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Financial Literacy: What Are Business Schools Teaching?

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ABSTRACT

The financial illiteracy of Americans has attracted the attention and funds of more than 10 federal agencies and countless other state agencies and non-profit organizations. The manifestations of poor financial skills and planning are divorce, depression, and many elderly Americans living in poverty.

Hundreds of business and non-business college students have been surveyed. Both groups were found to be financially illiterate. We examined the curricula of 100 AACSB institutions and concluded that business schools are either not offering fundamental courses in personal financial planning or that the courses are not generally available to business students (for credit) or non-business students.

It is ironic that college students are graduating with the required 60 credits in the liberal arts, but are not required to pass a course in personal finance. We feel strongly that it is time for business faculty, specifically finance faculty, to argue that being financially literate is as important as being literate in English and the sciences.

INTRODUCTION

The term financial literacy is used by many (ASEC, 2001; Chen & Volpe, 1998; ISFS, 2000; Jump\$tart, 2001; Mastio, 1999; Opiello, 1999; NEFE, 1998; U.S. Senate Committee on Banking, 2002). We define this term as having a working knowledge in the following four areas - investment management, retirement planning, general money management, and credit management. A foundation in investment management and retirement planning includes knowledge of portfolio diversification, asset allocation, risk, and the importance of time horizons. A foundation in general money management includes the understanding of budgets, reconciliations, insurance and costs of credit.

In his inaugural address, President Bush proclaimed that "financial literacy is an essential tool to make... the hope of ownership, independence and access to wealth...a reality". On February 5 and 6, 2002 the U.S. Senate Committee on Banking, Housing, and Urban Affairs held hearings on the "State of Financial Literacy and Education in America". In his opening remarks, Senator Sarbanes declared, "there is substantial evidence that Americans do not have an adequate basis for making sound decisions about their personal and household finances" (Sarbanes, 2002). Secretary of the Treasury, Paul O'Neil, described the seriousness of this problem when he stated, "there is a tragic human and personal cost that our society pays for the lack of financial knowledge" (O'Neil, 2002).

The manifestations of financial illiteracy are apparent from studying several social phenomena. Personal bankruptcy is at its highest level ever. Statistics released by the Federal Deposit Insurance Corporation (1998) showed that over 1.4 million individuals, or one in every 68 households declared personal bankruptcy in 1997. Figures show that personal bankruptcies have grown by more than 69% between 1990 and 2000 and continue to rise (Bishop, 1998). For the most recent quarter ending March 2002, personal bankruptcy filings hit a new high of more than 1.5 million (ABI, 2002). Financial

problems are one of the primary reasons for divorce and why the number of elderly living in poverty has never been higher (Mason, 2000). In a recent Lou Harris study, over fifty percent of Americans admitted living paycheck to paycheck and *not* saving enough for retirement (Molinari, 2002).

Many surveys have tested the financial literacy of adults. All have shown that the majority of adults are not financially literate (CFA/AMEX, 1991; EBRI, 1995; KPMG, 1995; Mastio, 1999; Money Magazine/Vanguard, 1996; Opiello, 1999; PSRA, 1996, 1997; Simon, 1998).

There have also been studies done of younger populations. Several surveys have concluded that high school students also show a lack of financial literacy (ASEC, 2001; Jump\$Start, 1997; NEFE, 1998;). Alarming, findings of research done on college students indicate that they are also financially illiterate (Bianco & Bosco, 2001; Chen & Volpe, 1998; Danes & Hira, 1987; Volpe et al., 1996).

The purpose of this paper is to further evaluate the state of the financial literacy of college students. We will examine three areas. First, we will survey assessments that have been conducted on the financial (il)literacy of college and high school students and adults. Second, we will analyze the influence of factors that have been found to impact financial literacy. Finally, we will evaluate the finance course offerings of colleges.

