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Financial Literacy: Evidence from Mauritius

Final Report

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‘Financial Literacy : Evidence from Mauritius

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Purpose:

- To determine the level of financial literacy in Mauritius;
- to analyse the score of themes such as savings, borrowings, etc and finally;
- to depict any relationship between the level of financial literacy and age, gender, education, income level and region and
- to formulate policies to curb any deficiency in the financial education of Mauritians at large.

Design/methodology/approach:

A comprehensive questionnaire was designed to cover major aspects of personal finance. It includes financial literacy on general knowledge, borrowing, debit card/ credit card/ ATM card, insurance, investments and savings. The survey participants were asked to answer 43 questions including 36 multiple-choice questions of their knowledge on personal finance and seven questions on demographic data. Different question formats were used to gather responses in each topic, including responses to hypothetical scenarios and multiple-choice questions about financial knowledge.

The population of this study is defined as randomly selected people aged 20 and over across Mauritius. The targeted population was be divided into subgroups on the basis of age, income, gender, location of residence and education level. The statistics for the subgroups were, as said previously, obtained from the Central Statistical Office of Mauritius. The sample size used in this study was 800 respondents.

Findings:

The results of the survey showed that, overall, Mauritians had a medium financial knowledge about the debit/credit card theme but relatively low levels of knowledge regarding savings (Mean score percentage=54.36%), borrowings (Mean score percentage=49.70%) suggesting a need to learn basics. On the other hand, respondents were found to be financially illiterate in investment (Mean score percentage=33.56%) and insurance issues (Mean score percentage=29.76%).

Furthermore, it was found that some segments were more financially literate than others. To this end, the analysis of variance further confirmed that gender, age group, education, marital status, level of income, occupation and the respondent's parent occupation significantly affected overall financial literacy [p-value < .05]. Yet, more in-depth analysis revealed only a significant, but negative and fairly weak association (-0.10) between gender and financial literacy. Similarly, the results also revealed a significant negatively weak correlation (-0.11) between an individual's age and his financial acumen at 1% significance level which goes against the findings of Agarwal et al (2007) who found that the sophistication of financial choices peaks at about age 53. This may be attributed to the fact that older Mauritian individuals did not have access to free education during their early years.

In addition, a rather strong positive correlation coefficient (0.45) was noted between education and the financial acumen of an individual, such that the more education a person has, the higher his financial literacy level.

Practical implications:

- **For the individual**

While reported financial literacy deficiencies can affect an individual's or family's day-to-day money management and ability to save for long-term goals such as buying a home, seeking higher education, or financing retirement, ineffective money management can also lead to decisions that may make consumers vulnerable to severe financial crises. Moreover, the costly consequences of financial illiteracy make individuals worry about their finances such that their productivity in workplaces is affected. When individuals cannot manage their finances, it becomes a problem for the society.

- **For the Financial sector and the economy as a whole**

From a broader perspective, market operations and competitive forces are compromised when consumers do not have the skills to manage their finances effectively. Indeed, informed participants help create a more competitive and a more efficient market. As

knowledgeable consumers demand products that meet their short- and long-term financial needs, providers compete to create products having the characteristics which best respond to those demands. Moreover, a low level of financial literacy may adversely impact on the economic growth of the country.

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ANOVA	Analysis of Variance
BPO	Business Process Outsourcing
BTS	Bartlett test of sphericity
CQI	Continuous quality improvement
CSO	Central Statistical Office
DBM	Development Bank of Mauritius
DIY	DO It Yourself
EC	European Commission
EPZDA	Export Processing Zone Development Authority
ESE	Entrepreneurial Self Efficacy
F	F Statistics
HDTV	High Definition Television
KMO	Kaiser-Meyer-Olkin
MD	Mini Disc
MDO	Marketing dominated organization
MIDA	Mauritius Industrial Development Authority
MIO	Marketing Independent organization
MWO	Marketing weak organization
N	Sample Size
NCB	National Computer Board
OECD	Organisation for Economic Cooperation and Development
p	p value
PCN	Personal Contact Network
PLC	Product Life Cycle
R&D	Research And Development
SBA	Small Business Administration
SME	Small And Medium Enterprise
SMIDO	Small And Medium Industries Development Organisation
SWOT	Strengths, Weaknesses, Opportunities, Threats
TQM	Total Quality Management
VCR	Video Cassette Recorder
WTO	World Trade Organisation
USP	Unique Selling Proposition

CHAPTER 1

INTRODUCTION

1.0 Introduction

Education is playing an increasingly important role in this rapidly changing modern society. High investment in human capital has gradually resulted in a shift from a manufacturing based economy to a services based one. In this respect, the financial services sector has increasingly gained in prominence over the last few years. It may be argued that a sound knowledge of the financial sector may help any individual to take better decisions thereby increasing his net welfare generated from any transactions carried in that sector.

There has been substantive literature as to the importance and relevance of financial literacy to our modern society. However, most of the findings from the existing literature tend to highlight the low levels of financial literacy, not only in developing countries but also in developed nations. This has resulted in losses for individuals, companies and for nations as well.

As mentioned before, financial literacy has a bearing on businesses as well. People with low understanding of the financial world are reluctant to deal freely in matters related to banking business, borrowing, credit card payment, insurance products, and financial investment among others. This may lead to potential significant losses for firms operating in the financial sector. Moreover, financial illiteracy may entail individuals not necessarily making the best financial decisions, often ending in sub-optimal benefits and hence resulting in welfare loss.

Financial literacy is the ability to manage one's finances. In everyday life, a person has to take financial decisions, as simple as how much to save or as complex as building a portfolio of investment. To be able to make the most astute and optimal decisions, individuals have to be financially literate. Across the world, and even in the most developed countries, surveys have shown that a significant proportion of both developed and developing countries' populations are financially illiterate. This tends to have a negative impact on their everyday lives. The end result is reluctant customers and a

financial services industry missing out on potential customers and profits. Moreover, financially illiterate investors may invest in inappropriate financial products that do not match their risk profiles. For examples, in the UK and the US, so-called independent financial advisors have duped many investors into purchasing the products that pay the highest commissions to those selling them. Large lawsuits and compensation claims have resulted. However, one could argue that the situation would never have arisen if the buyers of financial products had been conversant with what they were buying.

Empirical evidence in other countries shows that a literate person is not necessarily financially literate. For instance, despite enjoying a high literacy rate, the majority of Americans lack the basic financial skills that they require to be financially knowledgeable (Toussaint-Commeau et al., 2001). Financial illiteracy leads to personal bankruptcies (FFLP, 2001-2002) and those that lack the basic financial knowledge are reluctant to invest in financial products and at the same token providers of financial products and services lose on potential clients.

Mauritius enjoys a high literacy rate of over eighty percent. However, no research has been carried out to assess the level of financial literacy in Mauritius. Such a study will help bridge that gap and should provide crucial information to all parties concerned (that is consumers, providers of financial services/products, and government).

1.1 Objectives of the Study

Hence, the aims of this study are: to determine the level of financial literacy in Mauritius; to analyse the score of themes such as savings, borrowings, etc and finally; to depict any relationship between the level of financial literacy and age, gender, education, income level and region and to formulate policies to curb any deficiency in the financial education of Mauritians at large.

1.2 Chapter Outline

Chapter 2 will provide a detailed review of the literature pertaining to Financial Literacy. Chapter 3 will outline the methodology used to assess financial literacy in Mauritius. Chapter 4 will report the results of both descriptive and inferential statistics regarding the research objectives and discuss plausible reasons. Chapter 5 summarises the salient features of the study including the objectives, results and overall conclusion as to the level of financial literacy in Mauritius. Finally, Chapter 6 provides suggestions and recommendation on how to improve financial literacy in Mauritius.

CHAPTER 2

LITERATURE REVIEW

2.1 DEFINITION OF FINANCIAL LITERACY:

The National Foundation for Education Research which began a series of studies in 1992, conducted one of the first researches on the level of financial literacy in the UK. The definition of financial literacy derived from that study will be used in the current research. The NFER defined financial literacy as "the ability to make informed judgments and to take effective decisions regarding the use and the management of money." In this respect, in today's world of increasingly complex financial decisions, financial literacy may be considered as a vital skill for all consumers.

However, the term financial literacy may mean different things to different people and this is clearly reflected in the many definitions available in empirical work.

Jacob et al. (2000) defined financial literacy as follows: "Financial literacy involves the ability to understand financial terms and concepts and to translate the knowledge skillfully into behavior. Topics include the concepts of savings, earning interest, budgeting, buying insurance, managing credit and loans, and how to work with financial service institutions. Financial literacy embodies the minimum knowledge necessary to participate gainfully in the economy; it is the essential set of tools that will define how daily money choices are made".

Similarly, for the purpose of its Symposium on Financial literacy in America in 2002, the National Endownment for Financial Education (NEFE) used the following definition of personal financial literacy. "Personal financial literacy is the ability to read, analyze, manage, and communicate about the personal financial conditions that affect material well-being. It includes the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort or plan for the future, and respond competently to life events that affect everyday financial decision, including events in the general economy".

Conversely, McDaniel et al (2002) offers an altogether different definition of financial literacy. He gives a distinction between personal financial literacy and professional financial literacy, which is expected, from directors and audit committee. He explains that in this special circumstance, people who are financially literate should be defined as follows: "Financial literates are typically regarded as having an understanding of financial statements, cash flows and management compensation, internal control mechanisms and corporate governance".

2.2 GENERAL FACTS:

In his study, Rosso (2004) found the following:

- 40 percent of Americans say they live beyond their means.
- One in four women retire on an income below the poverty level.
- Outstanding non-secured consumer debt rose from $805 Billion in 1990 to $1.65 trillion in 2001.
- The average 50-year-old has less than $40000 in personal wealth.
- 66 percent of Americans don't pay off their credit card bill each month.

Those figures are very surprising to say the least, even more so, since they relate to the US, which is considered as one of the most successful economy of the world. However, the situation is not unique to the US. According to a survey done by the ANZ bank in Australia (2002), which provides a snapshot of the financial literacy levels of adult Australians, the latter are not found to be financially knowledgeable. The findings suggest that certain groups have particular challenges that need to be addressed and that certain financial skill, services and products are not as well understood or utilized, as they should be.

Similarly, financial literacy was also investigated in the UK by Schagen and Lines (1996). They undertook an investigation of financial literacy of British adults from the Nastwest Group Charitable Trust. Schagen and Lines (1996) found that some groups

were particularly susceptible to difficulties because of debt. These groups were: (a) young people aged between 16-21 years in work or training, (b) students in higher education and not living at home, (c) single parents on benefits and (d) families living in subsidized housing. Hence, it could be argued that the problem of financial illiteracy is not localized in a particular region of the world but are found to affect even the most performing economies of the world.

Moreover, one panelist, from the 2002 symposium on financial literacy by National Endowment for Financial Education (NEFE) in Colorado, argued that financial literacy has deep roots when he claimed: “Governments and industry created a social environment where people became dependent on them. They became dependant on Government for Social Security, and many people think that’s all they need. They became dependant on employers to provide them with pension programs and health care, and companies benefited from those policies for many years”. According to another panelist financial illiteracy is not the problem of a particular group. He stated: “Look at all the media people who blew it. Look at all the analysts who blew it. So, they may be extremely sophisticated in finance, they may be extremely sophisticated in business- but they are not sophisticated in managing the quality of their lives or becoming financially independent. That’s a global problem, not a poor person’s problem or a middle class problem.”

However, it seems that financial literacy programs are not working as efficiently as they should. The following facts presented at the NEFE symposium are extremely disturbing since the financial service sector, policy makers and several other organizations have worked on countless projects, programs, meetings, classes and seminars, some dating 50 years or more. The facts are as follows:

- From 1990 to 2000, the rate of personal bankruptcy in the United States rose by 69 percent. It appears that this trend will continue, supported by recent statistics showing a 19.2 percent increase between 2000 and 2001.

- High School seniors taking part in a 2002 national survey of financial knowledge, sponsored by the Jump$tart Coalition for personal Finance, scored an average of 50.2 percent- a failing grade. Score have been declining since the first survey was administered in 1997.
- The United State reportedly has the lowest individual savings rate in the industrialized world.
- In 2001, an AARP survey of older baby boomers (age 51-59) showed that nearly 40 percent were not confident about a secure retirement.

Finally Kempson and Whyley (1999) presented some facts about those who never made use of financial services:

- Householders who have never had a secure job are the largest group.
- Elderly people (aged over 70) who are part of a cash-only generation.
- Young householders who have not yet made use of financial services, but may do so in the future.
- Women who became single mothers at an early age.

2.21 FACTS ABOUT FINANCIAL LITERACY:

The following section highlights certain important facts about financial literacy. For ease of information and reading, the section has been segregated into different categories and these are as follows: A; Youth; B: Workers and Low Income Group; C: Investors; D: Retired; E: Adults and Households; F: Gender; G: Minorities.

2.21. A THE YOUTH:

Teenagers have money and they spend it! The information provided by NEFE high school financial planning program suggests that teenagers in the United States spend $155 billion in 2000. Research undertaken to determine the financial knowledge of teens indicated that the latter are ill-prepared to function efficiently. The 2000 JumpStart coalition survey on personal financial literacy revealed that most high school seniors were not able to pass a simple test of basic financial literacy- budgeting, saving,

borrowing and investing. The in average score was only 51.9% (a failing grade). This was clearly a decline from the average score of 59.1% obtained during the 1997 survey.

Furthermore, the observations made above were aligned with the Consumer Federation of America (CFA), which employed an American Express Survey, whereby the results revealed that only 42% of teens answered the questions correctly. Since it was a multiple choice test with four options for each item, at least 25% of the questions could be answered correctly by mere guessing. The categories included consumer credit, checking/savings, automobile insurance, housing rentals, food purchases, and automobiles purchases. The CFA survey also suggested that young adults (age 18 to 24) did not believe they possessed the appropriate knowledge to undertake sound financial decisions. Specifically, 62% believed they had fair or poor knowledge of credit reports.

However, such findings were not unique to the US. Reports have shown that in, Australia too, there is a need to improve financial competencies. The ANZ Bank's *Survey of Adult Financial Literacy in Australia* (2002) showed that while most Australians had basic financial knowledge, young consumers and those from low socioeconomic backgrounds were at a disadvantage in making informed decisions about money management. In a similar vein, in New Zealand, the Enterprise New Zealand Trust conducted a survey comparable to that of the Jump$tart one among new Zealand school students[1]**.** The results obtained were similar to those obtained in the US. Overall, 52% of students failed to attain a pass grade. The research found that students in the highest and lowest socioeconomic groups had the poorest success rate

Such a lack of knowledge about personal finance among the youth should be seriously be taken into consideration as the resulting effect may lead to a rise in the level of consumer debt, rising personal bankruptcy rates, increasing consumer credit delinquencies and inadequate retirement savings among adults.

[1] *An Investigation into the Financial Knowledge Levels of New Zealand Senior Secondary School Students,* December 2001, available at http://www.enzt.co.nz/pdf/Financial%20Literacy.pdf

2.21.A.1 HIGH SCHOOL STUDENTS:

A number of studies have been conducted to evaluate the financial competencies of high school students. The overall evidence suggests that most high school students were not sufficiently financially literate to handle situations that they were likely to encounter in life. Chen and Volpe (1998) developed a questionnaire applicable in high school and it covered aspects of personal finance including topics such as general knowledge, savings and borrowing, insurance, and investments. The overall mean for the US high school students who completed their survey was 52.87 percent.

Similarly, the JumpStart Coalition undertook four consecutive nationwide financial literacy surveys of Grade 12 students in 1997, 2000, 2002 and 2004. Their findings revealed that the US students were suffering from low levels of financial literacy, with average scores of 57.3%, 51.9% and 50.2% and 52.3% respectively (Jumpstart Coalition, 2004).

However, in line with the JumpStart Coalition Survey (2000), no statistical difference in survey scores were found among students who had completed a partial or entire course in economics, money management, or personal finance. Nevertheless, students who participated in the Stock Market Game scored better than average, albeit still not a passing grade at 55.1%. The higher retention on the Stock Market Game is only due to the effectiveness of different mode of delivery of instructional material. Chatzky (2002) agreed that the majority of American teenagers are not getting their share of financial education, but even those that are being exposed to money matters do not appear to retain much of the content. She relied on evidence that the average high-school senior was able to answer only 50% of 31 JumpStart Coalition for Personal Financial Literacy multi-choice PF questions correctly, whilst students who had completed a money-management course were only able to answer 48% correctly. In trying to figure out what went wrong with the program, she concluded that personal financial education does not have a home in US schools and that this type of education should start before high school.

In a similar vein, Mandell (1997) in his study of 1509 high school students from 63 schools, showed an average correct score of 57% in the areas of income, money management, savings and investment, and spending. He concluded that students are leaving schools without the ability to make critical decisions affecting their lives. Moris (2001) undertook a similar research on secondary school students in New Zealand. He administered a 30-item multiple-choice financial knowledge questionnaire to 804 senior secondary students from a cross-section of New Zealand secondary schools. The questionnaire was based on the one used in the Jumpstart study of US senior secondary students and covered a range of topics, including financial planning, income and taxation, budgeting, insurance, credit and borrowing, spending and banking, and saving and investing. The questions required simple arithmetic calculations and none involved the application of complex knowledge. The results showed that New Zealand students answered on average 55% of the questions correctly with significant differences emerging between New Zealand Europeans and other ethnic groups such as Maoris, Asians, and Pacific Islanders. Students in the lowest and highest socio-economic brackets had the poorest success rate. Region and gender however were not significant factors affecting financial literacy. Moris (2001) argued that New Zealand senior secondary students were not sufficiently financially knowledgeable to handle situations they were likely to encounter in later life.

Following the same reasoning, young Americans were found to have inadequate knowledge about concepts relating to personal finance and basic-economics. In accordance with the National Council on Economic Education (1997), high school students and adults scored a failing grade for their understanding of basic economics. Mandell (1998) which tested financial literacy among high school seniors found that the bulk of high school seniors did not understand basic financial subjects which involved banking products, credit cards, taxes, savings and investment.

2.21.A.2 COLLEGE STUDENTS:

Chen and Volpe (1998) conducted a study about the knowledge of personal finance among college students; the relationship between the financial literacy and participants' characteristics such as academic discipline, gender, and experience; and the consequences of having inadequate knowledge. They found that there is a need for college students to improve their personal finance knowledge. They also found in their survey that those participants, with less knowledge, were likely to hold wrong opinions and make incorrect decisions in the areas of general knowledge, savings and borrowing and investments. They also concluded that improving financial knowledge was important and that without adequate knowledge, college students were more likely to make mistakes in the real world.

Even though questions were fairly basic, the overall mean of correct answers was approximately 53%. None of the mean scores for each area of general knowledge, savings and borrowing, insurance, and investments were above 65%. By far, the weakest area was investment, where on average the participants answered about 40% of the questions correctly. Lower levels of financial literacy were found among subgroups. They included those who were non-business majors, in the lower class ranks, women, under age 30, and those with little work experience.

Murphy (2005) also found that college students did not know as much as they should when discussing of money matters. College students were in danger of facing a downward financial spiral of debt that would not be easily repaid while in college or after they have gained fulltime entrance into the workplace (Henry, Weber& Yarborough 2001; Joo, Gable& Bagwell, 2003). Similarly, at a hearing conducted by the consumer Bankers Association (2002), they found growing credit card debts among college students. Moreover, Breitbard (2003) found that college freshman had an average of eight credit card offers during their first week of school. University administrators reported they lost more students to credit card debt than to academic failure. The fact that college

students were not conversant with financial matters was having negative effects. The absence of financial management skills and accompanying low credit scores were increasing debt, causing inadvertent defaults, and were harmful for both students and their institutions (Gross et al, 2005).

In a similar vein, the data on students' loan debts in the US were shocking. Undergraduates in the United States who borrowed for education purposes graduated with a student loan debt averaging $18,900. The debts were far greater if only private institutions were considered (American Council on Education, 2004; Baum & O'Malley, 2003). The 2003 Study of Graduate Aid Practices, Policies and Procedures, found (for 2002-2003) that the average loan indebtedness of graduates for private dental medical and law schools was $144,000, $107,000 and $77,000, respectively. Redd (2004) found that for public schools in that year, the average indebtedness for dental and medical school students was $95,000 and $54,000 for law school students. Post secondary education were so high that almost half of all undergraduates were found in a situation where they were forced to borrow to finance all or part of their education (Berkner, Wei, He, Cominole, & Siegel, 2005). The burden of borrowing was made worse by the fact that many students did not earn enough income following graduation to service their debts (Redd, 2004[2]). A debt-ridden generation was being created.

Further studies revealed that 68% of college students rarely budgeted or budgeted at all (Henry et al 2001). Similarly, Joo et al (2003) study shows that only half of the students fully paid their credit card bills each month and 40% did not even know the annual percentage rate of their credit cards. These findings are troubling since they clearly indicate that college students are not managing their finance efficiently. The result of such a poor financial knowledge definitely had a negative impact on the life of the college students.

[2] See also Donhardt, 2004; Harrast, 2004;Princeton Review, 2004; Schwanhausser, 2002; King & Bannon, 2002; King & Fishberg, 2001

2.21.A.2b PSYCHOLOGY STUDENTS:

Holland's model (1985) of career choice revealed that people with interests in financial matters belong primarily to Conventional and Enterprising typologies. Psychology, on the other hand, had interests that were best captured by the Social and Investigative typologies, neither of which reflect an interest in financial affairs. On these grounds, one might expect that students, undertaking a major in psychology, would exhibit lower levels of financial literacy than students from faculties such as Business.

