# Investigating Financial Literacy among Emiratis

Ashraf Khalil, Salam Abdallah, Khalil Al-hilo, and Ebere Iroadu

Abstract—Financial literacy is one of the key factors needed in making informed financial decisions. As businesses continue to be more profit driven, more financial and economic intrigues arise that continue to put individuals at the risk of spending more and more without considering the short term and long term effects. We conducted a study to assess financial literacy and financial decision making among Emiratis. Our results show that financial literacy is lacking among Emiratis. Also, almost half of respondents owe loans to other peoples and 1/5 of them have bank loans. We expect that the outcome of this research will be useful for designing educational programs and policies to promote financial planning and security among Emiratis. We also posit that deeper and more informed understanding of this problem is a precursor for developing effective financial education programs with the aim of improving financial decision-making among Emiratis.

Keywords—Financial literacy, loans, financial planning, Emiratis.

#### I. INTRODUCTION

INCREASINGLY sophisticated financial products and terminologies are making financial literacy a key skill for all living in modern nations. Financial literacy involves basic knowledge of the role of interest and inflation in the value of savings over time, stock market participation and risk diversification, healthy borrowing behavior and proper use of credit facilities. Studies conducted in the USA demonstrate widespread financial illiteracy across the population, especially among women, minorities, and less educated spenders [1].

This research aims to investigate financial decision making and financial literacy among Emiratis. At an individual level, poor financial literacy can lead to huge loans from banks which in turn can put the individual under stress, pressure and affect her or his job performance, leading to many conflicts within the family. As a collective problem, this can lead to national vulnerability when the banks are burdened by significant amounts of loans and risks which often end up requiring government intervention to protect their financial institutions and the population alike. It then becomes pertinent to investigate factors that could impinge upon people's financial freedom and suggest possible ways of avoiding financial pitfalls. Our study investigates increasing financial mismanagement occasioned by lack of financial literacy among Emiratis. Many Emiratis are trapped with bogus loans and credit cards that can

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cripple any further financial growth. The minimal interest rates for loans encourage more borrowing and more spending. The notoriety of loan defaulting has reached the alarming rate which may have resulted in the recent calls to banks to put a ceiling on the amount borrowable by Emiratis in order to avert a national financial crisis that may be inevitable if banks keep looking up to the central bank to shore up their capital base all the time. This scenario calls for urgent study to garner statistical and scientific data that could be useful for effective fiscal planning both at the individual and the national level. Thus our research is timely in that it aims to provide such data.

#### II. LITERATURE REVIEW

The recent global financial crisis has alerted governments and institutions around the world to understand financial literacy, in terms of its measurement and its impact on the individual's welfare and the economic growth of society in general [2] [3]. The crisis was also followed up by extensive research on financial literacy aiming at guiding policy makers on what the national strategy should be towards protecting consumers and determining what areas of literacy to incorporate in educational programs.

As previously mentioned, this research is motivated by the importance for individuals to manage their money effectively. Financial literacy has different definitions, but they all evolve around the person's competency for managing money [4]. Remund provides a working definition, which states succinctly, "Financial literacy is a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-time decision-making and sound long range financial planning, while mindful of the life event and economic conditions" [4]. The extant literature on financial literacy may be summarized into five categories [4], namely:

- 1) Knowledge of financial concepts
- 2) Ability to communicate about financial concepts
- 3) Aptitude in managing personal finances
- 4) Skill in making appropriate financial decisions
- 5) Confidence in planning effectively for future financial needs.

Financial literacy is initially measured at the individual level and group level, e.g. school students or low income adults, which would in total provide us with a macro view on the society's behavior. However, we find that most of the research studies focus on the young, since they usually score low on financial literacy surveys, having had minimal actual experience in making significant financial decisions.

For the purpose of this research, financial literacy relates to the ability and the confidence to manage personal finance, which may include matters related to budgeting, saving, bor-

rowing and investing.