LITERATURE REVIEW

Financial literacy efforts have, to date, primarily targeted high school students and adults (Crawford; 2002; ISFS, 2000; NEFE, 1998; Office of the Comptroller of the Currency, 2002; O'Neil, 2002; Pitt, 2002). There are at least ten federal government departments and agencies, (Treasury Department, Office of the Comptroller of the Currency, Securities and Exchange Commission, etc.) many states, (Wisconsin, California, Louisiana, Pennsylvania, etc.) and many financial services firms (NASDAQ, Merrill Lynch, etc.) that offer information and/or instruction in personal finance, (Jum\$Start, 2002; O'Neil, 2002). President Bush recently allocated \$385 million dollars for financially literacy programs in 27 public high schools and communities (Molinari, 2002). College students, however, have been largely overlooked. Only a few universities are actively involved in developing the financial literacy of their students. In a partnership with Freddie Mac, five colleges have developed programs for their own students. Those schools are Howard University, Benedict College, Clark Atlanta University, Florida A&M University and St. Augustine's College (Swygert, 2002).

A study funded by Fannie Mae (IFSF, 2000) examined ninety programs that targeted instruction in financial literacy in community colleges, faith-based organizations, the workplace, and community programs. They did not evaluate the financial literacy of the participants but did find that many groups were not exposed to the type of instruction that would allow them to make well-informed personal financial decisions.

Most of the earlier studies to evaluate financial literacy have focused on high school students and/or adults. Studies of high school students find that they do not understand basic financial concepts (ACEC, 2001; Bakken, 1967; CFA/AMEX, 1991; HSR, 1993; Jump\$Start, 2001, 2002; Langrehr, 1979; Mandell, 2000; Miller, 1998; NAEP, 1979; NCEE, 1999). The Jump\$Start Coalition for Personal Financial Literacy has measured the financial literacy of 12th graders in the years, 1997, 2000, and 2002. The average score for participants in the 2002 survey is 50.2 (out of 100). The average scores in the 2000 and 1997 surveys were 51.9% and 57.3%, respectively. Over four thousand high school seniors completed the 2002 survey that covered money management, budgeting and spending, and investment and savings. Of concern is that almost two-thirds of those surveyed felt "very sure" about their ability to manage their own finances.

The average score on the ACEC survey of 801 high school seniors was 36.6%. This survey focused on the costs of credit, taxes, and sources of income. In another survey, the National Council on Economic Education tested high school students *and* their parents on basic economic/financial principles. The high school students scored 48%, while their parents scored 57% (NCEE, 1999; Peterson, 2000; Rodgers, 2000). The National Endowment for Financial Education states 70% of high school graduates are "illiterate consumers" (Miller, 1998).

Numerous studies have found adults to be financially illiterate. Even active investors are not necessarily financially literate. A Money Magazine/Vanguard Mutual Fund Literacy (1997) test administered every two years to fund investors revealed that less than 20% of the 1,555 investors polled scored 70% or better and the average score was just 49%. Denise Voigt Crawford, Texas Securities commissioner, after reviewing the results of the poll, concluded, "They show investors are ill-equipped to make the most fundamental decisions about investing...if we see a significant downturn, our office, along with every other state securities office in the U.S. will be flooded with calls." (Simon, 1998).

Several other groups have conducted surveys of active investors: NCEE (1999), PSRA (1997), the National Association of Securities Dealers (1997), the Investment Protection Trust (1996), and the Securities and Exchange Commission (1999). They have all reached similar conclusions - Americans have poor knowledge about investing and personal finance. Specific areas of ignorance include the benefits of diversification, asset allocation, market volatility, time horizons, and compounding (Mastio, 1999; Opiela, 1999).

The inability to properly manage credit and debt has become a downfall for many Americans. Credit card debt has risen from \$200 billion dollars in 1990 to over \$600 billion in 2000 (Brobeck, 2002). This rise in consumer credit card debt is the primary reason for the increase in personal bankruptcies (Bishop, 1998; Brobeck, 1998). At an average interest rate of 15%, this translates to \$90 billion dollars in interest being paid to credit card companies each year. More than one-half of Americans owe money on their credit card(s) and carry a balance each month (ASEC, 2001). This means that they are spending more money than they earn...living beyond their means.

Retirement and savings planning are also weaknesses in the money management area for most Americans, (ASEC, 2001; EBRI, 1995; ICFP, 1993; KPMG, 1995). A recent survey conducted ASEC in 2001 found that only one-third of non-retired Americans felt they would be financially prepared for retirement. The EBRI study identified several reasons why many Americans do not save enough for their retirement. Seven out of ten Americans do not know how much they need for retirement. The other barriers to adequate savings are related to people living either beyond their means or spending all of their income (ASEC, 2001).