2.21.A.3 MINORITY STUDENTS:

Murphy's (2005) research examined 277 survey responses to assess the influences of race, gender, and age, major and parental educational level on the financial knowledge of undergraduates attending a predominantly black institution. The overall level of financial literacy was only approximately 3 correct questions out of 10. Analysis of variance results showed valuable differences in the mean financial literacy score for all variables, except race. The logistic regression had somewhat different results; race, major and parental education level were important factors in explaining whether students would have higher or lower level of financial acumen. Age and major did not have noteworthy results in the logistic regression. Overall, the findings suggest that majority black students universities had an opportunity to more intentionally expose their students to a broad range of financial literacy topics, and as such, they were better prepared to meet the financial challenges of living as completely independent professional adults.

2.21.B WORKERS AND LOW INCOME GROUP:

2.21.B.1 THE LOWER INCOME GROUP:

The lower income group is more exposed to financial illiteracy given their inaccessibility to financial education. In the UK, the National Foundation for Education Research

revealed rising levels of households debt coupled with low levels of understanding about financial matters, particularly among lower income groups" (cited in ASIC, 2003,pp31). Furthermore, Jacob and al., (2000) found that the financial illiteracy problem among lower-income consumer were a serious issue. Similarly, given that a high percentage of low income earners were 'unbanked', there is added concern that these consumers were inadequately prepared (i.e., lack of experience and information about personal finance and consumer education concepts) to make informed financial decisions (Hogarth and O'Donell, 1997).

Rhine et al., 2001 stipulated that those willing to use alternative financial services (e.g. check cashing outlets), usually had lower income, were less educated, lived in lower-income urban areas, and tended to be a member of a minority group. In such cases, supplying consumer education programs might help that specific group to evaluate the cost of financial services from different sources.

2.21.B.2 THE WORKERS:

Numerous studies about the financial literacy of workers have concluded that they lacked the necessary information to make appropriate saving decisions. Workers did not save adequately for retirement and made investment decisions that are too conservative. A KPMG (1995) survey of 1183 employers, found that employees contributed only about 5% of their income to 401K plans, although the typical plan allows for a 14% contribution. Such result led to believe that employees were not maximizing their benefits. Moreover, evidence showed that low saving rate and conservative investments did not yield sufficient funds to ensure a financially secure retirement.

The Employee Benefit Research Institute (1995) argued that most Americans did not save sufficient retirement funds and had a false sense of financial confidence and security. Furthermore, Lusardi (2000,2002b) found that the lack of planning was also pervasive among older workers (5 to 10 years from retirement). In a national survey of self-assessment of financial literacy in the area of retirement, Cutler & Devlin (1996) found

an inadequate level of understanding. Their findings showed that out of the 49% of the national sample, who answered that they were financially knowledgeable about retirement planning, only half of the self-identified knowledgeable people really knew certain facts about Social Security and Medicare. These results led Cutler and Devlin to believe that there was an increasing need for financial education.

Correspondingly, Gustman and Steinmeier (1999b) reported that many workers were not fully aware of the type of pensions plan they had and the benefits they were deriving from them. The 2001 Retirement Confidence Survey documented that more than half of current workers expected to reach full eligibility for social security benefits sooner (age 65 or earlier) than they actually would.

The main financial difficulty employees faced were overuse of credit, overspending, lack of budgeting, too many debts, inadequate shopping and spending skills, low salary or wages, and lack of knowledge about money. These findings were obtained from Garman, Porter and Mc Million (1989) who conducted a survey of 47 Virginia corporations' Employee Benefit Offices. Bernheim (1998) surveyed several studies and showed that workers were often too ill-equipped to make saving plans.

Hence, based on the above argument, it could be that workers usually did not have enough financial knowledge to take proper decisions about savings and often did not plan retirement efficiently, which meant that they were not financially secure when they eventually retired.

2.21.B.2b PROFESSIONAL WORKERS:

Coates, Marais and Weil's (2005) study showed that audit committee members were not financially literate. They carried out a survey at Chicago GSB, Stanford Law School and Wharton, where over the past 4 years, they had more than 1400 attendees who consisted mainly of board members or CEOs or CFOs or general counsel. The results disclosed that the median score was about 8 correct out of the 25-item quiz and that such score had

remained constant over several years of testing. In this situation, financial literacy meant understanding accounting at the level of an introductory MBA accounting course. Moreover, what they also found when interviewing audit committee members for a job, was that no formal process was used to assess the financial literacy of those individuals.

2.21.C INVESTORS:

Investors are individuals who deal with money matters everyday in their work life and they are expected to be financially literate. However, from previous empirical work undertaken, it could be argued that investors were far from being financially literate. During 2002 NEFE, the symposium on financial literacy in America, discussions were held regarding the possible simplification of financial disclosure statements. It was argued that "Investors must have access to all the information they need to make an informed decision about whether or not to purchase a security product," One roundtable member stated: "The fact is that there is so much information that it is barely impossible for the investor to consider it at all when taking a decision".

Hence, it could be recognized that because they were being overloaded by so much information, the investors did not read everything and they sometimes took decisions even though they were not fully aware of all the possibilities.

Furthermore, the Princeton Survey Research Associates (1996) interviewed 1001 investors and they found that only 18% of them were financially literate. In a similar vein, Vanguard Group/Money magazine (1997) reviewed 1467 mutual fund investors at 59 shopping malls across the country. The average correct score on a 20-question quiz was approximately 45%. Once again, the result pointed towards financial illiteracy.

However, Alexander, Jones, and Nigro (1996), stated that the financial illiteracy of investors should be taken seriously, especially since over the past 15 years or so, mutual funds have become an increasingly popular investment vehicle. Ownership of stock, bond, and money market mutual funds has risen from 6 percent of U.S. households in

1980 to 37 percent in 1996, while the total assets held by mutual funds soared by nearly 2,100 percent, from $135 billion to roughly $3.5 trillion at year-end 1996[3]. Following the rapid growth of the mutual fund industry, the policy makers have expressed real concern as regards to whether investors are knowledgeable about the costs and risks associated with mutual funds.

Their research yielded the conclusion that the typical investor surveyed is older, wealthier and better educated than the average American. The result of the survey also revealed that there was still room for improvement where it related to the investor's knowledge of the expenses and risks associated with mutual funds. The study also showed a lot of flaws in the investors' knowledge of mutual funds. Although the average fund shareholder had invested in funds for several years, most fund shareholders did not appear to appreciate the relationship between fund expenses and performance. In addition, a substantial number of fund investors still believed they could not lose money in a bond fund.

The American Association of Retired Person's study (1994) stated that: "the vast majority of American bank consumers are unaware of the risks and fees involved in the sale of uninsured investment products, such as mutual funds and annuities, that are increasingly available at U.S. banks and other financial institutions." The 1996 Investor Knowledge Survey found that fewer than one-fifth of all individual investors (in stocks, bonds, funds, or other securities) could be considered to be "financially literate" based on responses to a quiz[4]

2.21.D THE RETIRED:

If the retired were financially literate they would definitely be able to maintain their consumption level after retirement. However, according to the 2001 Employee Benefit Research Institute's (EBRI) Retirement Confidence Survey (RCS), a high proportion of workers have done little or no planning for retirement. Only 39 percent of workers had

[3] See Investment Company Institute (December 1996) and Reid (1997).
[4] See Crenshaw (1996)

tried to determine with some accuracy how much they would need to save to fund their retirement, a figure slightly higher than in previous years**.**

Similarly, Lusardi (2004), using data from the Health Retirement Study, tried to determine how much wealth (including Social Security and pensions) older households had and how much they would need to save to maintain their consumption level after retirement. The result of the study showed that the majority of older households would not be able to maintain their current level of consumption into retirement without additional saving. In particular, the median HRS household would still have to save an additional 16 percent of income to smooth consumption after retirement**.**

Moreover, the NEFE (2002) findings showed that with the increase in the life span of individuals, there was a need for an extended income stream, particularly during a period when the traditional sources of retirement support (social security, pensions and personal savings) were dangerously unstable.

Since the period representing retirement had almost doubled from 1930 to 2000, the elderly should have been more conscientious in planning their savings so that they could maintain consumption at the desired level when they retired. However, Lusardi and Mitchell (2005) found that financial illiteracy was widespread among older American: only half of the age 50+ respondents could correctly answer two simple questions regarding interest compounding and inflation, and only one third correctly answered these two questions and a question about risk diversification. Women minorities and those without a college degree were at risk of displaying low financial knowledge. They also assessed whether individuals tried to determine how much they needed to save for retirement, whether they did a plan and if the resulting plan was successful. The result of the study revealed that these calculations proved difficult: less than one-third of the age 50+ respondents ever tried to devise a retirement plan, and only two third of those who tried, actually claimed to have succeeded.

Likewise, previous studies have concluded that many households did not make provision for retirement and adverse events. Women appeared particularly vulnerable to the death of their spouses and a husband's death could precipitate his widow's entry into poverty (Weir and Willis 2000). Warshawsky and Ameriks (2000) performed the experiment of importing the current wealth holdings of United States households, as reported in the Survey of Consumer Finances (SCF), into one of the most popular financial planners. They found that about half of working middleclass American households did not have a fully funded retirement. Some would actually run out of resources very shortly after retirement.

2.21.E ADULTS AND HOUSEHOLDS:

The important question to ask is whether adults master personal finance and investment issues? However, from what researches have found, adults seemed to suffer from financial illiteracy. Moreover, given that there was an increase in life span, adults needed to have a better grasp of financial issues since they had an increased financial responsibility towards their aging parents. Recent statistics showed that an unprecedented number of middle age Americans were simultaneously raising children and supporting their own parents. The fact that people were living longer was illustrated by some simple statistics. For instance, in 1900, 7 percent of 60-year-old Americans had at least one living parent. In 2000, such percentage has risen to 44.

Moreover, results of numerous researches have shown that adults were not financially literate. Princeton Survey Research Associates (1997) surveyed 1770 households nationwide on their financial knowledge and found an average correct score of 42%. Their results exhibited that households financial decision makers did not have a good grasp of basic finance concepts. Correspondingly, Cutler (1997), found that Americans needed to be financially educated. The latter particularly singled out baby boomers and found that, even though boomers admitted to some superficial knowledge of, for example, unit trust (mutual funds), only 29% were confident of making a good choice as an investment. The lowest level of familiarity and knowledge among boomers and others

was of health care rights attached to retirement income streams and of US Medicare eligibility. Less than half of the sample knew that Medicare would not pay for nursing home care of Alzheimer's patients. The conclusion reached by Cutler was that the American public was not financially literate and more particularly as regards matters related to insurance, social security and health care.

Finally, studies have showed that the lack of financial understanding was not unique to the US. Australians were also found to suffer from financial illiteracy. Household debt to disposable income was about 1:2 or 50% but, by 2002, this value has risen to 1.1:1 or 110% (RBA, 2002,pp20). Uninformed people fell prey to financial scams. Fortunately however, the Australian Securities and Investment Commision (ASIC) have since taken some initiatives to raise the level of financial knowledge of Australians.

2.21. F GENDER:

From what has been learned from past empirical work, women tended to be less financially literate than their male counterparts. For instance, some past studies have commonly shown that male college students had a higher level of financial literacy knowledge and practices than their female counterparts (Chen & Volpe, 1998,2002; Henry et al 2001; Markovich & Devaney 1997). In addition, as the individuals grew older, the gender difference in terms of financial literacy tended to diminish. Similarly, Hogarth and Hilbert (2002), when comparing male and female adult households, found a disproportionate amount of women in the less financially knowledgeable category. Furthermore, in another study of 522 adult women, 56 % were found not to be very knowledgeable about investing (Oppenheimer Funds/Girls Inc., 1997)

Moreover, women were also found not to be particularly good financial planners[5] and did not make provision for retirement and adverse effects. Furthermore, Clark et al.(2003) also pondered on certain crucial facts about females' financial literacy level: they were

[5] See Lusardi (2003)

mainly employed in occupations requiring lower skills and less education; they had fewer years of job tenure, and they had lower annual earnings.

Hence, it could be argued that women were less prepared for retirement than men and given their lower income and as such, they were less likely to be able to raise their retirement savings significantly. Therefore, providing financial education that gives women the necessary tool to undertake financial planning was essential, mainly since women had longer life expectancies, greater chances of becoming widowed, and higher probabilities of needing nursing home care late in life.

2.21.G MINORITIES:

Studies have shown that minorities had less access to financial services and therefore tended to be less financially knowledgeable. For instance, Kempson and Whyley (1999) argued that Pakistani and Bangladeshi households made limited use of financial products due to language barriers, religious beliefs and lack of knowledge.

Moreover, the Community Development Financial Institution (CDFI) Fund have conducted an in-depth study of access to capital in Native communities. The study found that only 14% of Native land located in the United States had a financial institution in the community and 15% of Native people had to travel more than 100 miles to reach a bank or ATM. The study also discovered that tribal respondents to the project considered the majority of mainstream financial services as difficult or impossible to attain[6]. Hence, it could be argued that the minorities were financially illiterate due to limited access to financial education. By the same token, they were excluded from the financial markets, in that they did not have access to the same range of services as the rest of the population.

[6] CDFI Fund. (2000). Native American Lending Study

2.21.G POLICY AND CRITICAL ANALYSIS:

This section pertains at investigating the policy measures that have been implemented to improve financial literacy and evaluate whether they were successful or not. The recognition of the importance of having a financially literate population, have led to the proliferation of financial literacy programs over the last years. Among the ninety financial literacy programs that Fannie Mae examined, only two third were executed in 1990.

Those involved in the supply of such programs were the employers, the military, the state coorperative extension services, the community colleges, faith based groups and community-based organizations. Commercial banks were also considered as an important provider of financial literacy programs.

From what was collected in the ASIC 2003 paper, it was essential that the financial services industry, both industry associations and individual firms, be involved in this project on an ongoing basis. Similarly, Christine Stocks and Will Morony (ASIC 2003) have argued that the financial sector was clearly involved in the improvement of the youth understanding of money matters. Examples include the Financial Planning Association's program where financial planners visit schools on an ad hoc basis to discuss financial planning matters, and the current initiative by the Collection House Foundation, which is supporting pilot financial literacy programs in a number of schools. Many industry associations have also allocated resources to developing education materials. However, a study by the Consumers Bankers Association (July 2001) found that out of 48 retail banks, only two contributed to financial literacy efforts[7].

[7] Consumer Bankers Association, ''Financial Literacy Programs: A Survey of the Banking Industry'' (July 2001) (www.cbanet.org/ issues/financial_literacy/Financial_Literacy_Survey_2002.htm).

2.21.G.1: STUDENTS AND YOUTH:

The importance of having a financially literate youth is essential, since it would enable the youngsters to function efficiently and avoid making serious financial mistakes in the real world. In concert with the findings of Chen and Volpe (1998) in the USA, university students in Australia were found not to be skilled or knowledgeable in financial matters. Furthermore, such lack of financial knowledge was seen to have a negative impact on their future life through incompetent financial management. Australia viewed the proliferation of various financial literacy programs as a means to increase the financial knowledge of those who attend them. In this respect, in 2003, the Australian Securities and Investments Commission's *Financial Literacy in Schools* reported championed financial literacy programs inside and outside of schools.

In a similar vein, in 2001, the Chairman of the federal bank reserve, Alan Greenspan, stated that "improving basic financial education at the elementary and secondary school levels is essential to providing a foundation for financial literacy that can help prevent young people from making poor financial decisions that take years to overcome."

In this respect, surveys have shown that the problem of financial illiteracy among the young Americans is serious. The American Saving Education Council (ASEC 1999) found that many of the 16-23 years old overestimate their financial acumen. Similarly, studies conducted by Mandel (1998, 2001) and National Council on Economic Education, at high school and state level respectively, revealed poor and declining personal financial literacy as well as a general lack of personal financial standards at the same level.

However, certain initiatives have been taken to improve the financial literacy of the American population. In the United States, the Federal Reserve Board-founded *Jumpstart Coalition for Personal Financial Literacy* annually studied the financial literacy of high school students and the response, at least in part, has been a proliferation of state legislation mandating personal finance in school curricula (Anonymous 2003c). More

recently, the Senate Committee on Banking, Housing and Urban Affairs (2002) has conducted hearings into the state of financial literacy and education and the Department of Treasury (2002) has created the Office of Financial Education with a specific focus on improving financial literacy.

Chatzky (2002) identified that although the majority of American teenagers were not receiving financial education, those who were actually being exposed to money matters did not appear to retain much of the content. She supported her result on the evidence that the average high school senior was able to answer only 50% of 31 Jump$tart Coalition for Personal Financial Literacy multi-choice PF questions correctly, whilst students who had completed a money-management course were only able to answer 48% correctly. She believed that this was so because personal finance did not have ‘a home’ in US school and it was too late to start teaching it in high school.

2.21.G.2 WORKERS:

Employees may sometimes be financially illiterate and this often leads to unwise financial decisions which may have a negative impact on their future life. Many employers have tried to improve the financial knowledge of their employees by dispensing financial education at the workplace on private savings or contributions to pension funds. From what was gathered from previous empirical studies, workplace financial education affects positively savings and pensions, but however the form of financial education seems to matter. For instance, Bernheim and Garrett (2003) and Bayer, Bernheim and Scholtz (1996) found that programs that relied on print media (newsletters, plan description, etc.) had generally no effect on pensions participation or contributions, even though the quality of financial information seemed to matter (Clark and Schieber 1998). But, still retirement seminars were found to be effective although they seem to affect only certain aspects of behavior, for example pension participation and the amount of contributions, but not total saving levels (Bernheim and Garrett 2003, McCarthy and Turner 1996). Nevertheless, these and other similar studies suffer from

severe data shortcomings; in as much as they lack much information about workers' characteristics, the characteristics of their pension plan and total wealth levels.

Furthermore, Bernheim and Garrett (2003) stipulated that financial education is offered as a remedial measure, that is, they are offered in institutions where employees do very little savings. However, due to a lack of information, the real effectiveness of workplace financial education is difficult to evaluate.

2.21.G.3 HOUSEHOLDS:

According to AICPA's Roper report, "Americans would be severely strained financially by a medical emergency involving more than $15000 in uninsured expenses, and that those with household incomes of $75000 or more were unlikely to feel particularly financially secure". Since the situation of American households was alarming, Melancon, the AICPA president & CEO, concluded that Americans needed to be financially educated (Tie 2006).

As a way to help Americans take control of their financial destiny, the AICPA and its member have taken a series of initiatives and have laid the foundation for a nationwide financial literacy program. In the light of earlier studies, it can be suggested that financial education offered by the employers tend to have a positive impact on savings and alter the investment of assets in retirement accounts. Maki (2001) observed there are three ways in which individuals could use the information obtained from the financial literacy programs. First, financial education could increase household saving by causing the family to lower its discount rate. Second, increased knowledge could prompt the household to become less risk averse and thus invest more in assets with higher risk and expected return. Finally, financial education programs could change the household's knowledge of its investment choice set. However, Maki dismissed the first two possibilities and argued that greater knowledge of what is possible is the primary mechanism through which these programs alter household decision-making

The situation is no different in the UK either, where research revealed rising levels of household debt coupled with low levels of understanding in financial matters, particularly among lower income groups. The research also found that existing money advice centres were over-stretched with insufficient resources to raise standards of financial literacy generally. (Stocks and Morony, 2003)

2.21.G.4: POLICY MEASURES

There is sometimes the fear that the information delivered by the financial sector might not be impartial (ASIC, 2003). This can be alleviated when financial institutions and association work in partnership with ASIC, educators and community groups, to raise the standards of financial literacy. There are already examples of such kind of partnership arrangement being established on an individual basis — for example, the joint Finance First project of Citigroup and the YWCA (Stock and Morony 2003).

The financial sector has an important role to play and there is evidence that many members of that industry would be more than willing to help in financially educating the public. Indeed, their help is highly valuable. The reason is that members of the financial sector, particularly the retail sector, have the expertise in financial matters necessary to ensure that teaching resources are not only accurate but also topical in their subject matter. For some in the industry, this may entail producing (in partnership with educators or professional education consultants) high quality teaching resources for use in schools. For others, this may mean providing the necessary funding either for the development of specific resources or programs to promote the teaching of financial literacy more generally (ASIC, 2003).

The financial sector has a lot to gain from providing such financial education programs. Being financially illiterate, consumers might not be able to assess the returns and risks of financial transaction that they undertake. The consumers are therefore in a position where they cannot compare the different financial products in a meaningful way. Such a lack of understanding has led to frequent complaints against the financial sector. Dealing with

consumer complaints can be costly for a firm, not only in terms of resources required, but also in terms of damage to its reputation. Many of these costs could be avoided if consumers had a better understanding of what they were buying and why.

Moreover, providing financial education can help the financial service sector increase their consumer base. Evidence shows that when consumers are confident about their financial knowledge of financial products, resulting from learning at an early age, the actual purchase of products increases. The National Bureau for Economic Research (1997) in the US found that state mandates requiring schools to provide financial education to high school students 'ultimately elevate the rates at which individuals save and accumulate wealth during their adult lives'[8]**.**

Advantages derived from the provision of financial education has led to a surging interest in financial literacy by US financial institutions and their associations. For example, in 2003, some ninety-eight percent of US banks sponsored financial literacy programs, and seventy-two percent offered their own programs (Anonymous 2003a), with the objectives of 'reaching youth', 'stemming the rise in bankruptcies', 'thwarting predatory lending' and 'boosting communities' (Ginovsky 2003).

[8] *Education and Saving: The Long-Term Effect of High School Curriculum Mandates,* National Bureau of Economic Research, July 1997.

2.3 CAUSES OF FINANCIAL ILLITERACY:

2.31 MAJOR CAUSES OF FINANCIAL LITERACY:

2.31.A ACCESS TO EDUCATION:

Lack of financial education programs may result in financial illiteracy. Unfortunately, financial literacy is an area where initiatives are quite low and where the payback cannot be observed immediately and can rarely be measured. Private organizations would only provide them, if they think it benefits them. For instance, in the US, Fannie Mae (one of the largest housing financial services providers) is an example of a company that has committed itself to financial literacy, because it has observed the positive impact it has had on loan portfolio.