Some studies have revealed that there is a correlation between financial literacy and proper financial management [1]. The more literate an individual is about financial management, the more likely that individual will make informed financial decisions. Financial literacy programs are needed to teach people how "to read and write financially" just as literacy programs are needed to teach people how to read and write in any language. Research has also revealed that youth moving to adulthood do poor financial management [5]. Regardless of the age group, lack of knowledge about money and its accumulation through appropriate investment, people may end up in debts and end with poor retirement plans [6, 7, 8].

Lusardi and Alesina examined the role of regulating bodies in stemming financial illiteracy [9]. Arguing that tax payers bear the brunt of individual and collective financial mistakes, they called on responsible regulating agency to take financial education more seriously. Giving an example with the mandatory requirement of training and obtaining a driver's license before one can drive, they suggested a basic compulsory financial literacy program for all. They equate the risk of financial failure with the risk of road accidents and suggest that with basic training such risk could be avoided or at the least be minimized. Acknowledging the impact of different programs on financial literacy, they no doubt suggest that more could be done. For example, in the same way, there are recipes suggesting how to live healthfully by eating a balanced diet, experts in the field of finance could provide professional opinion on a website for people who want to save and invest. This service will minimize the recourse to speculation and unprofessional advice by investors.

What are the implications of the literature above for creating financial literacy programs in the UAE? There already exist clamors for such programs. An article published in Khaleej Times Online in 2010 titled 'Financial Literacy Education Sought in UAE Schools: Poll" [10] revealed that 95 per cent of education professionals want basic money skills and money management taught to students. Seventy three per cent of the teachers polled admitted that schools are currently not teaching basic financial courses in their curriculum. Asked if financial understanding was important for young people to be learned, 92 per cent responded positively, who also believe that this should be made compulsory in schools and educational institutions." The Corporate Communications Manager of Visa, the electronic service provider that conducted the research admitted that the most important financial tool at the present is not "a product but knowledge".

Another article published by Gulf News titled "Financial Literacy can save you money" [21] contains the startling revelation that financial illiteracy abounds in the UAE, according to a 2009 report by HSBC Insurance. More than half of UAE residents as cited as having had no general financial education, while roughly only a third have ever accessed any form of professional financial advice. The article attributed many financial crises that residents encounter to this type of general ignorance, whether they involve banks, property developers or other service providers. The primary reason for financial

troubles is thus lack of education, as "without adequate knowledge, consumers are gullible to numerous predatory lending and investment schemes."

Offering financial literacy education through university curriculum is one way of overcoming this deficiency [11]. In addition to education through family, this was found to have explicit and implicit influence on young adults [12, 13]. The young adults are influenced by how financial matters are being handled within their families, but formal learning may provide a more solid and well-rounded understanding of financial concepts, strategies and risks.

The literature above underscores the need for an in-depth study on the worrisome issue of financial illiteracy within the UAE populace and particularly among Emiratis in order to forestall any major financial crisis within the society. The data we gathered sheds light on the level of financial literacy and financial decision making with the goal to educate people more on how best to manage their finances and make important financial decisions.

### III. METHODOLOGY

## A. Research Question and Hypotheses

This study tries to answer the following questions:

- 1-Do age, gender, education and income levels affect financial literacy and to what extent?
- 2- What is the percentage of Emiratis that took loans from banks or individuals?

### B. Questionnaire Design

This study used a comprehensive questionnaire designed to cover major aspects of personal finance. The questionnaire consisted of twenty-nine questions of which five targeted demographic information (age, gender, nationality, marital status and education level) and seven targeted socio-economic status (monthly income, source of income, property ownership). Also, we used five exam-type questions to assess financial literacy level. The remaining twelve questions explored respondents' financial decision-making, covering savings, borrowing and investments. Two versions of the questionnaire were prepared, Arabic and English, to better reach respondents using a language in which they are proficient.