Only a few studies have focused on the college student population. College students represent a considerable population and their level of financial literacy will soon impact the overall economy. In 2001 the U.S. Census Bureau estimated that more than 15.5 million students were enrolled in U.S. higher-education institutions. We would expect that as part of the preparation for a career (and higher earnings), colleges and universities would enlighten students with regard to personal financial planning.

Studies have shown that college students are not being prepared to make basic financial decisions (Bianco and Bosco, 2001; CFA/AMEX, 1991; Chen and Volpe, 1998; Danes and Hira, 1987; HSR, 1993; Volpe, Chen and Pavlicko, 1996). Danes and Hira (1987) surveyed 323 college students on their knowledge of debt management (credit cards and personal loans), insurance, money management, financial management, and record keeping. They concluded that college students are not literate in personal finance. They also found that males were stronger in the areas of insurance and personal loans

but that females were more knowledgeable about financial management. Volpe, Chen, and Pavlicko (1996) surveyed 454 students utilizing an instrument developed and used by Money Magazine to test the investment literacy of active investors. The average score for these students was 44%. Another study conducted in 1996 by Chen and Volpe (1998) surveyed 924 students at 14 college campuses. This comprehensive survey asked questions on general financial knowledge, savings and borrowing, insurance and investments. They concluded that college students do not have adequate knowledge of personal finance. Furthermore, they found that males outperformed females, upperclassmen scored higher than the younger freshman and sophomores, and business majors were more knowledgeable than non-business majors.

Only one study has *recently* examined the financial literacy of college students. Bianco and Bosco (2001) surveyed 574 students at an undergraduate university in New England in December, 1999 and January, 2000. The participants in this study demonstrated a poor understanding of personal finance with an average score of 47%. These results were consistent with past studies of adults and students (CFA/AMEX, 1991; Chen and Volpe, 1998; Danes and Hira, 1987; HSR, 1993; Volpe et. al., 1996).

One reason that the need for financial education is important is because of the amount of debt most college students incur while they are in school. Sixty percent of college students have school loans (Miller, 1998). In fact, total debt at graduation, including school loans, automobile loans, and credit cards, is often much greater than the students' starting salaries (Mason, 2000). The average total debt held by college students increased from \$8,200 to \$18,800 in the past six years (Miller, 1998). Of this debt, approximately \$2,226 is credit card debt (Miller, 1998).

DATA AND FINDINGS

The AACSB - The International Association For Management Education, is an organization that grants accreditation to institutions for bachelors, masters and doctoral degree programs in business administration and accounting. As of 2010, 469 United States institutions had earned accreditation by this agency, of which about 400 were accredited for undergraduate programs in business administration and management (AACSB, 2010). We examined the curricula of one hundred of the accredited institutions that have undergraduate business programs.

To evaluate the finance curriculum of US four-year business schools, as it relates to financial literacy, we reviewed the course descriptions listed on the web site of the institution or in the printed college catalog. Specifically, we examined the course descriptions of the finance courses required to receive an undergraduate degree in business administration or management and also reviewed the finance course listings for courses that contained instruction on personal finance.

Table 1: Number of Required Finance Courses

Number of Required Finance Courses	Number of Institutions AACSB	Percentage of Institutions AACSB
1	92	92%
2	8	8%
Total	100	100%

One of the schools requiring two finance courses has a two-course required sequence. The other institutions that require two courses allow the students to select a finance elective. The course descriptions for the one required finance course are somewhat consistent (see Table 2). A few schools

offer segments on dividend policy, international finance, and business ethics. Although we did not specifically look at course requirements in areas other than finance, it was noted that many schools do have management courses that cover international management and business ethics. Dividend policy, however, would normally be taught in a finance course.

Table 2: Course Content of Required Finance Course

Content	Percentage of Institutions AACSB
Investment Decisions**	96%
Valuation/Time Value of Money	96%
Financing Decisions	98%
Dividends	28%
Capital Budgeting / Working Capital Management**	92%
International	30%
Ethics	18%

We looked at the accounting courses required by institutions. We found that 98% out of our sample of 100 require two accounting courses. Introductory accounting courses generally cover reconciliations and budgeting.