Besides, the problem of access to financial education is also evident in other parts of the world. Beal (2003), found for Australia that besides business, finance and economic courses at the tertiary level, there is little effort done at the high school level to financially educate young Australians. Thus, they become financially inefficient and are unable to take major and minor financial decisions in life. It was observed that the financial literacy of Australians is acquired and improved through work experience and income, therefore suggesting a trial and error exercise to some degree.

Furthermore, Lusardi (2004) demonstrates that the provision of financial education programs tend to raise both financial and net worth sharply, even more so, for those families at the bottom of the wealth distribution and those with low level of education. Portfolios are also rather simple, and many families, particularly those with low education, hold little or no high-return assets. He further shows that seminars foster saving.

In a similar vein, Chen and Volpe (1998) also found that financial illiteracy in the American system is mainly the result of a lack of financial literacy program. They found that college students do not have much competencies where it concerns personal finance and therefore they are not in a position to make informed financial decisions. The findings of this study clearly suggest that there is a systematic lack of personal finance education in the US education system. Hence, there is a need for financial literacy programs to combat such a serious issue. The costly consequences of financial illiteracy have made individuals worry about their finances such that their productivity in workplaces is affected (CHRGI, 1995). When individuals cannot manage their finances, it becomes a problem for the society.

2.31.B QUALITY, FORMAT AND TIMING OF EDUCATION:

2.31.B.1 QUALITY OF INFORMATION OFFERED:

Some employers have, on their own initiatives, offered financial education programs to their employees. However, the quality of the financial plans offered may be seriously questionable. Arnone (2002) estimated that 40 percent of employers, with more than 1,000 employees, offer some type of educational program; however, he believed that only half of these companies provide a high quality educational program. He defined such a program as "an employer-paid program available throughout the year during working hours and including both education that is custom tailored to the employer's specific benefit plans and counseling that is individualized to each employee." It is his assessment that most of the 42 million participants in 401(k) plans are in effect "on their own" as they plan for retirement.

Clark et al. (2003) also found that financially educating individuals is important since it enables those approaching retirement, to plan so that they eventually can enjoy their retirement. Financial education can improve their knowledge base and help future retirees enjoy their retirement years. These findings have important implications for employers that offer pension plans, especially those with defined contribution plans. He also argued

that while many companies already provide some form of financial education, the quality of these programs has been questioned and of course, many companies do not currently provide any form of financial education to their employees.

Moreover, as regards the quality of financial education in the workplace, certain studies suggest that programs offered by employers should be more focused towards investment education. Blair and Sellers (1995) suggested that most employer-provided financial education focused on investing and was not sufficient. Tiras (1997) also asserted that financial education focused, on investing for retirement, was not sufficient and that employees desired and deserved a far more comprehensive education. In addition, Tiras also provided the suggestion that employees should not only be educated about how to invest their retirement savings but also how to free up money to save. Therefore, the quality of the education program is much more important than simply providing information.

2.31.B.2 FORMAT OF FINANCIAL EDUCATION PROGRAMS:

Sometimes, a lack of financial education programs might not be the sole reason for financially illiteracy. It might be that those plans are not offered in the appropriate format. The design of the plan is important as it is directly related to the amount of information that is retained by the attendees. Mayer (2001) has demonstrated that students experience a greater rate of retention of instructional material when it is experienced through animation (visually) simultaneously with narration that when presented with animation and text. The ability to transfer the knowledge, that is, to apply the knowledge in novel ways, was even more enhanced by the combination of animation and narrative presentation. Mayer also found that a high level of cognitive activity was necessary in order for an instructional experience to result in meaningful learning, i.e., an ability to use the acquired knowledge in novel ways to problem-solve. The student must not be a passive observer but should participate actively in the learning procedures. Active engagements need not be behavioral; it may be mental.

The inappropriate format of financial education programs might be one of the reason why results on the effectiveness of financial literacy training is mixed. Braunstein and Welch (2002) found that some programs have succeeded in improving certain aspects of consumers' personal financial management—such as maintaining a mortgage, increasing savings, or participating in employer sponsored benefit plans—improved financial behavior does not necessarily follow from increased financial information. What is important to ensure that financial literacy programs yield positive changes on households' financial well being, is the timing and format of the training, as well as human traits such as aversion to change.

2.31.B HUMAN TRAITS:

Financial literacy programs surely lead to an increase in the financial knowledge of individuals, but however from what was gathered from previous empirical work, increased information does not necessarily mean an improvement in financial behavior. The main aim of financial literacy program is to inform about financial matters but unfortunately financial behavior does not always follow financial knowledge.

Behavioral economics is the discipline that is going to shed some light on why individuals, who possess reliable and credible information, do not behave to reach a financially optimum decision, as an efficient market would suggest. In examining the disconnect between the efficient markets model and the ''nonrational'' behaviors in which consumers engage, a study funded by the National Bureau of Economic Research (NBER) posited that the risk—either real or perceived—associated with experimenting with something new will cause an individual to remain in a situation that is not optimal[9]. The study's authors also note several economically self-destructive aspects of behavior, such as overconfidence (investing in the absence of complete information), overreaction (exaggerated response to new information), selflessness (giving to charity despite one's

[9] Sendhil Mullainathan and Richard H. Thaler, ''Behavioral Economics,''NBER working paper w7948 (National Bureau of Economic Research, October 2000).

financial situation), and loss aversion (delayed entry into or exit from a financial situation inconsistent with one's financial best interest).

2.31.C DEMOGRAPHICS AND SOCIOECONOMIC FACTORS:

2.31.C.1 INTRODUCTION

The JumpStart Coalition (2000) survey found no significant difference in scores between young men and women. It found that while white students scored on average slightly higher than did minority students and students from families with higher annual incomes scored on average slightly higher than did students of families with lower annual incomes, no racial or income group had a majority of students passing the exam, indicating a national problem rather than one of race or income.

Apart from other authors, Worthington (2004) has shown that the distribution of financial literacy in Australia varies strongly according to demographic and socioeconomic characteristics. All other things being equal, males, older persons, people whose occupations are professional, business owners and executives, small business and farm owners and semi-skilled trades, those with a university education and those with higher levels of income, savings and mortgage debt have a greater likelihood of a high level of financial literacy.

Similarly, Beal and Delpachitra (2003) surveyed students at an Australian regional university and found that most respondents scored reasonably well for basic financial literacy concepts. However, financial literacy was found to vary with work experience and income, and business students generally outperformed those in other disciplines, irrespective of age.

2.31.C.2 LOWER INCOME GROUP:

Low-income families are especially vulnerable to misinformation. Anderson, Zhan, and Scott (2004), in their study, found that people with low-incomes are less likely, than their higher-income counterparts, to have any financial education. Moreover, low-income families are often deprived of access to traditional financial institution. Given that a high proportion of lower-income consumers are 'unbanked', there is added concern that these consumers are inadequately prepared (i.e., lack of experience and information about personal finance and consumer education concepts) to make informed financial decisions (Hogarth and O'Donell, 1997).

Avery et al (1997) also arrived at the same conclusion; that low-income communities often lack such financial institutions as banks that encourage and facilitate sound financial management. Additionally, the lower income groups are usually those which are the less educated and the rapid change in technology is making it even more difficult to use financial products. Comeau and Rhine (2000) stipulated that the ability of consumers to make sound financial decisions has never been more challenged. Changes in technology, affecting both the type and delivery of financial services, have substantially contributed to the complexity associated with making appropriate financial decisions. Financial services have also become more varied in their makeup and sophistication, making it increasingly difficult for consumers to make astute choices among financial services.

In a similar vein, Braunstein and Welch (2002), stated that the growing complexity of financial markets, which widens the choices people have in order to save, invest, and take or avoid risks, requires knowledge to work toward a sound financial position. Hence, since low-income individuals are one of those groups to be most deprived of financial information, the rapid changes in financial products are likely to leave them in an even more disadvantaged position with respect to financial literacy. Having modest or no wealth at all, low-income households are particularly susceptible to financial crises (Anderson et al. 2004).

2.31.C.3 MINORITIES:

Minorities are particularly at risk of predatory lending. Previous studies have found that this is due to numerous reasons, namely, stereotyping and discrimination, poor or no credit histories, and lack of mainstream or alternative financial institutions. From a study undertaken by the Federal Reserve System, the Department of Treasury, and consumer protection and advocacy organizations, the main reason why consumers enter into abusive lending relationships is a lack of positive experience with and information about banking, personal finance, and credit. Hence, Sherry Salway Black, vice president of First Nations Development Institutes, concluded that limited financial expertise and inadequate financial education resources "has played a key role, both as a cause and as an effect, in the lack of access to [affordable] capital and financial services in native communities".

Similar results were found, as racial minorities were found to be less financially literate. Research that examines the influence of race on financial literacy has generally found that racial minority college students had lower rates of financial literacy knowledge than whites (Chen&Volpe 1998; Joo et al, 2003). However, Chen and Volpe (2002) follow up research did not show any significant racial impact with Asians, Black, Latinos and Whites. Although their research had a total of 802 college students; only 59 were black, 76 were Asians, Latino or Native Americans, the remaining were white. Out of 242 participants in Joo et al's article on credit, only 5 were black college students, 27 Latinos or others, and while the rest were white.

Moreover, one reason why minorities are left out in terms of financial knowledge is that they don't tend to use traditional financial institution. Rhine and Toussaint-Comeau (1999), found that consumers who are immigrants or members of a minority group have a greater reluctance to use formal financial institutions because of negative historical experiences and/or perceptions. Immigrants and minorities are more likely to have

nontraditional borrowing and lending habits such as relying on family and friends (i.e., informal markets) to meet their financing needs.

However, measures should be taken to integrate minorities to the use of mainstream financial services. The benefits should be for both the minorities and the financial sector. The former would benefit in terms of a larger choice, for instance by having a deposit relationship with a financial institution, the consumer has greater access to credit for the purpose of purchasing a home or other durable items. Moreover, having access to a checking account can help them to manage more effectively personal finances. The financial services sector might also benefits if minorities are financially educated since this may lead to an enlargement of its customer base and by the same token will lead to a rise in incoming funds.

2.32 MINOR CAUSES OF FINANCIAL LITERACY:

2.32.A TIMING OF FINANCIAL EDUCATION:

Sometimes, even though financial literacy programs are offered, they do not seem to have significant impact on those attending them. For instance, the four Jumpstart surveys (1997), encompassing more than 10,000 high-school seniors, have shown little overall difference in financial literacy test scores between those who have taken an entire semester’s course in financial management and those who have not.

Mandell (2006) argues that the reason for this puzzling phenomenon is simply that students do not immediately make use of what is being taught to them in the financial management class in high school and therefore the information transferred through the program tends to be quickly forgotten. For instance, the 2004 Jumpstart survey showed that only 16% of high school seniors had a credit card in their own names, it’s not surprising that the other 84% might disregard credit card information. Hence, the advocates of the Just-in-Time financial education suggests that financial education on specific topics should be delivered at the time where the individuals are going to use it.

For example, information about mortgage loans was offered to young married couples or anyone willing to buy a home.

Consequently, according to the just-in-time hypothesis, financial illiteracy is not because of the non provision of financial education, but simply result from the issue that students do not retain much of the information transmitted, since they are not going to use that information immediately.

2.32.B EDUCATION LEVEL AND PARENTS' INFLUENCE:

The 2000 Survey found that students with higher education aspirations and higher anticipated future income scored higher than students who did not intend to continue onto higher education and who anticipated lower future incomes. This is especially troubling if one considers the fact that lower wage earners are those who should be more careful about finance management and who would definitely benefit from financial education (Bristol, Fehr and Johnson (2003-02)

Moreover, another cause of lack of financial knowledge is parental's influence. Hayhoe and Ray (2004) contends that program should help parents demonstrate appropriate consumer and financial management and give their children opportunities to learn about money management and the marketplace before they go to college. Skills need to be practiced to reinforce learning. Once a student enters college or the workplace, parents and families should continue to encourage appropriate money management skills. Whenever financial literacy programs are not available, parents should request schools and communities to provide it and also encourage their children to participate in them.

2.32.C LACK OF UNDERSTANDING OF THE TERM FINANCIAL LITERACY:

One puzzling fact is that there is a lack of understanding of the term financial literacy and that it is not frequently heard or used. The Erebus research discovered that in the implementation of programs at school and class room level, there is currently a wide

interpretation of the term and its related concepts. In their interview with educational stakeholders (officials from Boards of Studies and other curriculum authorities and approximately 30 teachers) they found that, overwhelmingly, there was little understanding of the term financial literacy. Most respondents could guess the meaning of financial literacy, but they did not have a good grasp of what this may imply in schools.(Stock and Morony ASIC Paper 2003)

One aim of the ASIC organization is to raise the level of financial literacy and make individuals aware of its importance. However, from what is gathered from Stock and Morony (2003), before the ASIC can achieve its aim, there needs to be some agreement about what the term financial literacy means, or more practically, what a financially literate person needs to know.

The definitional understanding of the term financial literacy has to be taken seriously. **According to a research report commissioned by the Department of Education, Training and Youth Affairs (DETYA) in January 1999 to** evaluate the teaching of enterprise education in schools[10] was that there are significant variations in the way people use and understand the term enterprise education. There is no consistency in understanding being applied within or across the education, business and industry sectors, and many people are confused and/or uncertain about its meaning.

The lack of consistency in the definition of financial literacy was found to be of consequence as it affected people's attitude to it, their approach to implementing it; and their judgment of its success. The curriculum research revealed that although there are numerous opportunities for teaching financial literacy, there is no coherent coverage of key topics that can be readily labelled as financial literacy (ASIC 2003). Without clearly identifying what financial literacy means, it is barely impossible to develop within the syllabus a clear curriculum for learning, which will eventually be implemented.

[10] *Evaluation of the Enterprise Education in Schools (EES) Element of the School to Work Programme,* prepared by Keys Young for the Department of Education, Training and Youth Affairs, June 1999.

Finally, if the term financial literacy is not properly defined, the extent to which students will be exposed to financial literacy would be seriously constrained since the possibilities for deeper study of the topic is only optional.

2.4 IMPORTANCE OF FINANCIAL LITERACY:

2.41 INTRODUCTION:

The major objective of financial education is to inculcate to individuals the knowledge of how to manage money efficiently. Sebstab and Cohen (2003) argued the aim of financial education is to enable people to become more informed financial decision makers, develop awareness of personal financial issues and choices, and learn basic skills relating to earning, spending, budgeting, savings, borrowing, and investing money. Thus, by being financially literate, it is easier for people to set their financial goals and optimize their financial options.

A statement made by the treasury secretary Paul O'Neil at the conference on financial literacy initiated by the Consumer Bankers Association (2002), can be considered as striking and perfectly describes the importance of financial literacy and it is as follows "Ownership, independence, and access to wealth should not be the privilege of a few. They should be the hope of every Americans. Financial literacy is an essential tool to make that hope a reality. Studies also tell us that financial education is an indispensable element of any strategy to combat the rise of predatory lending". This statement clearly that financial literacy, demonstrate not only the power to help individuals to achieve their goals but also to prevent them from engaging in abusive practices that can have the power to negatively affect their lives.

Similarly, a participant at the symposium undertaken by the National Endowment for Financial Education (NEFE) in 2002 stated " I think the most powerful thing to know about money is that it has the power to make your dreams come true," This means that

people can only make money work for them if they understand how to manage their personal finance.

2.42 ECONOMIC IMPORTANCE OF FINANCIAL LITERACY:

2.42A POSITIVE CHANGES IN FINANCIAL BEHAVIOR:

2.42A.1: INTRODUCTION:

Thousands of Americans have become smarter financial consumers and participate more successfully in the economy, after attending educational programs. Financial education enables the population to make responsible decisions as market participants. Hence, market participants who are properly educated will be in a better position to contribute to the stability of the financial system and the well being of the national economy (Hawke 2002). As a result, the federal bank regulatory agencies—charged with maintaining stability in the nation's financial system—have an intrinsic responsibility to provide financial education opportunities to the public[11].

Moreover, Sebstad and Cohen (2003) asserted that people in developing countries are more in need of financial education, particularly those who are deprived of resources, who operate at the margin, and who are vulnerable to downward financial pressure. Women, in particular, often assume responsibility for household cash management under difficult and unstable circumstances and with few resources to fall back on. They often lack the skills or knowledge to make well informed decisions. Financial literacy should enable them make appropriate decisions and be better prepared to face daily financial demands. Furthermore, they will possess the knowledge that will enable them to prepare ahead of time for life cycle needs and as such attend to unexpected events without assuming unnecessary debts. Financial literacy can increase their decision making power

[11] (33Financial education in a dynamic banking environment (An update on emerging issues in banking Nov 5, 2003)

and prepare them to cope with financial demands of daily life. It can help them prepare ahead of time for life cycle needs and deal with unexpected emergencies without assuming unnecessary debt. Financial planning can help people position themselves to take full advantages of new opportunities when they present themselves. (Sebstad and Cohen, 2003)

2.42A.2 EMPIRICAL EVIDENCE:

The absence of financial literacy can constitute a serious handicap to an individual because a person will eventually find himself in financial distress and unable to achieve his aims. The following facts should help explain how damaging financial illiteracy could be: Some 40% of Americans live beyond their means. Average credit card debt per household rose to $8562 in 2002 from $2985 in 1990. More than half of American workers between the age of 45 and 54 did not have any kind of retirement account in 1998. (Breitbard 2003).

Similarly, Beal (19 2003) reached the conclusion that the symptoms of insufficient financial literacy includes rising individual debt levels with overuse of credit cards, using personal loans for consumption and undertaking over-optimistic home-loan obligations, irresponsible overspending on consumption, foolish commitment to get-rich-quick schemes, making vehicle-leasing contracts, among others. On a more mundane level, people on lower incomes often make unwise commitments to mobile-telephone contracts, buy now-pay later purchases, long-term exercise-centre contracts and expensive diet plans.

Besides, a survey on financial literacy conducted by Princeton Survey Research Associates on behalf of The Consumer Federal of America and NationsBank, also reached deceiving results where adults Americans obtained an average scores of only 42%, while only 8% of the participants obtained a score of 75% or higher. The resulting consequences of such missing financial acumen is a doubling of personal bankruptcy filling between 1990 and 2000 and the admission by four of ten Americans that they live

beyond their means primarily due to misuse and misunderstanding of credit (US Department of Treasury, Office of Financial Education, 2002).

One obvious solution to reduce the financial difficulties of individuals is to provide financial education programs that would improve financial literacy. Certainly, a financially literate person is in a better position to take efficient decision regarding money matters. For instance, Garman et al (1998) examined the effects of providing workplace financial workshops (one to four) on worker's financial management where 75% responded that they became more confident in investment decisions due to financial education and 70% said they changed their investment strategy by diversifying or being more aggressive in their choices. However, the data only originated from post-assessment surveys of employees after programs were delivered years ago. Correspondingly, Huddleston and Danes (1999) examined the impact of a high-school financial planning program on a national sample of students in the USA. They found that teaching personal finance (PF) in high schools could increase financial knowledge and had a positive impact on both teenage financial behavior and subsequent behavior as adults. Further, they urged that PF become a mandatory component of consumer education in schools (Huddleston and Danes, 1999).

Following the same line of reasoning, financial education programs, like any other educational initiatives, have impacts that are difficult to quantify. However, from previous empirical work, it was observed that financial education tended to increase financial literacy and subsequently improved financial behavior, although the exact improvement could not be measured quantitatively. A study carried out by the Federal Reserve Board found that financial knowledge can be statistically linked to financial practices, such as cash-flow management, credit management, saving, and investment[12]. Another study undertaken by Freddie Mac found that homebuyers who obtain structured homeownership education have reduced rates of loan delinquency[13]. When the National

[12] Hilgert, Marianne A., and Jeanne M. Hogarth. "Household Financial Management: The Connection between Knowledge and Behavior." *Federal Reserve Bulletin*. July 2003.

[13] Hirad, Abdighani, and Peter M. Zorn. *A Little Knowledge Is a Good Thing: Empirical Evidence of the Effectiveness of Pre-Purchase Homeownership Counseling*. Freddie Mac. May 22, 2001.

Endowment for Financial Education evaluated its high-school-based programs, it found that participation in financial-planning programs improved students' knowledge, behavior, and confidence about personal finance, and that nearly one-half of the participants began to save more after participating in the program[14].

Finally, certain studies suggest that improving financial literacy through financial education does not necessarily imply improved behavior. Existing research definitely argued that there is a correlation between financial literacy and behavior, although the direction of causality remains unclear. As Hogarth, Beverly, and Hilgert (2003) suggested, this correlation does not necessarily mean that more knowledge improves behavior. Perhaps more experience in financial activities, or learning by doing, leads to more financial knowledge.

However, evidence still reveals that the level of financial knowledge that households possess has an impact on its inhabitants' future behavior. Hilgert and Hogarth (2003) detailed this link statistically by examining sources of financial experiences, knowledge and practices in the 2001 Survey of consumer finances and the University of Michigan's 2001 Surveys of Consumer. By exploring consumer behavior and knowledge in cash-flow management, credit management, saving, and investment, the authors found that those who knew more in each of these area also tended to "score" better in terms of financial practices-such households were more likely to follow sound financial behaviors. Hence, the concluding point would be that there are plenty of reasons for policy makers to promote financial literacy. People, who are financially knowledgeable, as a result of well-designed and well-executed financial education programs, will be in a better position to make sound economic choices for themselves and for their families. They are more likely to own their own homes and to keep them, with all the social and economic advantage that go with ownership. They are more likely to accumulate assets and less likely to be burdened by excessive debts. (Hawke, 2002)

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[14] Boyce, Laurie, Sharon M. Danes, Catherine Huddleston-Casas, Mindy Nakamoto, and Amy B. Fisher. "Evaluation of the NEFE High School Financial Planning Program 1997-1998." National Endowment for Financial Education. October 1998

2.42B LOSSES TO THE FINANCIAL SECTOR:

2.42B.1 INTRODUCTION:

Participants to the symposium carried out by the National Endownment for Financial Education (2002), in Colorado, agreed that the health of the nation's financial system depends on the ability of its people to effectively manage their own finance. Customers like minorities and low-income group who are less familiar with the traditional banking system are more likely to be the victims of abusive financial practices such as predatory lending.