# C. Sampling and Data Collection

We aimed to study UAE nationals who are employed and therefore have a steady income. Thus, we distributed the survey primarily in governmental organizations as most Emiratis work in the government rather than the private sector. Since these organizations employ both nationals and expatriates, some expatriates completed the questionnaires, and their responses were considered in our statistics, but our primary focus in this case was only on UAE nationals. Ultimately, we were able to collect a total of 191 valid responses.

#### IV. DATA ANALYSIS AND RESULTS

# A. Profile of the Study's Respondents

TABLE I

RESPONDENTS' CHARACTERISTICS		
Characters	Percentage	
Nationality		
Emirati	80%	
Arab (non-Emirati)	10%	
Asian	4%	
Western	6%	
Others	1%	
Marital status		
Single	32%	
Married	60%	
Divorced	4%	
Widowed	1%	
Gender		
Male	42%	
Female	57%	
Age		
18-23 years	9%	
24-29 years	26%	
30-35 years	35%	
36-41 years	12%	
42 and over	18%	
Income		
Less than 5000 AED	4%	
5000 to 10,000 AED	5%	
10,001 to 15,000 AED	5%	
15,001 to 20,000 AED	28%	
20,001 to 25,000 AED	49%	
Above 25,000 AED	4%	
No answer	1%	
Income Source		
Government employment (or semi-government)	88%	
Private sector employment	5%	
Own business	2%	
No income, supported by family	2%	
Education		
Less than secondary education	5%	
Secondary education or equivalent	15%	
Diploma after secondary education	12%	
College degree (Dip, BSc)	41%	
Post graduate diploma	8%	
Post graduate degree (MSc, PhD)	17%	

The questionnaire asked each respondent to provide some demographic information which included nationality, marital status, gender, age, income, income source and education. Table I provides descriptive statistics for the respondents' characteristics. About 80% of the respondents were Emiratis, 10% were Arabs, and the remaining 10% were Asian, Western and other nationalities. Sixty percent of respondents were married, 5% had been married in the past, and 32% remained single. With respect to gender, 42% were males whereas 57% were females. Roughly 35% of respondents were 30-35 years, 26% were 24-29 years, 12% were 36-42 years and 9% were 18-23%. Regarding respondents' monthly income, almost half range from 20,001 to 25,000 AED and 28% range from 15,001 to 20,000 AED. In terms of income source, 88% of respondents receive their income from government organizations. Finally, 41% of respondents are college graduates with bachelor degrees or diplomas and 17 % have post graduate degrees.

B. Financial Literacy Level		
TABLE II		
FINANCIAL LITERACY EVALUATION QUESTIONS		
Financial Literacy Evaluation Questions		
What is a Credit Card?		
<ul> <li>A card used to deduct money from my bank account</li> </ul>		
when I purchase items.		
<ul> <li>A card used to borrow money from the bank when I pur-</li> </ul>		
chase items.		
I do not know.		
What is a Debit Card?		
<ul> <li>A card used to deduct money from my bank account</li> </ul>		
when I purchase items.		
A card used to borrow money from the bank when I pur-		
chase items.		
I do not know.  TY		
Let's assume that you saw TV sets of the same model on sale in two		
different shops. The initial retail price was 1,000 Dirhams. One shop offered a discount of 100 Dirham, while the other one offered		
a 15% discount. Which one is a better bargain?		
A discount of 100 Dirham		
A discount     A 15 % discount		
• The same		
Not sure		
Imagine that you deposited the money in a bank account at 8%		
interest rate, while the annual inflation rate was 10%. Do you think		
the money from your account can buy:		
More than a year ago		
The same		
<ul> <li>Less than a year ago</li> </ul>		
Not sure		
Let's assume that in 2014 your income is twice as now, and the		
consumer prices also doubled. Do you think that in 2014 you will		
be able to buy:		
More than today		
Exactly the same		
Less than today		
Not sure		

To measure the financial literacy level of respondents, we used 5 known-answer questions requiring basic calculations. The questions were multiple choice and measured basic financial knowledge including ability to perform simple calculations involving interest rate, inflation rate, and discounts. If a respondent was able to answer three or more questions successfully (the 5 questions are presented in Table II), we consi-

dered him/her financially literate while if s/he was able to solve two or less we consider him/her financially illiterate. As presented in Table II, more than 60% of Emirati respondents are by our definition financially illiterate.

