlation of Tuition and Fees with Percent Borrowing Private


## EXCESSIVE DEBT AT 2-YEAR COLLEGES

Overall, $2.2 \%$ of $2^{\text {nd }}$ year students at 2-year colleges had excessive debt according to the 2007-08 NPSAS, defining excessive debt as debt greater than $\$ 30,000 .{ }^{8} 1.6 \%$ of students at 2 -year public colleges have excessive debt, compared with $8.9 \%$ of students at 2 -year private not-for-profit colleges and $12.5 \%$ of students at 2-yer private for-profit colleges. Students at 2-year private forprofit colleges represent $27.5 \%$ of students at 2-year colleges with excessive debt, but only $4.3 \%$ of students at 2-year colleges without excessive debt.

The following table lists characteristics of $2^{\text {nd }}$ year students at 2-year colleges with an aboveaverage probability of excessive debt.

| 2007-08 NPSAS | Probability of <br> Excessive Debt |
| :--- | ---: |
| Borrower Characteristic (2-Year Colleges) | $12.5 \%$ |
| Attending private for-profit college | $11.4 \%$ |
| Cost of Attendance > \$20,000 | $11.4 \%$ |
| Tuition \& Fees > \$5,000 | $9.8 \%$ |
| Borrowed Private Student Loans | $8.9 \%$ |
| Attending private not-for-profit college | $7.0 \%$ |
| Borrowed Federal Loans | $6.6 \%$ |
| Borrowed Federal or Private Loans | $5.9 \%$ |
| Native Hawaiian / other Pacific Islander | $4.5 \%$ |
| More than one race | $4.2 \%$ |
| Black or African American | $3.6 \%$ |
| Pell Grant Recipient | $3.6 \%$ |
| Age 30+ | $3.5 \%$ |
| Independent, no dependents, unmarried | $3.1 \%$ |
| Independent | $3.0 \%$ |
| Independent, with dependents | $2.9 \%$ |
| American Indian or Alaska Native | $2.7 \%$ |
| Age 24-29 | $2.6 \%$ |
| Total Income $\leq \$ 50,000$ | $2.5 \%$ |
| Female | $2.3 \%$ |
| Independent, no dependents, married |  |

The ranking of these characteristics is similar to the ranking of characteristics for students at 4year colleges.

In addition, if the data is segmented by Pell Grant recipient status and institutional control, 2.3\% of Pell Grant recipients at 2-year public colleges had excessive debt (compared with $1.4 \%$ among non-recipients), $9.1 \%$ of Pell Grant recipients at 2 -year private not-for-profit colleges had excessive debt (compared with $8.7 \%$ among non-recipients) and $11.6 \%$ of Pell Grant recipients at 2-year private for-profit colleges had excessive debt (compared with $14.4 \%$ among nonrecipients). Again, it appears that at public and not-for-profit colleges the Pell Grant recipients are more likely to have excessive debt than non-recipients.

[^3]
[^0]:    ${ }^{1}$ Added correlations of total debt, institution level, institution control and student major with excessive debt.
    ${ }^{2}$ It is also a truism that students who borrow excessive debt must necessarily borrow, so the strong correlation is more a demonstration of an effect than a cause.

[^1]:    ${ }^{3}$ A weighting problem in the 2003-04 NPSAS may have caused federal loan statistics to have been overstated in the 2003-04 NPSAS. The 2003-04 data in this report will be revisited when the problem is corrected in a few months.
    ${ }^{4}$ The same threshold was used for both the 2003-04 and 2007-08 NPSAS data. It was not adjusted for inflation.
    ${ }^{5}$ The 2007-08 data in this report will be revisited when the COLLGRAD variable becomes available in a few months. The PRIMLANG, GPA and PAREDUC variables were also missing from the 2007-08 dataset.

[^2]:    ${ }_{7}^{6}$ 2007-08 NPSAS data does not yet include the MAJORS variable.
    ${ }^{7}$ The trail-off in the percentages borrowing at the highest cost colleges may have to do with a combination of more generous financial aid packages at the most elite colleges and a small sample size yielding greater potential error.

[^3]:    ${ }^{8}$ One could argue for a $\$ 20,000$ threshold for students at 2 -year colleges by dividing the $\$ 40,000$ threshold for students at 4 -year colleges in half. However, it seems reasonable to base the threshold on the average starting salary for students attaining a degree. Given that the average salary for $25-34$ year-olds with an associate's degree is $75 \%$ of the average starting salary for 25-34 year-olds with a bachelor's degree, it seems reasonable to use a $\$ 30,000$ threshold instead of a $\$ 20,000$ threshold.