2.42B.2 EMPIRICAL EVIDENCE:

2.42B.2. (1) THE UNBANKED: MAKING USE OF NON-TRADITIONAL BANKING

Those who have been abused, when engaging in financial transactions might be unwilling to make use of financial services again. This definitely represents a loss to the financial sector. Hawke (2002) argues that there is a large number of Americans who are 'unbanked'. They are people who may use the banking system for a casual transaction or two, or maybe not at all. By definition, they don't have a savings or checking account, and they rely on non-bank financial providers when they need to cash a check or to buy a money order. Furthermore, there is a second category of individuals who are also called 'unbanked'. The latter constitute of millions of people who may have a bank account, but who rely to a greater or lesser extent on high cost, short-term credit provided by non-bank lenders, often in the form of payday loans. Hawke (2002)**.**

Those two groups may diverge from each other, but they definitely have a lot in common too. The most striking similarity between them is that they both pay more than they should for the financial services in a fully competitive market. Moreover, given their lack

of financial literacy, those individuals will not use the traditional banking system; therefore implying losses to the bank in terms of potential clients.

2.42B.2. (2) TOO COMPLEX FINANCIAL PRODUCTS:

There are still more than 10 million individuals in America who fall outside the financial mainstream and do not maintain traditional bank credit, savings, or investment accounts. Others have actually ventured into the financial world, but they find themselves having to choose between a wide array of complex financial products. Some will find themselves unprepared to deal with the complexities that characterize today's financial services. For example, the decision to open a checking account would have been very simple some thirty years ago. You would walk into your hometown bank, the tellers and the bank manager knew your name; the product choice was simple (about all you had to choose was the color of your check); and the bank was on the corner. Today, the bank may still be on the corner but it's likely to be on the Internet; the product choice is much more diverse (bank have several basic and interest checking accounts along with electronic transaction account); and with mergers and acquisition, the staff may not know you at all. With technological innovation; the customers should be able to chose effectively among the different products and take the decision that would maximize gain. However, due to a lack of financial literacy, some individuals hesitate to use mainstreams financial services and this certainly represent a loss to the financial sector.

However, efforts are being made to encourage the 'unbanked' and the undeserved to invest in today's consumer financial market. For example, more banks are offering the U.S. Treasury Department's low cost Electronic Transfer Accounts so that federal payments recipients can take advantage of direct deposit[15]. Moreover, many

[15] The Debt Collection Improvement Act of 1996 (Public Law 104-134) includes a provision for mandatory electronic funds transfer (EFT) for most federal payments effective January 1, 1999. One of the purposes of this provision was to provide incentives for consumers to receive federal payments electronically through direct deposits and increase their access to accounts at federally insured financial institutions

organizations, both in the public and private sectors, have developed financial education programs in an effort to help consumers. The FDIC introduced its own financial education curriculum in 2001. The FDIC's *Money Smart* program was specifically designed to meet the needs of low- and moderate-income adults, including the unbanked and underserved populations, introduce them to banking and financial concepts, and equip them to manage their finances safely and wisely.

Finally, the technological advancements achieved over the last decade, have revolutionized consumer banking. Some important changes include: deregulation of interest rates, expansion of the general purpose credit card market, improvements to credit scoring models, advancements in risk-based pricing strategies, and growth in loan securitization. The consumer lending revolution has indeed resulted in the democratization of credit, and consumers have had access to new and innovative products[16]. Hence, to maximize this benefits the financial sector should educate the public about the different choices that they have and as such they should be able to decide about which products suit their need the best.

2.42B.2. (3) CULTURAL DISTRUST OF BANKS:

A significant number of household who do not possess a bank account, relate that they do not like dealing with banks. Often, they are imbued with a cultural distrust of banks, and they may be concerned about privacy. Some feel that banks charge unreasonable fees, require unmanageable minimum balances, or provide banking services that do not meet their needs. Others are plagued with credit problems or feel that they do not have sufficient funds to justify having a bank account. Many also admit that a lack of education is an obstacle, and over 10 percent of the unbanked population acknowledges that they cannot manage or balance a checkbook[17].

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[16] See Susan Burhouse, "Evaluating the Consumer Lending Revolution," FDIC: *FYI*, September 17, 2003.

[17] Ibid

Instead of using the traditional banking sector, the ‘unbanked’ uses ‘fringe bank’ or "non-banks"—such as check-cashing outlets, wire transfer companies, payday lenders, and pawnshops. Hence, as a result, once more, mainstream financial institution loses potential customers. (Gambrell, 2003). One measure adopted by banks are the enhancing of bilingual services and marketing; offering low cost or free money orders and check cashing services even to non-account holders, and modifying personal identification requirements to better serve non-resident immigrants. In addition, financial institutions are lending to "riskier" individuals who might have been denied credit in the past. As such, banks should at the same time provide financial education workshops to increase financial literacy and increase the general trust of individuals regarding the traditional financial sector.

2.42C HIGHER PRODUCTIVITY:

2.42.C (1) INTRODUCTION:

Providing workplace financial education is beneficial both to the employer and the employee. By being financially literate, the workers should be in a better position to take effective and profitable decisions regarding money matters. An employee taking better financial decisions would reflect overall financial well-being. Moreover, employees who are maximizing the benefits available to them will more likely have greater job satisfaction, which may result in lower turnover. As for the employer, a financially stable individual is unlikely to suffer from financial stress and therefore would be more productive. Hence, the employer would benefit from better quality services from his employees. For example, they are going to be less absent from work, they will spend less time at the workplace dealing with financial crises and hence will earn higher job performance ratings.

2.42.C (2) EMPIRICAL EVIDENCE:

Many studies have been conducted on the relationship between financial literacy and workplace productivity. Most reached the conclusion that the lack of financial education leads to financial stress and thereby influences various life functions of the individual including workplace productivity (Garman, Leech, & Grable, 1996; Luther, Garman, Leech, Griffitt, & Gilroy, 1997). By having financial problems, an individual will suffer from a fall in the workplace morale and this would impact negatively on his work performance. Based on his experience as a pastoral counselor, Brown pointed out the importance and effectiveness of workplace financial counseling (Brown, 1979; Brown, 1993). Workplace support is helpful for both employees and employers.

Kim[18] (1999) found significant relationships between financial satisfaction, personal finance-work conflict, organizational commitment, and pay satisfaction. Joo[19] (1998) found that a higher level of financial well-being was associated with higher performance ratings, less absenteeism, and less work time loss. In addition, Parker (1994) showed that workplace support was the most significant factor affecting the degree of welfare reliance by single mothers. Helping employees with personal problems influences productivity. Wagner (1982) asserted that workplace assistance for employees with problems "can bring about incredible success in improving productivity and reducing costs" (p.59). Garman (1997) suggested that financial education in the workplace is a key factor in both recruitment and retention of workers. He also said "the best employers today are selling prospective employees on the idea that they offer an excellent financial education program."

Finally, the Iowa State University at the National Extension Association of Family and Consumer Sciences carried out another study. The research was based on the relationship

[18] Kim, Jinhee, Financial Satisfaction, Personal Finance-Work conflict, and Work Outcomes (Pay Satisfaction, Organizational Commitment, and Productivity). Proceedings of Association for Financial Counselling and Planning Education 1999.

[19] Joo, S.Personal Financial Wellness and Worker Productivity. Unpublished doctoral dissertation: Virginia Polytechnic Institute and State University, Blacksburg, VA, 1998.

between financial education in the workplace and workplace satisfaction[20]. Using data from a national sample of employees of an insurance company, the study found that employees who participate in workplace financial education more fully understand personal finances and recognize how financial literacy impacts their future financial matters. Moreover, the study found that employees gain confidence in financial matters and their future financial situation through workplace education, and are more likely to be satisfied with and supportive of their company.

2.42D BETTER ECONOMIC WELL-BEING:

2.42D (1) INTRODUCTION:

The financial literacy of the public has become a serious issue for policy makers. The concern is that individuals in general do not possess the required financial knowledge that would provide the tools to achieve the highest level of economic well being. Lacking financial skills can be disadvantageous from an individual point of view and can prevent the person from achieving long-term goals. Furthermore, being unable to manage effectively his personal finance an individual might eventually face a severe financial crisis.

Conversely, from a broader perspective, market operations and competitive forces are compromised when consumers do not have the skills to manage their finances effectively. Informed participants help create a more competitive, more efficient market. As knowledgeable consumers demand products that meet their short- and long-term financial needs, providers compete to create products having the characteristics that best respond to those demands (Braunstein and Welch 2002).

A statement reached during the symposium convened by the National Endowment for Financial Education in Colorado (2002), is that financial education is becoming

[20] Hira, T.K (2005). Understanding the Impact of the employer-provided financial education on workplace satisfaction. Journal of Consumer affairs, 39(1)

increasingly important to the broader economy. Continuing innovation in banking practices has resulted in an increasingly market-based banking system that relies vitally on timely and accurate information to operate efficiently. Educated consumers shape what services financial institutions deliver and how they deliver them. As a result, consumers that are unaware of innovations in banking will be increasingly left behind as the market continues to innovate. Innovative financial institutions responding to educated consumers will allocate capital through the economy most efficiently.

2.42D (2) EMPIRICAL EVIDENCE:

America is one of the countries where the financial illiteracy of its population has had negative impacts on the economy as a whole. Perhaps the most vivid example comes from the rapid business decline in the first years of the 21st century, when millions of Americans lost their retirement savings along with their jobs. "The 90s suspended reality," one participant to the symposium carried out by NEFE claimed. Paradoxically as stock prices went up, financial literacy went down. Buoyed by confidence in an inflated stock market and a seemingly endless cycle of growth, investors eschewed financial wisdom in favor of corporate America's predictions of perpetually expanding wealth. And the nation paid-and is still paying –the price.

Similarly, the terrorist attacks of the 11th September 2001 was impossible to predict. Yet, if the American population had been financially literate, they should theoretically have been able to reduce the significance of individual loss that they had incurred. For example, many survivors of 9/11 victims discovered that their loved ones had not made adequate financial arrangements: insurance was insufficient, beneficiaries were not designated, and contingency plans for spouses and children were incomplete or nonexistent. Further, many who incurred financial losses due to the economic downturn could have better protected their assets by employing a couple of basic financial principles: diversify your investments and maintain a reserve account (NEFE Symposium in Colorado in 2002).

Furthermore, in relation to the native communities, Malkin (2003), concluded that industry leaders in the economic development field have recognized that changes in the global financial system and the fragile position of today's consumers means that higher levels of financial competence is required to shield the financial health of families, facilitate economic investment into low-income communities, and build the capacity of future leaders to engage in and benefit from the capital market.

Furthermore, Malkin (2003) also found that a lack of financial expertise and the scarcity of financial education resources allocation to the native communities have seriously curbed the economic health of these communities. A study conducted by the Native American Working Group of the Office of the Comptroller of the Currency found that the most important factor in raising access to affordable financial services and curbing predatory lending is financial education[21]. Hawke (2001) recommended that banks support and participate in financial education initiatives, noting that, "improving financial literacy is a key component to developing a market for financial services in Indian Country"[22].

Additionally, the Native American lending Study also reached the conclusion that by being financially educated the tribal members were more likely to rate financial products and services as easier to access. Hence, by being more active participants in the financial market the native communities will create a more competitive and efficient market, where the economy as a whole will benefit.

[21] Office of the Comptroller of the Currency. (1997, July). Providing Financial Services to Native Americans in Indian Country. Community Dividend Newsletter

[22] Office of the Comptroller of the Currency. (2001, Fall). Banking in Indian Country: Challenges and Opportunities. Community Dividend Newsletter

2.42E HIGHER STOCKS RETURNS TO COMPANIES RESULTING FROM HIGHER FINANCIAL LITERACY:

From a cost and benefit analysis point of view, financial literacy programs are worth being provided by employers. Coates, Marais and Weil (2005), have tried to determine the potential costs and benefits that a firm would derive if it offered financial education workshops to its audit committee. They found that the pocket cost is likely to be zero, but surely less than $100,000 per year for replacing a 3 or 2 or 1 with a member who scores 4.

On average, for companies with market capitalization of $10 billion, companies which improved their audit committees' potential literacy had increases in wealth of about $580 million per year greater than the companies whose audit committees didn't improve.

Hence, Coates, Marais and Weil (2005) established that firms who had enhanced the financial literacy potential of their audit committee over the last four years were likely to experience superior stock market returns. The improvers in their sample enjoyed annualized abnormal excess returns of 4.6% per year more than those, which did not improve.

2.43 SOCIAL IMPORTANCE OF FINANCIAL LITERACY:

2.43.A: EFFECTIVE DECISION MAKING FROM A SOCIETAL POINT OF VIEW:

2.43.A. (1): DEFINITION:

Poor financial literacy may potentially result in devastating consequences both from an individual and a societal point of view. Financial literacy was defined in the UK by

Noctor, Stoney, and Straddling (1992) as “the ability to make informed judgments and to take effective decisions regarding the use and the management of money.”

Moreover in today’s world, where society is becoming more consumer-oriented and where credit cards and self-service banking technologies are strongly advertised, being financially knowledgeable is important. Deficiencies in financial literacy constitute a serious handicap to the individual.

2.43.A. (2): EMPIRICAL EVIDENCE:

Beal and Delpachitra (2003) include among the behavioral symptoms of poor literacy issues such as the overuse of credit cards to the point where debts cannot be met, using personal loans for consumption, undertaking overly-optimistic home-loan obligations, foolish commitment to get- rich-quick schemes, making unwise high-risk investments inconsistent with required capital stability, and entering inappropriate vehicle-leasing contracts. Those financially incompetent conducts may be seriously destructive from an individual and social point of view. The Australian Securities and Investment Commission (2003) recorded $800 million in losses to Australian consumers in the last 3 Years from scams. This single example illustrates the gullibility of the Australian public where financial matters are concerned but the issue runs much deeper than mere susceptibility to scams. This simple fact illustrates how unsophisticated financially the Australian public is and unfortunately the issue runs deeper than bare susceptibility to scam. In this case, financial illiteracy has had serious negative impacts on the society. Read (2003), speaking at the ASIC stakeholder forum in Sydney, highlighted the following areas of concern (a) bankruptcies, with youth bankruptcies increasing; (b) marriage breakdown, where financial problems are a common cause;(c) crime pressure placed on individuals because they are part of a consumer society; (d) personal hardship from growing consumer debt; (e) low level of national savings which has an economic impact on all members of society.

Being guileless in terms of financial behavior normally result in personal financial problems. Poor financial are "personal and family money management practices that have consequential, detrimental and negative impacts on one's life at home and/or work" (Garman et al., 1996). The latter identified 35 examples of poor financial behaviors that negatively impact family and work life. Personal financial problems are frequently cited in the press as a cause of workplace troubles. For example, a Wal-Mart employee was accused of embezzlement in a phony refund scheme, and the reason for the embezzlement was a shortage of income (Hemphill, 1997).

Hogarth and Hilgert (2002) found that financial literacy has made a step up on the agenda of educators, community groups, businesses, government agencies, organizations and policy makers. Being well informed about financial matters, individuals should be able to take better decisions concerning their families and by the same token increase economic security and well-being. Secure families are better able to contribute to vital, thriving communities, further fostering community economic development. Thus, financial literacy is not only important to the individual household and family, but also to their communities as well (Hogarth and Hilgert 2002).

Financial stress will negatively impact on individual and family well-being. Specifically financial strain has been linked to depression, anxiety, marital conflict, alcoholism, and drug abuse. Individuals experiencing financial problems have also been found to exhibit lower productivity, greater absenteeism, and other workplace problems such as stealing (Brown, 1999; Garman et al., 1996; Joo & Garman, 1999; Peirce, Frone, Russell, & Cooper, 1996). Furthermore, in developing countries, where resources are sometimes scarce, financial education is seen to play a big role in the life of young people. Adolescence is an important period to learn about techniques for earning, spending, savings and investing money.

Sebstad and Cohen (2003) postulated that most adolescents (and adults) learnt these skills through trial and error. While money management is an important dimension of day-to-day life for everyone, money management skills can help young people grow more

independent, self-confident, and prepared for the future. The main reason why inculcating financial knowledge to the youth of developing countries is crucial is that those youngsters usually start to work at an early age out of necessity. Moreover many factors associated with risky sexual behavior in adolescents relate to poverty, vulnerability, limited assets, and decision-making skills, financial literacy can provide young women an economic safety that can help them avoid risky sex. By emphasizing practical skills to plan for the future, financial literacy can play an important role in promoting a "future orientation". (Hallman et al, 2003)

In the context of families and communities affected by HIV/AIDS, effective budgeting and management of household financial resources is a critical coping strategy. (Barnes 2002; Donahue et al 2001; Parker 2000). Furthermore, a staggering situation occurred once due financial stress, which was caused by poor financial knowledge. There was the story about a truck driver who stole air force missiles because of debt problems ("Truck driver," 1997). Sporakowski (1979) argued that financial problems cause stress and crisis. He noted the significant relationship between financial problems and stress-related illnesses. He further contended that financial problems may influence a person's other daily life functions. Related to this, Cash (1996) identified financial problems as the number one source of stress.

2.43.B BETTER PLANS FOR RETIREMENT:

2.43.B. (1): INTRODUCTION:

The Employee Benefit Research Institute (EBRI) Retirement Confidence Survey (2001), argued that a large proportion of workers have done little or no planning for retirement. Only 39% of workers have tried to determine with some accuracy how much they need to save to fund their retirement. This figure is a bit higher than in previous years. In the early 1990s, often less than one third of workers tried to calculate how much money they needed to save for retirement. When asked why calculation was not attempted, many respondents replied that it was difficult and that they did not know where to find help to

do it. By being financial illiterate, some workers might start saving too late and thus end up being in a position where they cannot realize retirement goals. The resulting effect is that they might not attain the optimal balance between current consumption during working period and future consumption during retirement.

Alan Greenspan, the Federal Reserve Chairman stated that education can play a critical role by equipping consumers with the knowledge required to make wise decisions when choosing among the myriad of financial products and providers. In addition, comprehensive education can help provide individuals with the financial knowledge necessary to create household budgets, initiate savings plans, manage debt, and make strategic investment decisions for their retirement or children's education. Having these basic financial planning skills can help families to meet their near-term obligations and to maximize their longer-term financial well being. While data available to measure the efficacy of financial education are not plentiful, the limited research is encouraging[23]. Hence, it may be argued that financial education is definitely helpful in planning for retirement.

Maki (2001) specified that education altered savings and investment in 3 ways. First, financial education could increase household savings by causing the family to reduce its discount rate. Second, increased knowledge could lead the household to become less risk averse and thus increase investment in assets with a greater level of risk and expected return. Finally, financial education programs could change the household's knowledge of its investment choice set. For example, the information may reveal to workers that it is impossible to achieve the current goal of retiring at a specific age with a certain level of income using the existing saving and investment strategy. Maki dismisses the first two

[23] Lusardi (2000) agrees that financial literacy is a key to effective retirement savings and concludes that lack of planning and a lack of understanding the savings process is one of the primary reasons for the low savings rate in the United States. She also argues that more research is needed "to determine why households do not plan for retirement, and whether the provision of information … can play a role in affecting household decision making and, ultimately, the financial security of many American households

possibilities and argues that greater knowledge of what is possible is the primary mechanism through which these programs alter household decision-making.

2.43.B. (2): EMPIRICAL EVIDENCE:

Lusardi (2000a, 2000b) has used the Health Retirement Study to report that lack of planning is pervasive even among older workers, who are 5 to 10 years away from retirement. These findings are consistent with several other studies, which document that many workers do not possess the information necessary for making savings decisions. Madrian and Shea (2001) examined the administrative records of a large employer in the health care and insurance industry. The only retirement plan offered by this company is its 401(k) plan. In 2000, the company offered one-hour financial education seminars at 42 different sites.

Lusardi (1999, 2000a) found that planning had effects on both saving behavior and portfolio choice. Households whose head had not planned for retirement accumulated much less wealth and after accounting for many determinants of wealth and after accounting for pension and social security wealth. In addition, household that did not plan were less likely to invest in high return assets such as stocks. Examining data for workers who had already retired, Lusardi (2000a) also showed that those who did not plan report experiencing a less satisfying requirement.

In this new environment, where the level of retirement income held by individuals depends mostly on themselves and their financial knowledge, an understanding of the retirement savings process, and recognition of the need for adequate savings have become critical to successfully achieving one's retirement objectives. However, from the facts obtained in the previous empirical studies, it can be said that individuals seem to possess extremely poor knowledge of financial markets. They also do not know how much they need to save to achieve retirement goals and cannot calculate the risks associated with specific assets. Hence, the need to improve financial literacy of the members of society is crucial.

2.43.C AVOID ABUSIVE PRACTICES:

2.43.C. (1): INTRODUCTION:

Unethical or predatory mortgage lending practices refer to situations where the contracts being made are not technically illegal but rather inappropriate for and disadvantageous to the consumers. An example is a loan structured with relatively small fixed payments in the early years but a large ''balloon'' payment at the end of the loan term. Such a structure recognizes that a younger borrower's future earning potential is generally greater than his or her current income and assumes that the borrower will be able to refinance at the end of the loan term. While the arrangement makes mortgage payments more affordable for some borrowers, it can be devastating to those living on fixed incomes (Braunstein and Welch 2002).

Borrowers who have difficulties in understanding the term of the contract and who are not well versed about credit transactions, are more likely to be the victims of abusive practices. Although, regulatory protections and legal remedies are important, consumer education is seen as an essential element for combating and preventing predatory lending[24].