We also wanted to see the relationship between financial literacy and gender, age, education level, marital status and nationality. As presented in Fig. 1, there are more financial illiterate females than males. In fact, 59.25% of males were financially illiterate while 65.74% of female respondents were financially illiterate. This result is similar to the result reported by [14] who studied financial literacy among college students in the USA. They found out that gender difference was the main statistically significant factor when it comes to financial literacy. They observed that women are less enthusiastic and are less willing to learn about personal finance topics and have lower confidence in their financial decisions.

TABLE III OVERALL FINANCIAL LITERACY LEVEI

Financial literacy level	No. of Respondents	Percentage
High	70	36.65%
Low	121	63.35%

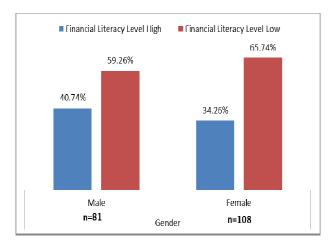


Fig. 1 Financial Literacy and Gender

Furthermore, we wanted to examine the relationship between financial literacy and age (see Fig. 2). We found that more than 75% of young adults between the age of 24 and 29 are financially illiterate. The percentage is also high for adults between the age of 30 and 35 where more than 65% of them are financially illiterate and adults between the age of 36 and 41 where more than 63% of them financially illiterate. The problem is that these three age groups have the highest income amount among the other age groups as presented in Fig. 3. Thus, they should know how to spend it wisely and save part of it.

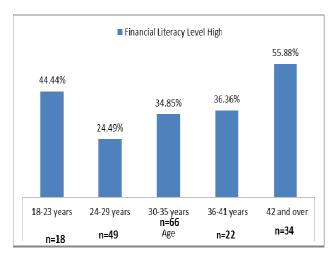


Fig. 2 Financial Literacy and Age

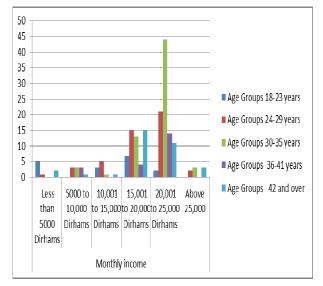


Fig. 3 The distribution of monthly income in AED based on Age

Also, we wanted to see the effect of education level on financial literacy. As presented in Fig. 4 respondents holding postgraduate degrees, or diplomas are more financially literate than other groups. Unexpectedly, more than 70% of respondents with college degrees have low financial literacy.

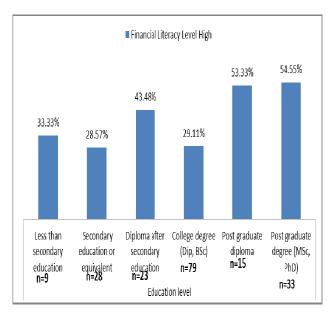


Fig. 4 Financial Literacy and Education Level

Furthermore, we studied the relationship between financial literacy and marital status. In general we found that single and married respondents have low financial literacy (see Fig. 5). Unfortunately, we cannot draw any conclusions regarding divorced and widowed due to the small number of respondents in these categories.

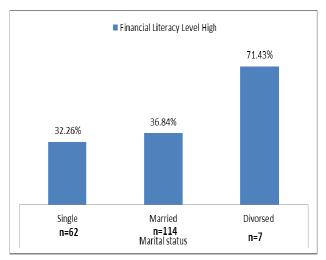


Fig. 5 Financial Literacy and Marital Status

To answer our first research question which is how do Emiratis decide on making a high-value item purchase such as a car and do they involve other family members when they make these decisions?, we asked them: If you decide to buy a car, do you prefer to pay cash or take a loan? The result is presented in Fig. 6 and it shows that the majority of Emiratis prefer to pay cash when they buy expensive items such as cars.