The last curriculum area we examined was the course offerings in the finance area. We found that just over one-half of the schools offer a course in personal finance. However, of those schools almost one-fifth limit the course to non-business majors. That is, only 44% of the schools offer any type of personal finance course to business majors and only 10% of *those* institutions offer a personal finance course to non-business majors (see Table 3). Of the institutions that require a second finance course, (see Table 1) only one offers a personal finance course for business majors.

Table 3: Personal Finance Course Offerings

	Percentage Of Schools AACSB
Course Available (for credit) to Business Majors	44%
Course Open To Non-Business Majors Only	10%
Institutions Offering Personal Finance Course	54%

The results of this survey are not unexpected. Business students are 'exposed' to the principles of finance in one course. They are introduced to the fundamentals of investment and financing decisions of the corporation, the time value of money, basic budgeting and valuation techniques. In the two-course accounting sequence they are shown the (bank) reconciliation process, budgeting, and the importance of (accounting) record keeping. However, these courses are taught only from the perspective of the (*corporation*) *business* entity. Only 44% of the schools offer a personal finance course for business majors and 10% for non-business majors. Furthermore, the curriculum for most business programs leaves little room for taking a finance course as an elective, for credit, if the student is not a finance major.

If we evaluate the content of these courses in the context of financial literacy, it is clear that business programs do not prepare most students to make informed personal financial decisions. Not only do the required courses include inadequate information with regard to individual financial management, but also less than half of the institutions even offer a personal finance course for business majors. Furthermore, non-business majors, at most institutions, are not only financially illiterate (Bianco and Bosco, 2001), but 90% are denied the opportunity to take a personal finance course.

IMPLICATIONS

The manifestations of the costs of financial illiteracy are evident from studying several social phenomena. Personal bankruptcy is at the highest level ever. Financial problems are one of the primary reasons for divorce and why the number of elderly living in poverty has never been higher (Mason, 2000). Recent statistics show that personal bankruptcies are in a growth pattern (ABI, 2002).

According to Gary McClung (1999), baby boomers are saving only slightly more than one-third of the funds they will need to retire. Dozens of others surveys have concluded that the average worker is not saving and investing enough for a comfortable retirement (Mastio, 1999). "Confusion and ignorance about personal finance issues" is seen as a reason why Americans fail to save enough for retirement (CPA, 2000).

Human Resource managers are reporting that financial difficulties are seriously impacting not only employee satisfaction, but also productivity and retention.(CHRG, 1995; McClung, 1998) "Financial illiteracy of workers" was seen as the most critical issue in the workplace by a 1998 survey of corporate human resources managers (McClung, 1998). Furthermore, when human resource managers were asked to list factors that affected employee performance, employees' personal financial difficulties was among them (McClung, 2000). Employees also desire that employers assist them with making financial decisions for retirement.

The results of this study indicate that employers will still need to provide financial education for employees in order to assist them in managing the more sophisticated financial benefit options available today. It does appear that business education provides some assistance to those students by improving their level of knowledge in general money management, retirement planning, and investment management (Bianco and Bosco, 2001). Business educators should continue to provide information to their students in these areas, but should also improve coverage of credit management – the area of financial literacy where business education has seemed to have little or no impact.

One of the reasons for this concern about financial literacy is the shift from defined benefit plans (retirement plans which have a stated benefit at retirement) to a defined contribution plan. This change has resulted in employees bearing responsibility for retirement planning that was once the responsibility of employers. As of December 2000, 42 million Americans had \$1.8 trillion invested in 401(k) plans (Crawford, 2002). Based on the results of surveys of adult financial literacy cited earlier, most employees seem to lack the necessary skills to make investment decisions that are critical to their financial futures. McClung (1998) recommends that organizations offer an employee education program that would cover such topics as employer business economics, retirement planning, personal financial planning, and personal investing. McClung (1998) recognizes that education programs sponsored by outside parties often are using the education program as a way to market their services or products to employees.

Employers hire financial educators most often when a new plan has been offered to employees and few are signing up. There are basically two types of financial educators- representatives of companies who are selling their own products or representatives from industries who are selling the services of insurance, banks, and other financial institutions.