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[24] In 1999 and 2000, a variety of efforts were undertaken by federal, state, and local agencies to gain insight into abusive lending practices. The Federal Reserve hosted a series of public hearings to obtain comment on proposed revisions to the regulation implementing the Home Ownership Equity Protection Act, a statute enacted to stem unscrupulous lending by increasing disclosure requirements and consumer protections for high-cost loans (www.federalreserve.gov/ events/publichearings/default.htm). A joint task force of the Department of Housing and Urban Development and the Department of the Treasury released a report of findings and policy recommendations regarding predatory lending (www.huduser.org/publications/hsgfin/ curbing.html). In both cases, financial education was recommended as a means of helping borrowers better understand the basics of mortgage credit.

2.43.C. (2) EMPIRICAL EVIDENCE:

In the late 1990s, concerns were raised as to the scope and impact of unscrupulous credit lending, which is also called predatory lending. Such a concern originated due to an increase in the anecdotal reports of unfair and deceptive home equity lending practices (Braunstein and Welch 2002). The main reason why people fell for abusive practices is due to their lack of financial knowledge or more specifically their financial illiteracy. The National Association of Citizens Advice Bureaux (CAB) in the UK[25] conducted a research on the actual experience of CAB advisers. They found that not only did financially illiterate consumers have difficulty choosing appropriate financial products and services, they were also more likely to fall victim to abusive practices and often responded to financial difficulties in ways that resulted in additional problems. Estimates of the cost of poor financial literacy ran into billions of pounds.

One solution to prevent individuals from falling for abusive practices is to provide financial literacy programs and according to previous literature, training programs are found to be effective both for teens and adults. Boyce and Danes (1997-1998) conducted a study in which they observed the money management behavior, financial knowledge and confidence in dealing with money matters among students. The survey consisted of 4000 students from 188 high schools. They repeated the survey after students had completed National Endowment for Financial Education's (NEFE's) High School Financial Planning Program (HSFPP) and again three months after students completed the HSFPP curriculum. Eighty-six percent of the students reported increased knowledge and/or positive changes in financial behavior and 42% reported an increase in confidence regarding money matters immediately following completion of HSFPP. Three months later, more than half of the students reported improved spending and savings habits and 39% reported having started a savings account.

[25] *Summing Up: Bridging the Financial Literacy Divide,* National Association of Citizens Advice Bureaux, November 2001.

This is particularly important, since as according to Bernheim, Garrett and Maki (1997), those who learn to save as teenagers, have been shown to save more as adults. By saving more and controlling their spending, individuals are less likely to find themselves in a position where they are forced to make use of non-traditional source of funds. This often results in the customer being abused by the lender.

2.44 ECONOMIC AND SOCIAL IMPORTANCE OF FINANCIAL LITERACY:

2.44. A TRIGGERS POSITIVE SAVINGS BEHAVIOR:

2.44. A. (1) INTRODUCTION:

Financial education program has the power to instigate saving initiatives among those who participate in them. Higher savings is advantageous from both a societal and economic point of view. From the social point of view, a rise in saving is beneficial to the individual himself or herself as it enables him or her to be prepared to meet adverse events. Moreover, a financially stable individual is less likely to engage in unscrupulous actions like theft and burglary, which without doubt will affect negatively the society. Hence, given that financial literacy programs leads to higher savings and improved financial behavior, it can be argued that those plans are beneficial to society.

On economic ground, given that savings tend to be positively correlated to financial education, a rise in the latter will lead to an increase in funds available to investors. In a situation where the country's economic development is constrained due to lack of loanable funds, financial education programs may prove valuable. Even more so, when tax policies to raise savings are found to be controversial. Furthermore, a rise in savings help to reduce consumption, which in turn will diminish pressure on prices and hence leading to a fall in inflation. With lower inflation, the society once again benefits through lower price goods and hence a rise in standard of living.

2.44. A. (2) WORKERS:

Several studies have been undertaken by Virginia Tech's National Institute for Personal Finance Employee Education (NIPFEE) on the effects of financial education at the workplace. One of the most important finding is that the first reason why employees were not saving for retirement was because they had money and credit problems. The second reason is that employees have yet to be persuaded that saving for retirement was really important to them (Garman, 1997). Hence, the solution would have been to provide financial education in the workplace. Several studies have also concluded that workplace financial education does increase financial literacy, hence raising retirement savings and improving financial management. By trying to determine the effects of financial programs at the workplace, Bayer, Bernheim and Scholz (1996) found that participation in and contributions to voluntary savings plans increased when employers offered retirement seminars. Further, this effect was more pronounced in lower-income populations. For lower-wage employees, frequent seminars, offered with retirement plans, resulted in a participation rate that is 11.5 percent higher than for those plans without the seminars. For highly compensated employees, there was a 6.4 percent difference.

Similarly, in accordance with Kim, Bagwell, & Garman (1998); Kim, Bagwell, Garman, & Goodman (1998), a high proportion of workers who attended a seminar on financial education were satisfied with the knowledge that they have acquired. Moreover, those workers were more likely to respond positively regarding their personal finance. For example, four out of five indicated that they would determine how much they needed for a comfortable retirement and would put additional money into savings and investments other than retirement. Workers who attended a workshop or seminar indicated a desire for additional financial education, including, in descending order of interest, the topics of investing, retirement planning, early retirement, budgeting, and cash management. Joo and Garman (1998a) revealed that workers who participated in workplace financial education desired future educational programs including, in descending order or interest, retirement planning, investing, budgeting, and getting out of debt.

Finally, Bernheim and Garrett (1996) found that employees relied heavily on employer-based financial education when it was made available to them. The result of their study showed that rates of savings, both in general and for the purposes of retirement, increase significantly with the provision of employer-based education. Employees who were offered retirement education were far more likely to participate in 401(k) programs, and to make larger contributions to their plans. The effects of education were particularly pronounced among those least inclined to save; however, there was some indication that education stimulated 401(k) contributions among high savers by relaxing non-discrimination constraints. However, Bernheim and Garrett (2001), also found that the availability of education in the workplace might be systematically correlated with the underlying predisposition to save, that their estimates may confound the effects of unobserved plan characteristics, and that education might effect reporting rather than behavior. Though they were cognizant of the limits of cross-sectional analysis, they believed that their results favored the hypothesis that financial education significantly stimulates retirement savings among low and moderate savers. Furthermore, further analysis supported the view that the associated increase in retirement saving represented a net contribution to total saving rather than asset shifting.

2.44. A. (3) HOUSEHOLDS:

There are a lot of initiatives undertaken to raise the financial literacy level of households and, by the same token, yielding an increase in savings undertaken by households. Indeed, financial education programs seem to have the desired effects. The Consumer Federation of America (2001) in their study aimed at carrying out local savings campaigns. The program included efforts to enroll residents as savers and the provision of no-fee savings accounts, motivational workshops, and one-on-one consultation. The pilot program was undertaken in Cleveland, Ohio, and had more than 100 organizational participants and enrolled 1,500 ‘‘Cleveland Savers,’’ and had involved more than 2,000 individuals in motivational workshops. An area wide survey suggested that through these

efforts, some 10,000 Cleveland-area residents had been persuaded to save more effectively[26].

Since the launch of the pilot program, America Saves campaigns have been initiated in Kansas City and are being organized in other cities, including Indianapolis and Charlotte.

Money 2000, a program sponsored by the U.S. Department of Agriculture through its Cooperative Extension Service (a division of the agency's Cooperative State Research, Education, and Extension Services program) was initiated to provide information and tools to consumers seeking to improve their savings and spending patterns. Program participants reported progress towards their financial goals and increased their savings, on average, approximately $1,600 within a twelve-month period and decreased their credit balances an average of more than $1,200[27].

Additionally, the effects of financial literacy can be advantageous from a policy perspective. When savings are too low, there may be a lack of funds to finance investment projects. In addition, in cases where tax policies are not able to raise the amount that people save, financial literacy programs might be the solution. For instance, some observers speculate that the post-War increase in saving by Japanese households may have been partially attributable to an extensive educational and promotional campaign. Similarly Bernheim and Garrett (1996) results has potentially important implications concerning the efficacy of strategies to stimulate saving by U.S. households. Most obviously, it raises the prospect that a serious national campaign to promote saving through education and information could have a measurable impact on behavior. Hence what can be concluded is that financial literacy programs have the potential of raising

[26] America Saves, ''One-Quarter of U.S. Households Are Wealth Poor,'' press release, May 13, 2002 (www.americasaves.org/back_page/savinginamerica_first.cfm). 450 Federal Reserve Bulletin November 2002

[27] Money 2000 recently became Money 2020 and is being incorporated into the America Saves program (www.money2000.org/).

savings and therefore can be used by policy makers as a measure to raise the amount of funds available for investment.

2.44. A. (4) THE YOUTH:

From previous empirical works, it has been found that students are not financially literate, and this definitely has disastrous effects on their lives. Therefore, certain initiatives have been instigated to raise the level of savings of the youth.

Financial literacy programs seem to have the desired effects. On trying to measure the short-term effects of financial training, an evaluation was done in 1997-1998 by the National Endownment for Financial Education (NEFE) for its high school financial planning[28]. The survey compared students' responses to questions about their financial behaviors, financial knowledge, and confidence levels in managing financial matters before and after participating in the program. Nearly 30 percent of the students reported that they started saving after participating in the training, and 15 percent indicated that they began saving more. In addition, 37 percent of the students stated that they had better skills for tracking spending, 47 percent believed that they were more knowledgeable about the cost of credit, and 38 percent indicated that they were both better informed about investments and more confident about managing money after participating in the program.

Moreover, Berheim, Garett and Maki (2001) found that financial education in high school was related to higher savings behaviors and greater net worth. Specifically, they found that (self-reported) savings rates were approximately 1.5 percent higher for students entering a high school grade five years after the imposition of a financial education mandate than for students not present when this mandate was instituted. Compared to the

[28] Laurie Boyce and Sharon M. Danes, ''Evaluation of the NEFE High School Financial Planning Program, 1997–1998'' (report of a study sponsored by the National Endowment for Financial Education) (www.nefe.org/pages/educational.html). 452 Federal Reserve Bulletin November 2002

overall population, the rate of savings out of income for students exposed to the mandate was 4.75 percent higher in the population distribution than for those who were not. Net worth, albeit much more difficult to measure, increased by roughly one year's worth of earnings for students exposed to the mandate, whose net-worth-to-earnings ratio was also 9 percent higher than students who were not exposed. Hence, it could be argued that financial literacy programs may be used to prevent the youth from overspending and to encourage them to increase savings, so as to be financially stable in the presence of an adverse event.

2.44. B WEALTH ACCUMULATION:

Lusardi (2004) revealed that seminars have the effect of raising the level of saving, especially for those who save little, those with low levels of education and those with low level of income. **The estimates put forward the fact that with financial education, wealth can be increased sharply, closely to 20 percent in the total sample, but the effect is more pronounced for families at the bottom of the distribution and those with low education. Retirement seminars also increased total wealth (inclusive of pension and Social Security) for both high and low education families.**

Government and policy makers should develop a strategy to improve financial literacy, so that the public can develop savings plan and accumulate wealth. The 2005 Retirement Confidence Survey, published by the Employee Benefit Research Institute in April 2005, provides a picture of the American retirement saving problems. The survey reported that employees lacked basic knowledge about retirement, had given little or no thought to how much money they will need in retirement, nor had they even attempted to calculate the amount of money needed in retirement.

On the other hand, Lusardi (2003) found that seminars were an effective way to foster savings and stock holdings. This is particularly the case for those with low education and those who save little.

On the contrary, those who were financially illiterate would tend to have false perceptions. For instance, the 2005 Retirement Confidence Survey reported that more than half of workers (52%) believed they would be eligible for unreduced social security benefits sooner than they actually. Only 42 percent of workers reported that they or their spouse had tried to calculate how much money they will need to save by the time they retire so they could live comfortably. A majority of workers (55%) believed they are behind schedule when it came to planning and saving for retirement. However, the bright spot of the survey was that 44 % of those who attempted to make calculations and plans about retirement saving ended up making changes to their retirement plans.

2.5 EFFECTIVENESS OF FINANCIAL EDUCATION PROGRAMS:

2.51 INTRODUCTION:

With the emergence of new financial products being developed, consumers should be appropriately educated to cope with this more elaborated world. Moreover, financial illiteracy has numerous symptoms, including the rise in consumer debts levels, a decline in already low personal savings and the increase in non-business bankruptcy filings (Braunstein and Welch 2002). Hence, the importance of financial literacy is obvious.

Braunstein and Welch (2002) stipulated that financial education is the consumer's first line of defense against fraud, abuse, and mismanagement of their finances. Financial education can empower consumers to be better shoppers for financial products and services. Indeed, studies have shown that financial education can change financial behavior[29].

[29] Braunstein, Sandra, and Carolyn Welch. "Financial Literacy: An Overview of Practice, Research, and Policy." *Federal Reserve Bulletin*. November 2002.

In a similar vein, Gambrell (2003) discovered that financial education can help secure the economic future of households, strengthen communities, and enhance the integrity of our financial system. Although there is a wider array of financial products and services available to consumers now than ever before, a large segment of the population still has no relationship with a bank, and households are struggling to manage debt. Financial education is a clear remedy to address these important issues.

Similarly, from what is gathered from Sebstab and Cohen (2003), financial education can play a special role for young people in developing countries by helping them prepare for productive and secure futures. Adolescence is a critical time for learning basic skills related to earnings, spending, savings and investing money.

Finally, Greenspan (2002) stated that:"(Financial education)…can help to inculcate individuals with the financial knowledge necessary to create household budgets, initiate savings plan, and make strategic investment decisions. Such financial planning can help families meet near term obligations and maximize their longer term well being and is especially valuable for population that have traditionally been underserved by our financial system…"

2.52 STUDENTS AND YOUTH:

It seems that today's youth does not possess the appropriate financial knowledge to function in the economy. Low level of financial literacy can be extremely damaging as it often result in serious problems. For instance, in the US, poor financial understanding among youngsters is related to record level of consumer debt, rising personal bankruptcy rates and increasing consumer credit delinquencies. The clear situation to all these problems would be to provide financial education. The latter may be the consumer's first line of defense against fraud, abuse, and mismanagement of their finances. It can empower consumers to be better shoppers for financial products and services.

Indeed, from what many previous studies has discovered, financial training seems to positively affect financial behavior. For example, when the National Endowment for Financial Education evaluated its high-school-based programs, it found that participation in financial-planning programs improved students' knowledge, behavior, and confidence about personal finance, and that nearly one-half of the participants began to save more after participating in the program[30].

Financial education may be the tool that helps consumers to take decisions that are efficient both from an individual and a market point of view. As for students, the result of financial training seems to be positive. The NEFE High School financial planning program did have a significant effect on the financial behavior and knowledge of teens.

Hayhoe et al. (2004) found that 47% of students said they " knew more about credit costs and nearly 38% knew more about investments after completing die program." Thirty – seven percent "improved skills for tracking spending, and 45% started saving or began saving more. In addition, 38% reported an increase in confidence regarding their money management skills.

Moreover, educating the youth is particularly important. The study by Beinheim, Garrett and Maki (1997) found that those who save as a teenager is more likely to save as an adult. In addition, Boyce and Danes (1998) surveyed money management behavior, financial knowledge, and confidence in dealing with money among over 4000 students in 188 high schools nationwide. They repeated the survey after students had completed National Endowment for Financial Education's (NEFE's) High School Financial Planning Program (HSFPP) and again three months after students completed the HSFPP curriculum. Eighty-six percent of the students reported increased knowledge and/or positive changes in financial behavior and 42% reported an increase in confidence regarding money matters immediately following completion of HSFPP. Three months

[30] Boyce, Laurie, Sharon M. Danes, Catherine Huddleston-Casas, Mindy Nakamoto, and Amy B. Fisher. "Evaluation of the NEFE High School Financial Planning Program 1997-1998." National Endowment for Financial Education. October 1998

later, more than half of the students reported improved spending and savings habits and 39% reported having started a savings account.

Gross, Ingham, Matasar (2005) contended that students' debts will continue to grow. With the rapid change of technology and the growth of financial products offered, students will need to be educated. Those students professional life might be affected by their lack of financial literacy. For instance, Gross, Ingham, Matasar (2005) provided the example of Law students who will be asked in their professional life for advices by others. That advice obviously would be inadequate if the lawyers' financial education is not a panacea. It will not lower the costs of education. It surely will not raise the level of income students receive in the jobs they obtain after graduation. It will not generate added student loan assistance. It will not democratize access to education. It will not cause educators to rethink how education is delivered. It will not change the face of predatory lending practices targeted at students or the methods of credit scoring. Moreover, they are convinced that financial education will provide students with valuable skills that can improve their life during school and following graduation.

However, not all authors agree that financial education has positive impacts. For example, Chatzky (2002), observed that most American teenagers were not getting their share of financial education but even those being exposed to money matters did not seem to retain much of the content. She relied on evidence that the average high-school senior was able to answer only 50% of 31 Jump$tart Coalition for Personal Financial Literacy multi-choice PF questions correctly, whilst students who had completed a money-management course were only able to answer 48% correctly. After investigating what may have 'gone wrong' with the program, she suggested the following: PF education does not have 'a home' in US school. Similarly, the 2001 jump coalition survey found no statistical difference in survey scores among students who had completed a partial or entire course in economics money management or personal finance.

The findings on the effectiveness of financial education has proved to show mixed results. Some programs, those with discrete objectives, usually did work in improving

certain aspects of consumers' personal financial management such as increasing saving. However, some authors believe that improved financial behavior does not necessarily result from increased financial information. Brainstein and Welch (2002) found the timing and format of training as well as human traits such as aversion to change or play a role in determining the positive effect of financial training. Although research shows that the acquisition of additional information can result in improved behavior in financial matters, studies also make clear that increased information does not automatically result in such improvement. While the overarching objective of financial literacy training is to impart knowledge that will, ultimately, improve financial behaviors, the assumption that the presence of more information will lead to improved behavior is faulty. The conundrum of why, in the presence of reliable and credible information, households do not always act in their best financial interest—as the efficient markets model contends they should—is explored by the discipline of behavioral economics. Research in behavioral economics can contribute to the development of policies and programs that motivate positive change.

In examining the disconnect between the efficient markets model and the ''nonrational'' behaviors in which consumers engage, a study funded by the National Bureau of Economic Research (NBER) posits that the risk—either real or perceived—associated with experimenting with something new will cause an individual to remain in a situation that is not optimal[31]. The study's authors also note several economically self destructive aspects of behavior, such as overconfidence (investing in the absence of complete information), overreaction (exaggerated response to new information), selflessness (giving to charity despite one's financial situation), and loss aversion (delayed entry into or exit from a financial situation inconsistent with one's financial best interest). Recognition of these behavioral traits can help financial literacy trainers understand households' priorities and create financial training programs that take these traits into consideration.

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[31] Sendhil Mullainathan and Richard H. Thaler, ''Behavioral Economics,''NBER working paper w7948 (National Bureau of Economic Research, October 2000).

Moreover, the format of financial education provided seems to be important for the success of the program. Mayer (2001) has demonstrated that students experience a greater rate of retention of instructional material when it is experienced through animation (visually) simultaneously with narration that when presented with animation and text. The ability to transfer the knowledge, i.e, to apply the knowledge in novel ways, was even more enhanced by the combination of animation and narrative presentation.

Mayer (2001) **a**lso found that a high level of cognitive activity was necessary in order for an instructional experience to result in meaningful learning, i.e., an ability to use the acquired knowledge in novel ways to problem-solve. The students must be actively engaged in the learning, not a passive observer. Active engagement need not be behavioral; it may be mental.

Continuing on the same ground, four Jumpstart surveys since 1997, encompassing more than 10,000 high-school seniors, have shown little overall difference in financial literacy test scores between those who have taken an entire semester's course in financial management and those who have not. One hypothesis that was provided to interpret this puzzling phenomenon was that the students do not immediately need the information being provided to them. They would have been more interested to be educated about money matters that were immediately relevant to them. For example, if someone was driving a car and paying for its insurance, he or she would have presumably been motivated to learn how to shop for that expensive but necessary product (Mandell (2006)). Hence, the Just- in -Time hypothesis was proposed as a solution.

Mandell (2006) evaluated the Just in Time hypothesis, and found, on the whole, that the hypothesis was not promising. For each of the 11 Jumpstart questions, he compared the responses of students who had taken a course in financial management with those who had not. He also compared the responses of those students who had had firsthand experience with one of the seven types of financial topics listed above and those who had

not. The expectation was that, among students who had actually purchased auto insurance or signed up for credit cards in their own names, he had found that those who'd taken a course in financial management would do better on questions about that product than students who had not studied the subject. If this had turned out to be true, there would be reason for financial management educators to focus on just-in-time instruction. Unfortunately, the Jumpstart data showed no such benefit. Although some of the Jumpstart data appeared to support the just-in-time hypothesis, on the whole, they were not promising.

It can be concluded that financial education programs do improve financial knowledge but behavior does not always follow. This usually depends on how interested the individual is to learn and on the format of the training being offered. Providing education with animation and simultaneous narration yields higher level of retention.

2.53 HOUSEHOLDS:

With the rapid evolution of financial markets, individual needs to be more knowledgeable to be able to function efficiently. Today's consumer needs to choose among a wide variety of products, services and providers of financial products to be able to successfully manage their personal finance (Greenspan 2003). In addition, given that technological advances has been one of the dominant factor to cause the dramatic changes within the financial service market, consumers, more generally, must be familiar with the role that computers play in the conduct of every traditional financial transaction, from withdrawing funds to gaining access to credit.