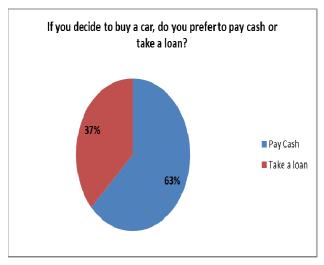


Fig. 6 Preferred Payment Method

We also wanted to know if they take their financial decisions solely or they involve other family members. As presented in Fig. 7, more than half of respondents involve their family members in their decisions while 34% of them take their financial decisions alone and without consulting others.

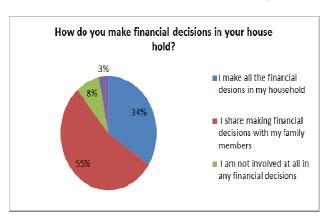


Fig. 7 How do you make financial decisions in your house hold?

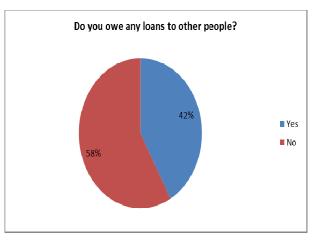


Fig. 8 Do you owe any loans to other people?

Furthermore, we wanted to know the percentage of Emiratis that take loans from banks or individuals. As shown in Fig. 8, more than 40% of respondents owe loans to other people. Whereas, 22% of respondents said they have bank loans (Refer to Fig. 9)

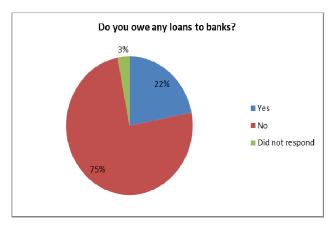


Fig. 9 Do you owe loans to banks?

# V. CONCLUSION

This paper highlighted and explored what Emiratis know and do not know as determined by a set of simple questions that assessed their financial literacy. We found that financial literacy was severely lacking among Emiratis. Thus, it may be important to foster financial knowledge in the population as a whole. Similarly, it may be important to develop programs targeted specifically to women and young adults, since they display much lower financial knowledge. It is likely favorable to provide financial education before individuals involve in financial contracts and before they start making financial decisions

Given the low levels of financial knowledge documented in this work, simplification of financial decisions could be very beneficial to Emiratis as a whole and women and young adults in particular. This simplification can be done in many ways. For instance, the National Bonds program makes saving very simple and attractive for the Emirati citizens as whole. Similar programs can be created to help Emiratis manage their loans.

We conducted a survey to assess financial literacy and financial decision making among Emiratis. Our results show a significant lack of financial literacy among Emiratis. We also found that the majority prefer borrowing money from individuals, rather than borrowing it from banks. The aim of this study is to garner statistical and scientific data that could be useful for effective fiscal planning both at the individual and the national level.

# REFERENCES

- [1] A. Lusardi, "Financial Literacy: An Essential Tool for Informed Consumer Choice?," 2008. [Online]. Available: http://www.jchs.harvard.edu/publications/finance/understanding\_consumer\_credit/papers/ucc08-11\_lusardi.pdf. [Accessed 27 October 2011].
- [2] S. Huston, "Measuring financial literacy," The Journal of Consumer Affairs, vol. 44, no. 2, pp. 296- 316, 2010.