Since college graduates are more educated and expect higher earnings (than high school graduates) we might expect them to be financially literate or at least more literate. We would expect that as part of the preparation for a career (and higher earnings) colleges and universities would enlighten students with regard to personal financial planning. The results of research on college students suggest that colleges and universities should embark on a mission to include financial literacy as an objective for all their graduates.

They could include a for-credit course on personal financial planning for students of all academic disciplines. Knowledge in areas such as history, science, math, and English are required for all students to earn a college degree. It seems clear that all students would benefit by having a foundation in personal finance as well.

FUTURE CONCERNS

The privatization of social security is a priority for the current presidential administration. Proponents and opponents readily admit that many individuals would not have the skills necessary to make investment decisions for retirement (Heiger and Shipman, 1998). The results of this study support that argument. Advocates suggest the licensing and regulating of investment management firms to aid individuals with investment decisions. The investments would be constrained by guidelines developed by a Board of Trustees. Evaluation of the proposed changes in the social security plan should include a realistic analysis of workers' abilities to improve their retirement incomes through personal investment decisions.

REFERENCES

- AACSB, Business School Data Trends and 2010 List of Accredited Schools, AACSB International, <http://www.aacsb.edu/publications/businesseducation/2010-Data-Trends.pdf>
- American Bankruptcy Institute (ABI). (May 2002) "Bankruptcy Filings Hit Record High - Again," Alexandria, Virginia.
- American Savings Education Council (ASEC). (Washington, DC., 2001) "Financial Understanding and Money Management Among Parents,".
- American Savings Education Council (ASEC). (Washington, DC.,1999) "Youth and Money 1999,".
- Americans For Consumer Education and Competition (ACEC). (Washington, DC., 2001) "Nation's High School Seniors Fail at Finance Fundamentals,".
- Bakken, R. (1996) "Money Management Understandings of Tenth Grade Students", National Business Education Quarterly, 36.
- Bianco, C. and S. Bosco, (October, 2001) "Financial Illiteracy of College Students," Presentation at the Financial Management Association Conference, Toronto, Canada.
- Bishop, P. (1998) "A Time Series Model of the U.S. Personal Bankruptcy Rate," *Bank Trends: Analysis of Emerging Risks in Banking*, WP98-01.
- Bj alaszewski, D., T. Pencek and J. Zietlow, J. (Fall, 1993) "Finance Requirements and Computer Utilization at AACSB Accredited Schools," *Finance Practice and Education*, 133-139.
- Brobeck, S. (July, 1998) "Recent Trends in Bank Credit Card Marketing and Indebtedness," Press Release American Bankruptcy Institute.
- Brobeck, S. (February, 2002) US Senate Committee on Banking, Housing, and Urban Affairs Hearing.
- Cambridge Human Resources Group, Inc. (CHRG). (Chicago, IL., 1995) "Latest Workplace Issues Survey,".
- Chen, H., and R. Volpe (1998) "An Analysis of Personal Financial Literacy Among College Students," *Financial Services Review*, 7:2, 107-128.
- Consumer Federation of America and American express Company (CFA/AMEX). (Washington, DC., 1991) *Student Consumer Knowledge; Results of a National Test*.
- Consumer Federation of America and NationsBank, (Washington, D.C., 1997) "Planning For the Future: Are Americans Prepared to Meet Their Financial Goals? A Summary of Key Findings,".
- Crawford, (Washington, DC., February 2002) D. US Senate Committee on Banking, Housing, and Urban Affairs Hearing.
- Danes, S. and T. Hira (Winter,1987) "Money Management Knowledge of College Students," *The Journal of Student Financial Aid*, 17:1, 4-16.

Employee Benefit Research Institute (EBRI). (Washington, DC., December, 1995) "Are Workers Kidding Themselves," Results of the 1995 Retirement Confidence Survey.

Federal Reserve Board (Washington, DC., January 2000) "1998 Survey of Consumer Finances," (SCF).

Field, J. and L. Casper (Washington, DC., June, 2001) "American Families and Living Arrangements: March 2001," Current Population Reports, US Census Bureau.

Genasci, L. (September 18, 1995) "Women and Retirement: An Unpleasant Surprise: You're Retired and Broke, " *The Vindicator*, B5.