Many authors believed that financial education; definitely would improve financial literacy and this will result in an amelioration of financial behavior. Consumers who are not used to traditional banking practices and banking products are more likely to fall victim to excessive interest rates or fees and disadvantageous terms. These consumers may also have access to more credit than may be manageable, which can make them vulnerable to short term fluctuations in their finances as their indebtedness grows (Donna

Gambrell 2003). Having an increased access to sources of credit should be beneficial to consumers; however, if the latter do not use this access wisely, the larger choice would end up being disadvantageous. Education in this instance is essential to help families to evaluate the expanding array of services available to them in rapidly changing financial market (Donna Gambrell 2003).

The effectiveness of financial training has been evaluated by several researches. Carr and Schuetz (2001) found that homebuyers who obtain structures homeownership education have reduced rates of loan delinquency. Moreover, financial literacy programs promote participation in the banking system to enable consumers to gain access to a full complement of services, with the possible result of significant savings in transaction fees[32].

Similarly, Block-Lieb et al (2005) hypothesized that policy makers viewed financial literacy classes as means for resolving their existing financial troubles and also hoping that this education will help consumers avoid prospective difficulties. The coalition of consumer bankruptcy successfully undertook a pilot project to financially educate debtors. The coalition educated through a variety of techniques a diverse group of debtors and they evaluated the process every step of the way. In the end, they recognized that financial literacy education is not a panacea that will cure all financial ills, but our experiences teach us that through improved financial management education, individuals can become more thoughtful and knowledgeable participants in our client based economy. (Donna Gambrell 2003).

In a similar vein, Law Schools usually provide a course entitled Trial Advocacy. From what, Gross, Ingham and Matasar (2005) found, the course had the merit of raising the understanding of basic consumer financial management. However, an evaluation of the program in the law school context did not reveal whether there was a long-term

[32] James H. Carr and Jenny Schuetz, ''Financial Services in Distressed Communities: Framing the Issue, Finding Solutions'' (Fannie Mae Foundation, August 2001) (www.fanniemaefoundation.org/programs/papers.shtml).

improvement in how they managed their finance. However, initial results here and other empirical work on financial literacy education demonstrated that courses such as this lead to longer-term retention of knowledge and positive changes in consumer attitudes and behavior with respect to money and spending (Wiener et al., 2005; Block-Lieb et al., 2004).

Furthermore, those that suffered most from lack of financial literacy were the low-income households. Malkins (2003) observed that financial education was more and more being used as an instrument to mitigate poverty and promote economic development in low-income communities in the United States. During an economic conference, Greenspan underscored the critical role of financial education programs in promoting homeownership, small business development, household savings education and long-term financial health for individuals, families, and communities. He emphasized that financial education not only increases access to capital and financial services for traditionally underserved markets, but also empowered these consumers to better understand the risks and benefits of financial products and services, enabling them to make better decisions about their financial future. The Native American Working Group of the Office of the Comptroller of the Currency found that the most important factor in raising access to affordable financial services and curbing predatory lending is financial education[33].

Hawke (2004) recommended that banks support and participate in financial education initiatives, noting that, "improving financial literacy is a key component to developing a market for financial services in Indian Country[34]." The Native American Lending Study found that tribal members had access to counseling, training, and/or technical assistance resources are more likely to rate financial products and services as easier to access.

[33] Office of the Comptroller of the Currency. (1997, July). Providing Financial Services to Native Americans in Indian Country. Community Dividend Newsletter

[34] Office of the Comptroller of the Currency. (2001, Fall). Banking in Indian Country: Challenges and Opportunities. Community Dividend Newsletter

On the other hand, not all studies believe that providing financial education will automatically lead to improve behaviour. From earlier empirical work, it has been demonstrated that there is a correlation between financial literacy and behaviour, although the direction of causality remains unclear. As Hogarth, Beverly, and Hilgert (2003) suggest, this correlation does not necessarily mean that more knowledge improves behavior. Perhaps, more experience in financial activities, or learning by doing, leads to more financial knowledge. Still, some evidence shows that the level of financial knowledge within a household affects its inhabitants' subsequent behavior. Hilgert and Hogarth (2003) detail this link statistically by examining sources of financial experiences, knowledge and practices in the 2001 Survey of consumer finances and the University of Michigan's 2001 Surveys of Consumer. By exploring consumer behavior and knowledge in cash-flow management, credit management, saving, and investment, the authors found that those who knew more in each of these area also tended to "score" better in terms of financial practices; such households were more likely to follow sound financial behaviors.

2.54 WORKERS/RETIRED:

Clark et al. (2003) argued that financial education does lead to individuals altering their retirement plans. The survey responses indicate that after an educational event, individuals might alter their retirement goals or change their retirement savings behaviour. To determine the influence of new information, they examined the responses from two surveys completed by individuals before and after participation in a retirement seminar. The results were clear. A significant proportion of the respondents indicated that they had revised their goals and planned to modify their savings and investments. The responses to a follow-up survey were being examined to determine whether individuals actually made the changes in accordance with their revised goals. Initially, women had set younger retirement age goals and lower retirement income goals than men. Following the seminar, they were more likely to raise both these retirement goals. They are also more likely to start new tax deferred savings accounts, to increase contributions to existing retirement plans, and to change their investment allocations.

Equivalently, Lusardi (2004), found that retirement seminars could foster saving, particularly for those with low income and those with low education and those who save little. Her estimates suggested that, by offering financial education, wealth could be increased sharply. Retirement seminars also increased total wealth (inclusive of pension and Social Security) for both high and low education families.

CHAPTER 3

RESEARCH METHODOLOGY

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3.0 Introduction

Every research has to be done in a methodological and scientific manner for validity and reliability. This chapter presents the methodology that has been used for assessing the level of financial literacy among the Mauritian population. It explicitly encompasses the research approach necessary to obtain the information required for achieving the research objectives of the present study. As such, the methodology chapter will highlight the questionnaire design and the sample plan of the survey. Much emphasis will also be given to the statistical tools that have been used for interpreting the results of the survey.

3.1 Problem Definition

In a world where taking financial decisions is becoming more and more complex, financial literacy is considered as vital for all consumers. Indeed, while a simple understanding of how to maintain a checking and savings account at local banks and savings institutions may have been sufficient two decades ago, consumers must now be able to differentiate between a wide range of financial products and services, and providers of those products and services.

Moreover, although Mauritius aims at establishing itself as one of the leading countries in the region in terms of a dynamic financial sector, one of the cornerstones of this dynamic financial system rests upon a highly skilled labour, more precisely a highly financial literate society. This study will hence identify the financial literacy levels of Mauritians in areas like savings, borrowings, cash flow management, investment, insurance, credit cards and personal finance.

For the purpose of this study, financial literacy[35] will be regarded as the ability to make informed judgments and take effective decisions regarding the use and the management of money (Stock and Morony 2003).

[35] As defined previously in Chapter 2.

3.2 Objectives of the research study

The main objectives of this study are:

1. Determine the level of financial literacy in Mauritius
2. Depict any relationship between financial literacy and related issues like savings, investment, good credit management practice and sound cash flow management.
3. Identify possible causes of financial illiteracy
4. Formulate policy measures to improve the level of financial.

3.3 The Research Design

After the formulation of the research problem, the research design has been developed. McEwan (2007) accordingly states that the choice of a research method hinges on the question posed. For the purpose of this study, a cross-sectional descriptive research method was used. While studies argue that a descriptive study is simply a fact-gathering expedition, Ferber, Blankertz and Hollander (1984) insist that it is the glue of explanation and understanding, and also the framework of theory.

Descriptive research employs standard quantitative techniques (Tukey, 1977) like the observation technique, the experimentation technique and the survey technique. With regards to the present study the survey research method-which is a research technique through which information is gathered from a sample of the targeted population by use of a questionnaire-will be used to collect data.

Among the basic types of surveys that exist, personal interviews have been chosen. Although personal interviews might be more expensive than the other two methods, it is valuable in the sense that the interviewer can utilize visual aids and supplement the interview with personal observation. Moreover through the personal interviews the interviewer will be provided with the opportunity for feedback to the respondent. For example an employee who might be reluctant to give information about his income level, may be reassured that his answers will be strictly confidential. Similarly the interviewer

may also provide guidance in clarifying any question the respondent has about the questionnaire.

Moreover, personal interviews increase significantly the probability of obtaining a complete questionnaire. Social interaction between an interviewer and a respondent in a personal interview indeed increases the likelihood that a response will be given on all items on the questionnaire.

3.4 Questionnaire Design

After a pertinent review of the literature a comprehensive questionnaire designed to cover major aspects of personal finance was formulated. It includes financial literacy on general knowledge, borrowing, debit card/ credit card/ ATM card, insurance, investments and savings. The survey participants were asked to answer 43 questions including 36 multiple-choice questions of their knowledge on personal finance and seven questions on demographic data. Different question formats were used to gather responses in each topic, including responses to hypothetical scenarios and multiple-choice questions about financial knowledge. The rationale behind the themes discussed in the questionnaire is given in this section.

3.4.1.1 Personal Finance Options

- Investigate whether the individual recognizes the importance of keeping financial records.
- Establish whether the respondent understands the importance of budgeting and whether he knows how to use a budget to plan and control his personal spending.
- Identify whether individual is able to compare the advantage of holding different assets.
- Determine whether the individual is aware of the impact of policy measures taken by the government.

- Inquire whether the respondent understands the implications of inflation and establish whether he knows who will be the most affected by it.
- Identify whether the individual knows about the strength and weaknesses of the different modes of payments.
- Determine whether the individual is aware of where money comes from and goes to.
- Investigate whether the individual understands the importance of budgeting and prioritising the need to balance income and expenditure.

3.4.1.2 Borrowing

- Analyse whether the individual understands the concept and implications of personal guarantor and co-borrowers agreements.
- Probe whether the respondent is aware of the fact that his past credit behaviour is likely to be considered when making a new demand for credit.
- Enquire whether the individual understands that some loans and purchase agreements are secured whilst others are unsecured, and the implication for default.
- Examine whether the respondent knows that savings and borrowings are offered on differing terms and interest rates that vary over time.
- Determine whether the individual is aware of inflation implications identify whether he knows that during inflation times, when interest rates are fixed, he will be paying back for borrowing in a depreciating currency.
- Analyse whether the respondent knows about the different type of loans available.
- Investigate whether the individual knows about the different terms used when applying for a loan.
- Identify whether the individual has a notion of what a secured debt means.

3.4.1.3 Savings

- Study whether the respondent recognizes the importance of reading 'the terms and conditions' before signing an agreement.
- Analyse whether the individual is aware of the interest rate prevailing on his account.
- Assess whether the individual understands compound interest and its functioning.
- Investigate whether the individual can distinguish between the different type of bank deposits, their benefits and drawbacks.
- Identify whether the individual has an understanding of strategic budgeting and the need to keep money-earning interest as long as possible.
- Explore whether the individual understands the functioning of a bank and has the ability to recognize that banks are actually earning interest from the money deposited into savings accounts.
- Inquire whether the individual is aware of his rights when it comes to the regulation of some type of deposits.
- Establish whether the individual is aware that there are several ways to save more if he is able to compare the advantages and disadvantages of the different forms of savings.

3.4.1.4 Investment

- Probe whether the individual understands the logic that investments yielding higher returns are likely to involve higher risks.
- Determine whether the person knows how a company is financed.
- Identify whether the individual is able to identify the returns that is yielded from investment in shares

3.4.1.5 Debit Card/ Credit Card/ ATM Card Use

- Establish whether the individual knows the potential costs resulting from the failure of repaying credit in full within the interest free period.

- Identify whether the individual is aware of the availability and the basic features of electronic banking.
- Determine whether the individual is able to compare the advantages and disadvantages of different forms of payment.
- Inquire whether the individual can differentiate between a credit card and a debit card and would he be able to consider the most suitable mode of payment depending upon the situation.
- Investigate whether the individual is aware of the different factors that are likely to affect the possibility of obtaining a credit.
- Analyse and whether the individual is aware of the risks associated with the non-payment of credit card bills.

3.4.1.6 Insurance

- Determine whether the individual is aware of the issues that an insurance company takes into consideration when calculating the premium on a policy.
- Enquire whether the individual knows that the non-payment of insurance premium simply imply that insurance coverage would stop.
- Identify whether the respondent knows the different terms used to classify the different type of auto insurance
- Investigate whether the person understands the consequences of under insurance
- Explore whether the respondent's awareness of the different terms used in an insurance contract.
- Analyse whether the individual understands the working of a deductible.
- Inquire whether the individual is aware of the different type of life insurance.

3.5 Sampling Design

The next step in the research is to undertake the sampling design, that is, identify the target population and select the sample. The researcher must determine who and how many people to interview, what and how many events to observe, or what and how many records to inspect.

3.5.1 The target population

The population of this study is defined as randomly selected people aged 20 and over across Mauritius. The sampling frame, which is the list of elements from which the sample may be drawn, is the list of the estimated resident population for 2004 obtained from the central statistical office of Mauritius.

3.5.2 The Sample

Quota sampling, which is a non-probability sampling technique, will be used in this research study. The method entails choosing a sample that reflects the numerical composition of various subgroups in the population. Then judgment is used to select the subjects or units from each segment based on a specified proportion. It is this second step, which makes the technique one of non-probability.

Speed of data collection, lower costs and convenience are the main advantages of quota sampling. Although there are many problems with this method, careful supervision of the data collection may provide a representative sample for analyzing the various subgroups within a population. The reasoning behind using quota sampling is to ensure that various groups in the population are represented on pertinent sample characteristics.

As such, the targeted population will be divided into subgroups on the basis of age, income, gender, location of residence and education level. The statistics for the subgroups were, as said previously, obtained from the central statistical office of Mauritius. These are tabulated below:

Years	Percentage
20-29	17.40%
30-44	23.60%
45-59	17%
60+	9.50%

Table 3.1: Estimated resident population by age group

Monthly income	Percentage
<7000	22.70%
7000-24999	65.80%
>25000	11.50%

Table 3.2: Distribution of households by income class

Gender	Percentage
Male	49.43%
Female	50.57%

Table 3.3: Estimated resident population by gender

Residence location	Percentage
Urban	43.65%
Rural	56.35%

Table 3.4: Evolution of the population by urban/rural residence

3.5.3 The Sample Size

The sample size used in this study is 800 respondents. As stipulated previously, special care has been taken to have a sample that is representative of the subgroups.

- Pilot Studies

Pilot testing was conducted to detect the weaknesses in design and instrumentation. A total of 20 questionnaires were pre-tested on a group of individuals who were representative of the targeted population. Indeed age group, gender, social background, educational level and job position mainly determined the pilot group. On the basis of the pre-test results, the main changes brought to the questionnaire were vis-à-vis its length and some terms which were ambiguous to respondents.

3.6 Data Collection

Interviews lasted approximately 30 minutes and respondents were assured that all the information would be treated with strict confidentiality. The survey data collection started in the month of November 2006 and ended in that of January 2007.

3.7 Description of how the data obtained was analysed

3.7.1 Editing

Errors and omissions do occur when data are collected. Editing ensured that the quality of raw data collected was in line with the standards set. In addition, the editing for each questionnaire was done practically just after the data for that questionnaire was collected so as to ensure reliability of the response.

3.7.2 Coding

The answers to questions asked through the questionnaire were coded using SPSS 13.0 as analytical software.

3.7.3 Analysis

First, the data were cleaned and overall frequencies were examined. Second, simple descriptive statistics were performed.

3.7.3.1 Analysis by Mean Scores

The responses from each participant will also be used to calculate the mean percentage of correct scores for each question, section, and the entire survey.

3.7.3.2 Hypothesis Testing

Hypothesis tests are part of the basic methodological toolkit of social and behavioural scientists. The fruitful application of hypothesis testing can benefit from a clear insight into, the underlying concepts and their limitations. Hypothesis testing is a method used to

draw conclusions about a population using data obtained from a sample and is therefore classified under inferential statistics. Several hypotheses will be testes in this study; their rationale are discussed below

Hypothesis 1: Gender and Financial Literacy

Empirical evidence has demonstrated that females tend to be less financially literate than their male counterparts. A study undertaken by Ciar Rosso (Jan-Feb 2004) found that one woman in four retire on an income below poverty level. Similarly, several other studies[36] revealed that male college students are more knowledgeable in financial matters than female ones. Hence the investigators want to determine whether there is a relationship between gender and financial literacy. In this case, the null and research hypotheses are:

H_{01} : Financial literacy is the same for males and females

H_{11} : Financial literacy is not the same for males and females

Hypothesis 2: Age and Financial Literacy

Recent studies on the financial knowledge of teenagers have indicated that the latter are transitioning into the adult world, ill prepared to function efficiently. For instance, the consumer federation of America and the American Express Company who investigated financial literacy levels among high school seniors nationally found that only 42% of the 52 questions set[37] were correctly answered (Consumer Federation of America, 1991). In a similar vein, the Jumpstart Coalition's (1997) national survey on personal financial literacy demonstrated that adolescents answered correctly 57% of the time; questions covered topics such as taxes, retirement, insurance, credit use, inflation and budgeting. Therefore the rationale behind this second hypothesis is whether the individual's age affects his financial knowledge. The relevant hypotheses are thus:

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[36] Chen and Volpe (1998, 2002); Henry et al (2001); Markovich and Devaney (1997).
[37] These questions were related to banking, auto insurance, housing, car, credit and food.

H_{02}: There is no association between the age group of an individual and his level of financial literacy.

H_{12}: There is an association between the age group of an individual and his level of financial literacy.

Hypothesis 3: Education and Financial Literacy

While many studies have revealed that education has an effect on financial literacy, this finding was not unanimously supported. The 2000 Survey found that students with higher education aspirations and higher anticipated future income scored higher than students who did not intend to continue onto higher education and who anticipated lower future incomes. Hence, the investigators will examine whether respondents with higher education level have a tendency to be more financially literate.

H_{03}: An individual's ability to tackle financial problems is not related to his level of education.

H_{13}: An individual's ability to tackle financial problems is related to his level of education.

Hypothesis 4: Marital status and financial literacy

Of the few studies that have examined the relationship between financial literacy and marital status, Hogarth and Hilgert (2002) found that respondents who were more financially knowledgeable were married, while the ANZ survey of Adult financial literacy divulged that single persons were financially the least capable. Below is the cross tabulation between the different financial literacy dimensions and the marital status of the respondent. The present hypotheses will thus be written as:

H_{04}: There is no link between an individual's level of financial literacy and his status

H_{14}: There is a link between an individual's level of financial literacy and his status

Hypothesis 5: Low income earners and financial literacy

In the UK, a research into levels and consequences of financial literacy conducted by the National Foundation for Education Research "revealed rising levels of household debt coupled with low levels of understanding about financial matters, particularly among lower income groups" (cited in ASIC, 2003). Hence the rational behind this hypothesis is to determine whether those in the lowest income group are those who are likely to suffer most from financial illiteracy. This is written as:

H_{05}: The level of financial knowledge is the same for all income groups

H_{15}: The level of financial knowledge is not the same for all income groups

Hypothesis 6: Occupation and financial literacy

H_{06}: An individual's occupation has no effect on his knowledge of financial matters

H_{16}: An individual's occupation has an effect on his knowledge of financial matters

Hypothesis 7: Parents' education level and financial literacy

Murphy (2005) examined 277 survey responses to assess the influences of race, gender, and age, major and parental educational level on the financial knowledge of undergraduates attending a predominantly black institution. The author concluded that parent's education level was a factor that affected the financial literacy. Hence another objective of this research study will be to assess whether more educated parents develop certain pattern concerning the financial literacy of their children. The

H_{07}: There is no link between an individual's financial literacy and his parents' level of education.

H_{17}: There is a link between an individual's financial literacy and his parents' level of education.

CHAPTER 4

ANALYSIS AND DISCUSSION

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4.0 Introduction

Following the review of the different concepts in existing literature on financial literary, this chapter integrates the various findings of the survey. The answers to questions asked through the questionnaire were entered and saved using SPSS 13 as analytical software. The empirical analysis contained in this section consisted of calculating mean scores, reliability coefficients, *analysis of variance* and hypothesis testing to develop a logical framework putting forward the main objectives of the research study.

4.1 Profile of Respondents

The response rate for this study was 74.86%, that is, out of the 800 questionnaires distributed, 599 were successfully completed and returned. This section illustrates the statistics obtained for each of the seven demographics groups, namely gender, age group, level of education, status, level of income, occupation and parents' occupation. The Kaiser-Mayer-Olhin (KMO) which is a measure of sampling adequacy was calculated. The statistic showed a value of 0.833, which is considered by Hutcheson and sofroniou (1999), as great.

4.1.1 Gender

From the 599 respondents surveyed, 52.5% were males and 47.3% females.

4.1.2 Age Group

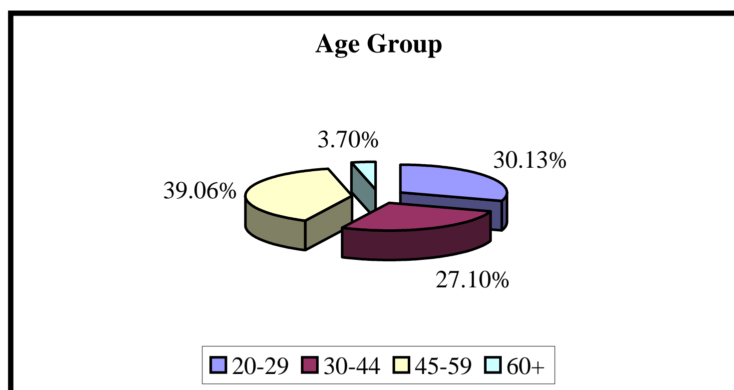

Figure 4.1: Respondents' age group

The age group was divided into four categories namely 20-29, 30- 44, 45-59 and over 60. As demonstrated above, the majority of respondents declared that they were in the '45-49'-age category. Conversely, 30.13%, 27.10% and 3.70% respectively claimed that they were in the age group '20-29', '45-59' and 'above 60'.