- [3] M. Bruhn, "New Ideas in Business Growth," 2011. [Online]. Available: http://blogs.worldbank.org/allaboutfinance/new-ideas-in-business-growth. J Accessed 27 October 2011.
- [4] D. Remund, "Financial Literacy Explicated: The case for a clear definition of an increasingly complex economy," Journal of Consumer Affairs, vol. 44, no. 2, pp. 276-295, 2010.
- [5] Employee benefit research institute, "Retirement confidence survey," 2008.
- [6] T. Dvorak and H. Hanely, "Financial literacy and the design of retirement plans.," The Journal of socio-Economic, vol. 39, pp. 645-552, 2010
- [7] A. Lusard and O. Mitchell, "Financial literacy and retirement preparedness: Evidence and Implication for financial education.," Business Economies, vol. 42, no. 2, pp. 35-44, 2007.
- [8] S. Braunstein and C. Welch, "Financial Literacy: An overview of practice research and policy," Federal Reserve Bulletin, vol. 88, no. 448, pp. 445-457, 2002.
- [9] A. Alesina and A. Lusardi, "Driving Your Financial Investment? Perhaps a License is Needed," 2006. [Online]. Available: http://www.dartmouth.edu/~vox/0607/0724/lusardi.html. [Accessed 26 October 2011].
- [10] Khalej Times Online, "Financial Literacy Education Sought in UAE Schools: Poll," 2010. [Online]. Available: http://www.khaleejtimes.com/DisplayArticleNew.asp?section=business&xfile=data/business/2010/march/business\_march338.xml. [Accessed 28 October 2011].
- [11] L. Delaune, J. Rakow and K. Rakow, "Teaching financial literacy in a co-curricular services-learning model.," Journal of Accounting Education, vol. 28, pp. 103-113, 2010.
- [12] B. Jorgensen and S. Jyoti, "Financial literacy of young adults: The importance of parental socialization," Family relations, pp. 465-478, 2010.
- [13] T. K. Hira, "Financial attitudes, beliefs and behaviors, Differences by age.," Journal of consume studies and home Economics, vol. 278, pp. 271-290, 1997.
- [14] H. Chen and R. Volpe, "Gender differences in personal financial literacy among college students," Financial Services Review, pp. 289-307, 2002.
- [15] H. Chen and R. P. Vlope, "An analysis of personal financial literacy among college students," Financial Services Review, vol. 7, no. 2, pp. 107-128, 1998.
- [16] A. Kezar and Y. H., "The importance of financial literacy," About Campus, vol. 14, p. 15–21, 2010.
- [17] K. Kate, C. Belinda, B. Vivienne and S. John, "Good practice in the conduct and reporting of survey research.," Int. Journal for Quality in Health Care, vol. 15, no. 3, pp. 261-266, 2003.
- [18] A. Lusardi, O. Mitichell and V. Curto, "Financial literacy among the young," The Journal of Consumer affairs, vol. 44, no. 2, pp. 358-380, 2010
- [19] C. Maceda, "Financial Literacy can save you money," [Online]. Available: http://gulfnews.com/business/your-money/financial-literacy-can-save-you-money-1.623766. [Accessed 27 October 2011].
- [20] Parks-Yancy, R. DiTomaso and N. Post, "The mitigating effects of social and financial capital resources on hardship," Journal of Family and Economic Issues, vol. 28, pp. 935-947, 2007.
  [21] U. T. /. N. E. f. f. education, "Young adults' finances poll," 2006. [On-
- [21] U. T. /. N. E. f. f. education, "Young adults' finances poll," 2006. [Online]. Available: http://www.nefe.org/Portals/0/NEFE\_Files/USATodaySurvey.pdf. [Accessed 27 October 2011].
- [22] A. Brown and K. Gartner, "Early Intervention and Credit Cardholders: Results of Efforts to Provide Online Financial Education to New-to-Credit and At-Risk Consumers," Center for Financial Services Innovation, Chicago, 2007.
- [23] R. Clark and D. Madeleine, "Adjusting Retirement Goals and Saving Behavior: The Role of Financial Education," University of Chicago Press., Chicago, 2008.
- [24] A. a. M. O. a. C. V. Lusardi, "Financial literacy among the young," Journal of Consumer Affairs, vol. 44, no. 2, pp. 358-380, 2010.
- [25] A. a. M. O. Lusardi, "Planning and financial literacy: how do women fare?," National Bureau of Economic Research, 2008.
- [26] D. Beal and S. Delpachitra, "Financial literacy among Australian university students," Economic Papers: A journal of applied economics and policy, vol. 22, no. 1, pp. 65-78, 2003.

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