Harris/Scholastic Research (HSR), *Liberty Financial Young Investor Survey*, New York, NY, 1993.

Hieger, M. and W. Shipman (Spring, 1998) "Common Objections to a Market-based Social Security System: A Response," *Journal of Investing*, 7:1, 77-108.

Institute for Socio-Financial Studies (ISFS), 2000, (Middleburg, VA., 2000) "Personal Finance and the Rush to Competence: Financial Literacy Education in the U.S.,".

Institute of Certified Financial Planners (ICFP), (Denver, Co., 1993) "Planners Say Financial Illiteracy Plagues American: Inability to Plan and Poor Understanding of Investments Cited,".

Jump\$tart Coalition, (Washington, DC., 2002) "From Bad to Worse: Financial Literacy Drops Further Among 12th Graders,".

Jump\$tart Coalition, (Washington, DC., 2000) "Personal Financial Survey 2000".

KPMG Peat Marwick LLP (KPMG), (New York, June, 1995) "Retirement Benefits in the 1990s: 1995 Survey Data,".

Langrehr, F. (1979) "Consumer Education: Does it Change Students' Competencies and Attitudes?" *The Journal of Consumer Affairs*, 13 4-10.

Lewin, T. (April 20, 1995) "Income Gap For Sexes Is Seen Wider in retirement," *The New York Times*, A19.

Mandell, L. (January, 2000) "American Youths are Ignorant about Debt," *Credit Union Magazine*, 66:2, 4A-5A.

Martinez, M. (November, 1994) "Why Women Should Save and Plan More," *HRMagazine*, 104-105.

Mason, J. (February, 2000) "Educating Consumers, " *Advisor Today*, 25, 125.

Mastio, D. (July, 1995) "Lessons Our 401(k) Taught Us," *Policy Review*, 95, 37-45.

McClung, G. and L. Wass (November, 1998) "Financial Education and Retirement Planning," *Employee Benefit Plan Review*, 12-14.

Miller, R. (January, 1998) "Youth Education's Long-term Yield," *Credit Union Magazine*, 64:1, 15A-16A.

Molinari, S. (Washington DC., February, 2002) US Senate Committee on Banking, Housing, and Urban Affairs Hearing.

National Council on Economic Education (NCEE). (New York, NY., April, 1999) "The Standards on Economics Survey,".

National Endowment for Financial Education (NEFE). (Denver, CO., 1996) "1993-1996 CFP Survey of Trends in Financial Planning,".

O'Neil, B. (Washington, DC., 1993) "Assessing America's Financial IQ: Reality, Consequences, and Potential Change," Personal Economic Summit 1993.

O'Neill, P. (Washington, DC., February, 2002) US Senate Committee on Banking, Housing, and Urban Affairs Hearing.

Opiela, N. (June, 1999) "401(k) Education: Planners responding to Plan Participants' Calls for Help," *Journal of Financial Planning*, 12. 58-73.

Peterson, A. (August, 2000) "Educating Youth," *Credit Union Magazine*, 66:8, 78-85.

Research Associates for the Investor Protection Trust, (Princeton, NJ., 1996) "Investor Knowledge Survey: A Report on the Findings: Investor Knowledge,".

Rodgers, S. (August, 2000) "Kids are flunking finance," *Credit Union Magazine*, 66:8, 8.

Sarbanes, P. (Washington DC., February 2002) US Senate Committee on Banking, Housing, and Urban Affairs Hearing.

Securities and Exchange Commission (SEC), (Washington, DC., 1999) "The Facts on Saving and Investing".

Simon, R. (March, 1998) "Fund Watch We Put Investors to the Test- and, Boy, Did They Ever Flunk," *Money Magazine*, 37-39.

Speer, T. (March, 1998) "College Come-ons," *American Demographics*, 20:23, 40-45.

Swygert, H. (Washington DC., February 2002) US Senate Committee on Banking, Housing, and Urban Affairs Hearing.

Vanguard Group/Money Magazine, (New York, NY., January, 1997) "Financial Literacy of mutual fund investors,".

Volpe, R., H. Chen and J. Pavlicko, (Fall/Winter, 1996) "Personal Investment Literacy Among College Students," *Financial Practice and Education*, 86-94.