4.1.3 Level of Education

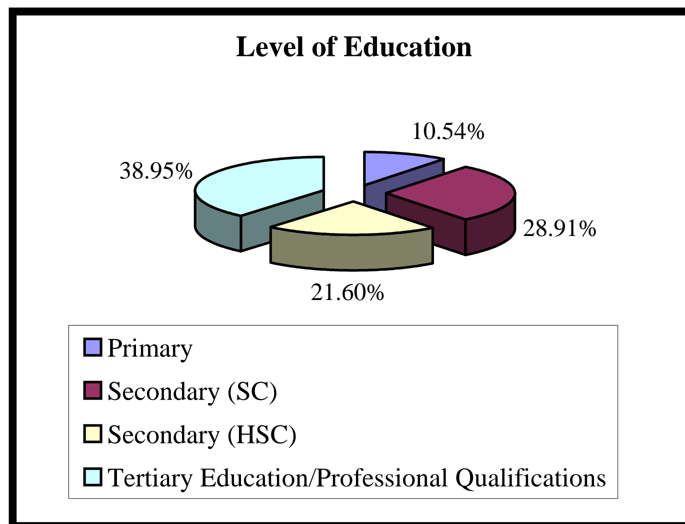

Figure 4.2: Respondents' level of education

The level of education of the respondents was also classified into four main groups: (1) primary education, (2) secondary (SC) education, (3) secondary (HSC) education and (4) tertiary education/professional qualifications. Figure 4.2 shows the level of education the respondents have achieved. While 38.95% of those who responded had Tertiary education/ Professional qualifications, 28.91% and 21.60% correspondingly stated that they were SC holders and HSC holders. The remaining 10.54% declared that they had had primary education only.

4.1.4 Marital Status

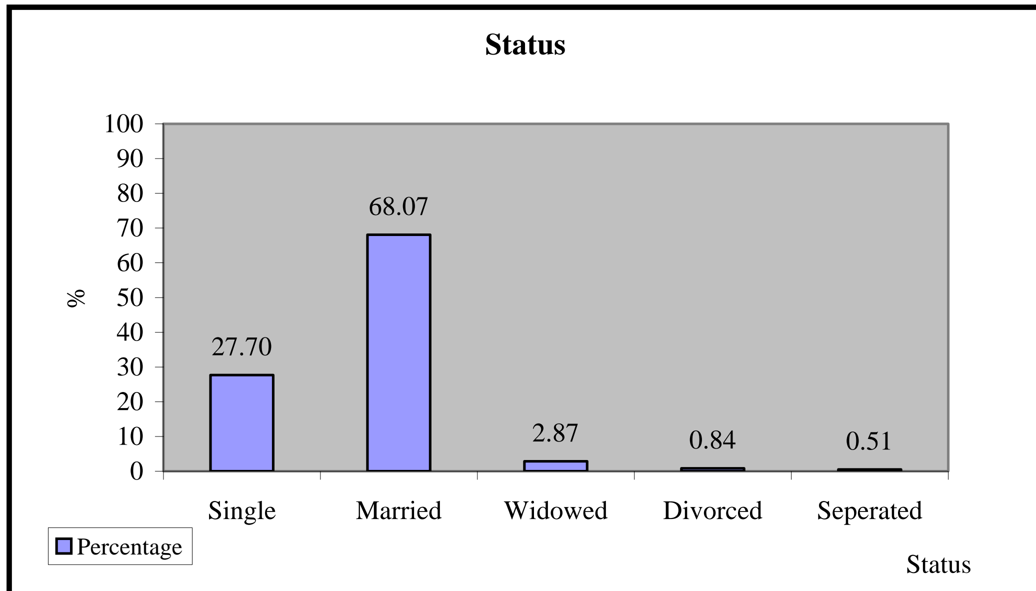

Figure 4.3: Respondents' marital status

The above table shows that 68.07% of all respondents reported they were married and 27.70% of respondents reported they were single (Figure 4.3). A small percentage reported being divorced (0.84%), separated (0.51%), or widowed (2.87%).

4.1.5 Level of Income

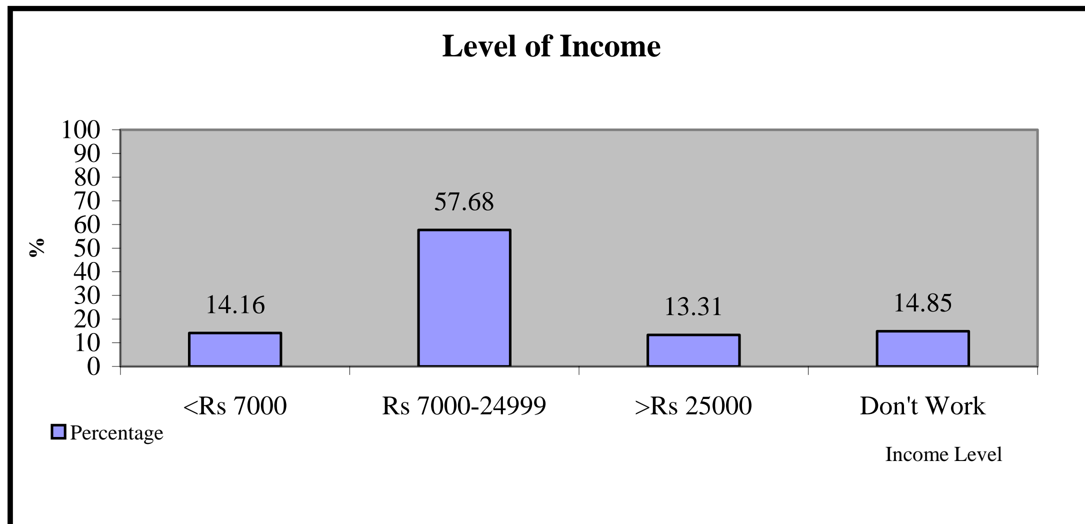

Figure 4.4: Level of income of respondents

As shown in figure 4.4, the majority of respondents (57.68%) declared that their monthly earnings ranged between Rs7000 and Rs24999'. On the other hand, 14.16% and 13.13% of respondants claimed that their monthly revenue were respectively in the '<Rs 7000' and '>Rs 25000' income brackets. 14.85% stated that they did not work.

4.1.6 Occupation

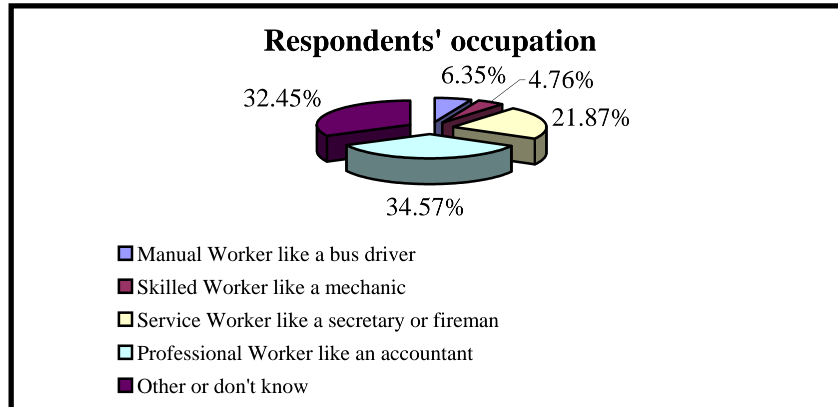

Figure 4.5: Respondents' occupation

Figure 4.5 provides for the occupational position of the respondents. The overwhelming majority of the respondents were professional workers (34.57%). While a lower percentage (32.45%) stipulated that they were in the 'Other or don't know' category, the remaining 21.87%, 6.35% and 4.76% duly reported they were respectively service workers, manual workers and skilled workers.

4.1.7 Parents' Occupation

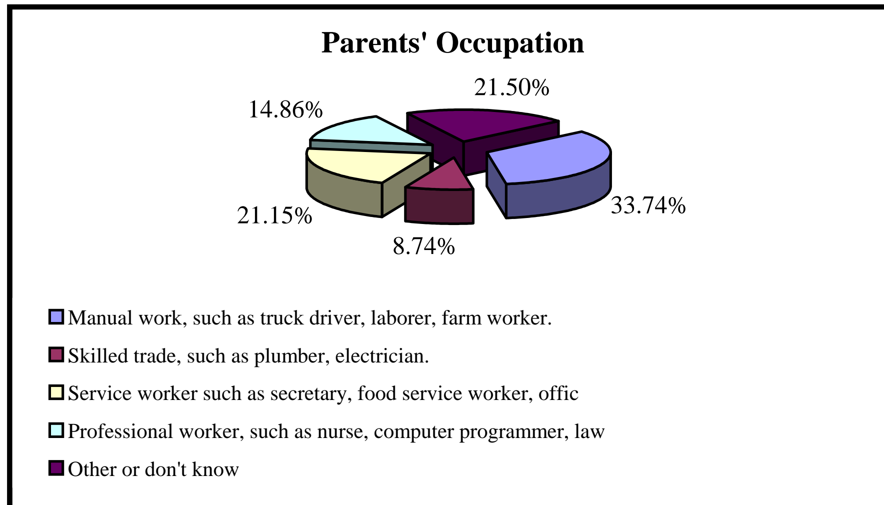

Figure 4.6: Respondents' parents' occupation

As exhibited in Figure 4.6, most respondents (33.74%) affirmed that their parents were manual workers. Alternatively, 21.50% of interviewees declared that their mother or father was in the 'Other or don't know' category. Moreover, 21.15% and 14.86% correspondingly indicated that their parents were service and professional workers. Lastly, only a small proportion (8.74%) of respondents attested that their parents' occupation fell into the *'Skilled trade'* category.

4.2 Score By Items

Responses to each question were separately analyzed because there was a desire to identify which financial literacy questions respondents got the most correct so as to gauge the strengths and weaknesses of the respondents' financial behaviour. As such, the mean score percentage (or frequency percentage, whichever because both figures are the same in this case) of the different questions with respect to their corresponding dimension was also given. The results in this section have also been tabulated to show the overall sample's average score with regards to the six dimensions used to measure financial literacy. The entire sample was moreover partitioned into separate sub-samples by demographics to determine whether there were differences in the level of literacy among these groups. The Cronbach alpha score of the 36-question survey is 0.83 which not only evidences the questionnaire's reliability but also highlights its validity.

4.2.1 Mean Score per question

4.2.1.1 Personal Finance (*Questions 1-8*)

Personal financial literacy is the ability to read, analyze, manage, and communicate about the personal financial conditions that affect material well-being.38 It includes therefore the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort, plan for the future, and respond competently to life events that affect everyday financial decisions, including events in the general economy.

The ability to manage personal finances has become increasingly important in today's world (Chen and Volpe, 1998). People must plan for long-term investments for their retirement and children's education, decide on short-term savings and borrowing for a vacation as well as manage their own medical and life insurance needs. Questions 1-8 measure the personal finance dimension. Below are the different mean frequencies with respect to each question related to this particular theme.

[38] Source: National Association of State Boards of Education (2006).

Question No	Mean Score
Q1	58.10%
Q2	43.07%
Q3	62.77%
Q4	76.29%
Q5	9.02%
Q6	82.80%
Q7	45.91%
Q8	61.27%

Table 4.1: Mean scores regarding personal finance questions.

Overall, respondents gave relatively good answers regarding personal finances, except for question 2, 5 and 7 where more than half of the responses were wrong.

Question 1-The most liquid asset is…

With respect to question 1, more than half of the sample (58.10%) correctly recognized 'money in a checking account' as the most liquid asset.

Question 2-Your net worth is…

Calculating the net worth is among the three basic practices that financial professionals routinely recommend in the budgeting process. Question 2 was hence used to determine whether respondents were acquainted with the term. The results showed that respondents were unclear on the meaning behind the concept: only 43.07% correctly identified 'net worth' as the difference between one's assets and liabilities.

Question 3-Inflation may cause difficulty in many ways. Which group would have the greatest problem during periods of high inflation?

The results pertaining to question 3 indicate that 62.77% of the participants surveyed correctly identified the group 'older people living on fixed retirement income' as the most vulnerable in times of inflation. This therefore implies that these respondents would presumably be in a better position to find solutions to shield themselves from the adverse effects of inflation.

Question 4-Which of the following statements are NOT correct about most ATM (Automated Teller Machine) cards?

With regards to question 4, respondents performed well as 76.29% of respondents obtained the right answer suggesting therefore a good knowledge of the strength and weaknesses of using ATM cards as a mode of payment. This suggests that most respondents actually use ATM cards which places them in a better position to correctly answer basic questions relating to their utilization.

Question 5: Which of the following credit card users is likely to pay more in terms of finance charges per year if all banks charge the same fee on the use of credit cards?

Question 5, on the other hand, is the question in which the respondents have performed the most poorly. Only 9.02% of the sample obtained the correct answer for the abovementioned question, clearly indicating that the majority of respondents were not aware of how credit cards worked and how fees were calculated on them. This can be considered as a serious problem since poor usage of credit cards can lead to a situation where the individual is unable to repay his debts.

Question 6: What is "net pay"?

Question 6 relates to personal income tax issues namely the meaning of the term "net pay". In this respect, the results show that overall, 82.80% of the sample knew that the 'net pay' was the individual gross wages minus taxes and deductions.

Question 7: What is "before tax money"?

With regards to the term 'before tax money' which is another important income tax concept, only 45.91% of the sample got the right answer. This is quite surprising as respondents score highly on the previous question about net pay.

Question 8: When the expenses and the income of a budget are equal, it is called…

For most people, money management involves being in control of one's financial resources, monitoring income and keeping some kind of record of expenditure. Critically, it requires someone to be aware of regular outgoings and to ensure that they would

always be able to meet these commitments. Budgeting is hence at the base of good money management and being able to understand the concept of a balanced budget is important. The rational for question 8 was therefore to assess whether respondents understand the above expression, which is crucial when doing budgeting. In this respect, 61.27% knew that when expenses and income are equal, it is called a balanced budget.

4.2.1.2 Borrowings (*Questions 9-15*)

Most people will need to borrow money at some time in their lives; they may need to pay for a big purchase they are planning, or meet some unexpected bills. Encouraging consumer caution in using credit coupled with the provision of information to aid in the understanding of the terms related to borrowings is important since because borrowers who are unfamiliar with credit transactions and unaware of the full implications of the loan terms may be vulnerable to unethical lenders' sales strategies (Braunstein and Welch, 2002). Questions 9-15 gauge the level of substantive knowledge of respondents about basic borrowing financial information.

Question No	Mean Score
Q9	63.77%
Q10	29.05%
Q11	26.71%
Q12	36.56%
Q13	54.76%
Q14	65.11%
Q15	71.95%

Table 4.2: Mean Scores regarding Borrowings questions

The scores to the seven borrowing-related questions in Table 4.2 indicate that with the exception of questions 10 ,11 and 12 (the correct responses to which were quite low) respondents exhibited a fair knowledge level on the borrowing-related issue.

Question 9 - If you co-sign a loan for a friend, then…

63.77% of the respondents obtained the correct answer for this question implying that on average the participants surveyed were able to understand the concept and implications of personal guarantor and co-borrower arrangements.

Question 10 - Matthew and Robin are young men. Each has a good credit history. They work at the same company and draw approximately the same salary. Matthew has borrowed Rs100 000 to buy a car. Robin has borrowed Rs100 000 to take a foreign vacation. Who is likely to pay the lowest finance charge?

Barely one-quarter of the sample (29.05%) obtained the correct answer for question 10; indeed most of the respondents did not know that Matthew would pay less because the car is used as collateral for the loan. As such, it can be concluded that the participants surveyed were not aware that some loans and purchase agreements were secured whilst others were unsecured, and the resulting advantages linked to taking a secured loan.

Question 11- Which of the following statements are true?

The rational for question 11 is to determine whether Mauritians understand how credit records are generated and the implications of bad records for future borrowing. However only 26.71% of the sample knew that banks and other lenders share the credit history of their borrowers with each other and are likely to know of any loan payments have been missed. This poor result suggests that respondents were not knowledgeable about the functioning of borrowing procedures.

Question 12- What does standard variable interest rate refer to?

36.56% of the sample knew that the standard variable interest rate referred to an interest rate that goes up and down, depending on the Bank of Mauritius's base rate. This clearly demonstrates that respondents were not aware that savings and borrowings were offered on differing terms and that interest rates varied over time.

Question 13-In times of high inflation what type of interest rates would you prefer for your loan or borrowing?

Only 54.76% of the respondents understood that in times of high inflation the borrower would benefit at the expense of the lender if a fixed interest rate was attached to the loan.

Question 14- People borrow money from banks and credit cards to finance homes, cars, education and businesses. If the borrower wants to secure the loan with an asset that they own, that asset is called a...

The rationale behind the above question is to determine whether the respondent understands the term collateral, which is often used when applying for a loan. In this respect, 65.11% of the sample understood the concept of pledging assets to a secure a loan, which in the event of default will be subject seizure.

Question 15- A mortgage on your home is considered a secured or unsecured debt?

This question was well answered by 71.95% of the sample, suggesting that on average the individual had a good notion of secured loans.

4.2.1.3 Savings (*Questions 16-22, 33*)

Financial literacy is a good way to teach consumers about the benefits of having a relationship with a financial institution. Among these are economical access to funds and credit, the ability to establish a positive financial history and perhaps most important, a higher propensity towards savings, which increases net worth. Questions 16-22 and 33 examine the extent to which the Mauritian respondent understands savings related issues.

Question No	Mean Score
Q16	58.26%
Q17	23.21%
Q18	51.59%
Q19	44.24%
Q20	81.30%
Q21	73.96%
Q22	40.90%
Q33	61.44%

Table 4.3: Mean Scores regarding Savings questions

While the majority of the savings related questions were correctly answered, respondents had difficulties with questions 17, 19 and 22 where mean scores were relatively low.

Question 16- Do you happen to know the interest rate on your savings account?

Crucial to good money management is the knowledge of the rate of interest prevailing on one's savings account. The results of the present study show that more than half of the participants surveyed (58.26%) knew the interest rate on their savings account.

Question 17- If you invest Rs1,000 today at 4% for a year, your balance in a year will be:

While this particular question involved a simple arithmetic calculation and aims at determining whether an individual understands compound interest and its functioning, more that three-quarter of the sample (76.79%) did not know that their balance would be higher if interest is compounded daily rather than monthly. As such, this is a clear indication of a very low level of knowledge concerning compound interest.

Question 18- Which of the following investments require that you keep your money invested for a specified period or faces an early withdrawal penalty?

The aim of this question was to investigate whether the Mauritian respondent was able to distinguish between the different types of bank deposits, their benefits and drawbacks. In this respect, 51.59% of the respondents were able to identify time deposits as the investment, which required its holder to lock up his fund for a fixed period of time.

Question 19- Vinesh and Booba are the same age. At age 25, Bouba began saving Rs 20,000 each year while Vinesh saved nothing. At age 50, Vinesh realized that he needed money for retirement and started saving Rs 40,000 per year while Booba kept his annual savings at Rs 20,000. Now they are both 75 years old. Who has the most money in his retirement account?

On average only 44.24% of the sample *correctly* stated that Booba would have more money because his money would have grown for a longer period of time at compound interest. Such a low score is suggestive of respondents lack of knowledge about which saving method would yield a greater nest egg at retirement.

Question 20- Which of the following instruments is NOT typically associated with spending?

Question 20 obtained very good results, with a mean score of 81.30%, meaning that the majority of respondents understood the financial terms used in the question. Indeed, only 18.70% of the sample did not know that certificate of deposits were not related to spending issues.

Question 21- When you deposit money into a savings account, what does the bank do with your money?

This question assessed the knowledge of respondents with regards to the functioning of a bank and the ability to recognize that the bank is actually earning interest from the money deposited into savings account. On average 73.96% of the respondents were able to answer the current question correctly, that is, stipulate that their money was lent to other bank customers.

Question 22- A person purchases Treasury Bills (T-Bills) rather than keeping his money in a savings. Which of the reasons below may explain this?

Only 40.90% propounded that earning more money in the same amount of time was one of the reasons as to why a person might purchase T-bills instead of traditionally keeping his money in a savings account at a bank. As such, more than half of the sample did not know that there was a variety of alternative ways to save money which would further lead to difficulties in comparing the advantages and disadvantages of the different forms of savings.

The high percentage of wrong answers to Questions 19 and 22 could be explained by the low literacy level exhibited by respondents but could also suggest that more often than not surplus funds are *unavailable* to the majority of respondents which would render the active search for better investment opportunities superfluous. For instance investment in treasury bills are effected in units of Rs100,000 which is well above the minimum required to open up a savings account in a bank.

Question 33- Maturity date on a Certificate of Deposit (CD) is the date that the money in the CD becomes available without penalty.

61% of the sample agreed that the maturity date on a CD is the date that the money in the CD becomes available without penalty.

4.2.1.4 Investment (*Questions 23-26, 34*)

Financial deregulation and the ensuing boost in competition and access to credit, proliferation in financial products, innovation in marketing and technological change have led to consumers being faced with a bewildering array of intricate financing and investment opportunities. Questions 23-26 and 34 investigate the degree to which Mauritians are informed about investments so as to determine their confidence about managing their money.

Question No	Mean Score
Q23	18.53%
Q24	28.55%
Q25	21.87%
Q26	57.10%
Q34	41.74%

Table 4.4: Mean Scores regarding Investment questions

The above table demonstrates that the majority of respondents had a grossly inadequate knowledge of investment issues. Indeed, the mean intensities of the 5 questions assessing investment literacy were very low, except for question 26 which reported a mean score of 57.10%.

Question 23- If interest rates rise, the price of a Treasury bond will…

Barely one-fifth of the sample (18.53%) was able to identify that the price of a Treasury bond would decrease if interest rates rose. This clearly indicates a very low level of knowledge concerning the mechanics of Treasury bonds.

Question 24-Mutual Funds invest in…

Approximately three-quarters of the participants surveyed were not familiar with the concept of mutual funds,-which is an important term often used when carrying out investment activities- as only 28.55% of respondents declared that Mutual Funds invested in stocks, bonds and real estates.

Question 25- Which of the following two are likely to yield higher returns?

In a similar vein, respondents performed poorly with regards to this question. Less than one-quarter of the sample knew the difference between a government bond and a corporate bond; only 21.87% of respondents understood that corporate bonds are similar to government bonds, except that the former are loans made to companies. As such, it can be argued that the respondents had a scant notion about the positive relationship between higher risk investments and higher returns.

Question 26- What is a stock dividend?

The rational behind this question was to determine whether an individual was able to identify the returns that come from investment in shares. In this respect, the mean score of 57.10% clearly indicates that respondents were fairly accustomed with the current issue.

Question 34-A mutual fund is an investment company that enables its shareholders to pool their funds for professional management as a single investment account.

This question concerns literacy about investment and it is observed that the respondents have a below average knowledge about the investment issue looked at in this question. Indeed, only 41.74% were aware that a mutual fund was an investment company that enabled its shareholders to pool their funds for professional management as a single investment account.

4.2.1.5 Debit and Credit Cards (Questions 27, 28, 35 and 36)

When paying for purchases and bills individuals often have several options: cash, money order, check, debit or credit cards. While most places accept cash, more and more places are now accepting credit and debit cards. While using a credit or debit card can make life easier, there is a widely held belief in environments that the ready availability of spending power at hand by way of plastic cards may lead consumers to exaggerate their spending. In some cases, it is even claimed that this may lead to over-indebtedness of households. Below are the findings related to debit and credit cards questions set up to assess whether Mauritian consumers are well equipped with regards to the use of their debit and credit card.

Question No	Mean Score
Q27	74.62%
Q28	55.09%
Q35	72.79%
Q36	83.47%

Table 4.5: Mean Scores regarding Debit and Credit cards questions

Responses with regards to debit and credit cards questions were very satisfactory. The mean score intensities clearly demonstrate that participants were highly cognizant of the abovementioned theme.

Question 28-What is the difference between a debit card and a credit card?

Whilst the aim of this question was to determine whether the individual was able to differentiate between a credit and a debit card, 55.09% of the respondents correctly answered that debit card was used to subtract money from one's own bank account, while with a credit card the individual was using money made available to him by a bank or other financial institution.

Question 35-The main advantage of a credit card is instant access to more cash that you may have on hand.

72.79% of respondents overtly declared that the main advantage of a credit card is instant access to more cash that you may have on hand

Question 36- A credit card gives the authorization to purchase goods and services up to a predetermined amount, called a credit limit.

Likewise, 83.47% of the sample correctly affirmed that a credit card gives the authorization to purchase goods and services up to a predetermined amount, called a credit limit.

4.2.1.6 Insurance (Questions 29-32)

The need for individual risk coverage has increased due to the emergence of a risk society whereby the modernization process has led to the expansion and frequency of a wide range of traditional and emerging risks[39] and to a society of threat where the globalisation of modern societies has resulted into an acute perception and information on potential risks and probably a lower level of tolerance to risk. Mony (2006) stipulates that

[39] Examples of these emerging risks are natural and industrial catastrophes, terrorism, pandemics, demographic (i.e. increasing life expectancy, dependance), health, etc.

insurance literacy includes the ability to discern protection and savings choices, discuss insurance and related financial issues without discomfort, plan for the future, and respond competently to life events that affect everyday exposure to risk and financial decisions in the context of happenings in personal lives and in the economy. Questions 29-32 assess the extent to which Mauritians are knowledgeable of the above.

Question No	Mean Score
Q29	19.20%
Q30	37.40%
Q31	16.36%
Q32	46.08%

Table 4.6: Mean Scores regarding Insurance questions

All the reported mean score intensities of Table 4.7 were relatively low, suggesting therefore that the participants surveyed were not very conversant with the notion of insurance.

Question 29- Auto insurance companies determine your premium based on:

The score of 19.20% obtained for question 29 clearly indicate a low level of understanding of the question. Indeed, less than one-fifth of the sample knew that auto insurance companies calculated premiums based on the age of the insured, the type and age of vehicle, the record of accidents and the completion of a driver education course. The above therefore suggests that the majority of the respondents were unaware of the factors that are taken into consideration when the premium for auto insurance is calculated.

Question 30- If each of the following persons had the same amount of after tax salary, who would need the greatest amount of life insurance?

This question sought to determine whether respondents were aware of the consequences of underinsurance. Clearly, they were not as only 37.40% knew that the young single woman with two young children would be the one needing the greatest amount of life insurance.

Question 31- An insurance deductible is the amount of money that an insurance policy holder would have to pay if they have an accident. The lower the deductible

Only 16.36% of the sample correctly argued that the lower the deductible, the higher the premium, implying therefore that most of the respondents did not know how their premium was calculated.

Question 32-Life insurance, which covers a policyholder for a set number of years, is called:

Lastly, 46.08% of respondents accurately affirmed that a life insurance, covering a policyholder for a set number of years was a term life insurance. Therefore, it can be argued that since respondents have a low level of knowledge regarding the different type of life insurance, they are unaware of the insurance available which may suit their needs.

4.2.2 Overall Results of the Survey: The Total Scores

Similar to other studies,40 the mean percentage of correct scores has been grouped into (1) more than 80%, (2) 60% to 79%, and (3) below 60%. While, the first category represents a relatively high level of knowledge, the second and the third category respectively represent a medium and a relatively low level of knowledge.

Items	Mean Point obtained	Total number of questions in the section	Mean Score obtained (%)
Personal Finance	4.39	8	54.90
Borrowings	3.48	7	49.70
Savings	4.35	8	54.36
Investment	1.68	5	33.56
Debit /Credit / ATM Cards	2.86	4	71.50
Insurance	1.19	4	29.76

Table 4.7: Mean score of each financial literacy dimension

(N=599)

[40] Danes and Hira (1987); Volpe, Chen and Pavlicko (1996).

Table 4.1 shows the mean scores obtained by all respondents with respect to the six dimensions discussed in the questionnaire. While the highest mean score obtained related to Debit /Credit / ATM Cards issues (71.50%), participants had conversely a relatively low level of knowledge regarding personal finance (54.90%), savings (54.36%), borrowings (49.70%), investment (33.56%) and insurance (29.76 %) matters. Mean score percentages falling in the 50%-60% range indicate a need to learn the basics, while those falling in the 40 or lower range, clearly suggests financial illiteracy.

4.2.2.1 Personal Finance

The overall mean percentage of correct scores with respect to personal finance was 54.90%, implying that, on average, respondents answered only half of the related questions correctly. As such, it can be argued that interviewees have a poor knowledge of personal financial fundamentals. This finding is in line with the Princeton Research Associates' (1997) survey on financial knowledge, which revealed that US household financial decision makers did not have a good grasp of basic finance concepts.

4.2.2.2 Borrowings

The borrowing section of the questionnaire was made up of simple arithmetic calculations and simple questions regarding the terms used when asking for a loan. Similar to personal finance, the mean score of the respondents for the borrowings dimension was less than 60% (49.70%). This again indicates that respondents did not have sufficient know-how concerning borrowing matters. Such a low score further demonstrates that Mauritians are ill equipped concerning their ability to make the right decision when they will go for a loan or borrowed funds.

4.2.2.3 Savings

In a world where the life expectancy and living costs are rising, it can be argued that there is a real need for the individual to save efficiently. The mean figure obtained for the savings section does not however reflect the abovementioned situation; indeed the average respondent answered only half of the savings questions correctly (Mean mark=4.35). The above result entails that Mauritians do not have a good grasp of savings

issues and are, as such, likely to have poor savings records. Given that there is an increasing need to provide for retirement, such a result can have dramatic consequences concerning the future of the respondents.

This is in accordance with other studies like that of the Employee Benefit Research Institute (1995) which provided evidence that most Americans do not save sufficient retirement funds and may have a false sense of financial confidence and security.

4.2.2.4 Investment

On average the survey participants' knowledge of personal investment is grossly inadequate (Percentage mean score obtained =35.56%), demonstrating that the Mauritian population is highly unsophisticated when it comes to investment issues. This poor investment knowledge can however explain why Mauritians have a medium knowledge of personal finance, because according to ICFP (1993), low investment knowledge is related to poor management of personal finances.

Yet, Mauritius is not the only country where poor literacy in investment issues exist, the Princeton Survey Research Associates (1996) for instance found that only 18% of Americans were financially literate. Moreover, the Vanguard Group/Money Magazine (1997)'s survey revealed that the average correct score on a 20-question quiz was approximately 45%.

4.2.2.5 Debit/Credit/ATM Cards

While the number of Mauritian debit and credit cardholders stood at 694,846 and 178,947 at May 2005,[41] outstanding debt on credit cards which has been up and rising amounted to Rs890 million at the end of March 2005. From the table above, it can be observed that the mean score obtained for the debit and credit card section of the questionnaire is 71.50%. As stipulated earlier, this figure is the highest when compared with the other dimensions of financial literacy implying hence that the Mauritian population has a medium level of knowledge in the field.

[41] Source:

4.2.2.6 Insurance

The mean score for insurance is the lowest when compared to the other financial literacy dimensions (29.76%); indeed out of the 4 questions set regarding insurance matters, the average participant had a mean mark of 1.19. This undeniably shows that respondents have poor knowledge and are at the risk of being under-insured or worst being uninsured. It is to be noted that being uninsured can have serious unfavourable effect on the financial position of an individual in the case of the occurrence of an unexpected adverse event.

4.2.3 Financial Literacy dimensions by demographics

In this section, the relationship between financial literacy and participants' gender, age group, level of education and other demographic background are examined. The researchers also utilized the analysis of variance (hereafter, ANOVA) to discern basic differences between each of the independent variables and the aggregated scores for financial literacy as a whole as well as its individual theme.

4.2.3.1 Financial Literacy and Gender

The extant literature on gender and financial literacy has commonly shown that women were less financially literate than men. In this respect, Chen and Volpe (2002) among others propounded that male college students had a higher level of financial literacy knowledge and practices than their female counterparts. Similarly, Hogarth and Hilbert (2002) found, when comparing male and female adult households, a disproportionate amount of women in the less financially knowledgeable category. Below is the tabulated result of the cross-tabulation between the six financial literacy dimensions discussed in this study and gender.

	Personal Finance	Borrowings	Savings	Investment	Debit/Credit cards	Insurance	Total
Gender:							
Male	56.29%	50.59%	56.65%	35.99%	73.25%	32.17%	
Female	53.40%	48.97%	52.03%	31.10%	69.70%	27.30%	
F Statistics	1.22	0.74	2.96*	3.89*	1.78	3.54*	3.38*

*Significant at the 0.05 level

Table 4.8: Crosstabs financial literacy themes *gender

The findings of Table 4.8 show that, overall, men have a better understanding of financial matters than women, supporting therefore past research findings. This is alarming given that, women share a larger burden of raising families, start to work later and earn less during their careers, live longer, have inadequate pension or survivors' benefits, and face more challenges in financial management (Alcon, 1999; Anthes and Most, 2000; Timmermann, 2000).

The analysis of variance further confirmed that gender significantly affected overall financial literacy [F (2,595) =3.38, < .05]. Individual ANOVA run for each dimension however revealed that there were significant gender differences for savings, investment and insurance themes only. In respect to the savings theme, the *F*-statisitics may explain the sparse but growing literature which strongly suggests that there are gender differences in saving decisions as well as in risk attitudes in several developed and developing economies.[42] In a similar vein, the significantly noted gender difference with regards to investment can also explain the increasing number of studies, which concluded that women were more conservative in their investment schemes than their male counterparts.[43] Indeed, a lack of financial knowledge can positively influence the risk-averseness of these individuals leading therefore to much conservatism characterising their investment style.

[42] Bajtelsmit and Van Derhei 1997; Sunden and Surette 1998; Bajtelsmit and Bernasek 1996, Hungerford 1999, Floro and Seguino 2000.
[43] Bajtelsmit and Bernasek (1996).

4.2.3.2 Financial Literacy and Age Group

Financial literacy generally improves as people age (Chen & Volpe, 1998, 2002; Henry et al, 2001). In this respect, Chen and Volpe (1998, 2002) discovered that age had a positive impact; they found that those students falling in the age range '40 and over' were more knowledgeable than those students under 30. Table 4.9 tabulates the mean score percentages of the different financial literacy themes according to age group.

	Personal Finance	Borrowings	Savings	Investment	Debit/Credit cards	Insurance	Total
Age Group:							
20-29	56.63%	49.48%	54.33%	33.52%	75.56%	31.01%	
30-44	60.02%	55.81%	58.54%	36.52%	72.98%	31.52%	
45-59	50.86%	46.49%	51.4%	31.64%	69.29%	28.02%	
60+	46.59%	45.45%	57.95%	34.55%	54.55%	23.86%	
F Statistic	6.65*	5.22*	2.94*	1.25	4.80*	1.19	5.85*

*Significant at the 0.05 level

Table 4.9: Crosstabs financial literacy themes*age group.

The above results clearly show that the past finding, namely, that age brings greater financial wisdom, holds only partially in this case. Those obtaining the highest score were those between 30 and 44 years old; they were indeed the only group with a medium level of knowledge. As for the youngest portion of the respondents they did not lag too far behind the most knowledgeable group, suggesting therefore that greater 'age' maturity does *not* bring about greater financial literacy. However, the particular age category – in this case the 30-44 age group – had the greatest impact on the degree of financial literacy. Presumably, differences in educational levels may explain why older adults are less financially tuned than younger adults (around age 30). However, the education factor does not explain why those falling in the *age group* '20-29' are less financially literate than their counterparts in the 30-34 age category.

In contrast, Table 4.9 also shows that those over the age of 60 had the most difficulty in understanding their finances relative to the other age groups. Yet, it should be noted that the abovementioned group did relatively well regarding savings and investment issues. It can be suggested that these respondents are not shortsighted and are able to make

decisions in light of their entire lives;[44] they save during a period of time (labour life), and dissave (spend) during another (retirement) explaining therefore their higher level of understanding in the abovementioned issues. While this confirms the findings of Demery and Duck (2001) who propounded that the savings rates of the elderly are both positive and rising with age, the above goes against the findings of Cutler and Devlin (1996) who stated that the baby boom was a generation of prolific spenders, not savers, and they were not appropriately planning for their financial future.

In addition, the present ANOVA finding reveals that age has a significant impact on the financial acumen of the Mauritian respondent as a whole [$F(3, 590) = 5.85, < .05$]. Yet, the individual analysis of variance reports statistically significant *age group* differences among Personal Finance, Borrowings, Saving and Debit/Credit cards themes only.

4.2.3.3 Financial Literacy and Education

The growing complexity of financial markets, which widens the choices people have to save, invest, and take or avoid risks, requires knowledge to work toward a sound financial knowledge (Braunstein and Welch, 2002). In this respect, Greenspan (2002) stipulates that education can play a critical role by equipping consumers with the knowledge required to make wise decisions when choosing among the myriad of financial products and providers. Furthermore, Baek and DeVaney (2004, 345) found that a higher educational level of consumers leads to increased saving and investing. The table below relates to the mean score percentage according to the respondents' level of education.

	Personal Finance	Borrowings	Savings	Investment	Debit/Credit cards	Insurance	Total
Level of Education:							
Primary	41.13%	31.57%	35.28%	21.61%	52.02%	19.35%	
Secondary (SC)	47.87%	44.12%	48.82%	29.88%	65.88%	27.94%	
Secondary (HSC)	52.66%	52.53%	56.00%	28.98%	75.39%	28.54%	
Tertiary/Professional qualification	65.39%	58.02%	63.21%	42.36%	78.60%	34.39%	
F Statistics	34.39*	28.24*	29.82*	18.94*	20.30*	6.74*	51.53*

*Significant at the 0.05 level

Table 4.10: Crosstabs financial literacy themes*Level of education

[44] The argument is based on Modigliani and Brumberg (1954)'s Life Cycle Hypothesis.

The findings from Table 4.10 clearly spells out that education plays an important role in improving an individual's knowledge of financial matters supporting therefore the existing literature on education and financial literacy. Indeed, respondents with tertiary education or professional qualifications are those with the highest marks - they were the only group in their category to have attained the medium level of financial literacy concerning knowledge in personal finance, savings and debit/credit cards (Mean Score Percentage> 60). Conversely, HSC and SC holders as well as those with a primary education only were found to have a grossly inadequate level of understanding regarding savings matters (their Mean Score Percentage < 60%) – except for debit/credit cards.

For instance, an examination of the borrowings theme with regards to level of education sum up the above. Yet, even if the medium level of knowledge has not been attained in this particular dimension, this implies respondents with a higher level of education will be less likely to have a loan with harmful terms. Conversely, individual respondents with less than a college degree are more likely to have loans with more harmful terms, exhibit higher levels of risk behaviours, exhibit less positive protective behaviours and have less knowledge (Moore, 2003).

The above findings are further supported by the analysis of variance, which revealed that the educational class of an individual significantly impacted on his overall financial knowledge [$F (3, 584) =51.53, < .05$]. This trend is also confirmed in each of the six dimensions discussed.

4.2.3.4 Financial Literacy and Marital Status

Of the few studies that have examined the relationship between financial literacy and marital status, Hogarth and Hilgert (2002) found that respondents who were more financially knowledgeable were married, while the ANZ survey of Adult financial literacy divulged that single persons were financially the least capable. Below is the cross tabulation between the different financial literacy dimensions and the marital status of the respondent.

	Personal Finance	Borrowings	Savings	Investment	Debit/Credit cards	Insurance	Total
Marital Status:							
Single	59.38%	50.52%	56.94%	35.85%	77.9%	31.71%	
Married	53.85%	49.17%	53.94%	32.75%	69.98%	28.78%	
Widowed	43.38%	47.06%	46.32%	35.29%	57.35%	29.41%	
Divorced	32.50%	42.86%	32.5%	12.00%	35%	40%	
Separated	45.83%	52.38%	45.83%	46.67%	58.33%	33.33%	
F Statistics	4.26*	0.25	2.06	1.64	6.12*	0.62	3.35*

*Significant at the 0.05 level

Table 4.11: Crosstabs financial literacy themes* Marital status

Surprisingly enough, Table 4.11 shows that more often than not singles had the highest score, followed by married respondents. However, this observation did not follow a particular trend as this pertained to personal finance,[45] savings and debit/credit cards themes only. Indeed, separated individuals were those who obtained the highest scores in borrowings matters. This can be explained by the fact that separated individuals have to live on one salary as contrary to the time where they were married and have two salaries to live on. They therefore are one of the groups who are more likely to have recourse to borrowed funds and explaining hence their relatively higher understanding regarding borrowing matters. Yet this reasoning does not hold for divorcees and widows who obtained the lowest scores, that is, 42.86% and 47.06% respectively. It is to be noted that the above result goes against that of Schagen and Lines (1996) who found that single parents are particularly susceptible to difficulties with debt.

While the ANOVA finding confirmed that marital status affected the individual's financial knowledge as a whole [F (4, 587) =3.35, < .05], the results generated from the analysis of variance for each financial literacy theme demonstrates that marital status significantly impacted on personal savings and debit/credit cards only.

[45] The finding is in contradiction with that of Danes and Hira (1987) who found that married students are generally more knowledgeable about personal finance.

4.2.3.5 Financial Literacy and Level of income

The positive relationship that exists between an individual's level of education and his income level[46] entails that the lower income group is more exposed to financial illiteracy. Anderson et al (2004), for instance, affirm that people with low-incomes are less likely than their higher-income counterparts to have any financial education. Similarly, Jacob et al (2000) declare that financial literacy has proven even more challenging for lower-income persons. Low-income families are especially vulnerable to misinformation (Bell and Lerman, 2005). Given that a high percentage of low-income earners were 'unbanked', there is added concern that these consumers were inadequately prepared (i.e., lack of experience and information about personal finance and consumer education concepts) to make informed financial decisions (Hogarth and O'Donell, 1997).

	Personal Finance	**Borrowings**	**Savings**	**Investment**	**Debit/Credit cards**	**Insurance**	**Total**
Level of income:							
< Rs 7 000	44.13%	35.63%	39.31%	22.89%	58.73%	26.20%	
Rs 7000-24999	58.14%	52.83%	58.39%	35.15%	77.29%	29.36%	
> Rs 25 000	63.14%	59.71%	64.9%	45.13%	73.08%	37.82%	
Don't work	44.97%	41.54%	43.68%	28.74%	60.92%	26.44%	
F Statistics	18.88*	21.44*	27.39*	13.11*	16.41*	3.86*	34.72*

*Significant at the 0.05 level

Table 4.12: Crosstabs financial literacy themes* Level of income

The level of income of the respondents seemed to be important determinant with respect to each financial literacy theme. The highest income earners are indeed the ones who obtained the highest score and the only group to have reached the medium level of literacy. As a matter of fact, Table 4.12 revealed that individuals falling in the highest income group (>Rs 25000) were the only with a medium level of financial knowledge regarding personal finance, savings and debit/credit cards issues. This is in line with Anderson, Zhan and Scott (2004), who argued that people with low-incomes are less likely than their higher-income counterparts to have any financial education.

[46] Income distribution is related to the population's average schooling and its dispersion. Income inequality increases with education inequality (De Gregorio and Lee, 1999) .

As far as borrowing was concerned, respondents with a salary *'> Rs 25000'* scored 59.71% while those earning between Rs 7 000 and Rs 24 999 obtained a mean score of 52.83%. Conversely, the '< Rs 7000' group obtained the lowest score, with an average percentage of 35.63% whereas respondents who did not work obtained a low score of 41.54%. This result can be particularly damaging to those in the lowest income group because, most likely, they are the one to feel the need to have access to borrowed funds. As such, given their limited knowledge they are more a risk to malpractices like swindling.

Table 4.12 further demonstrated that all the groups obtained a score indicative of low level of literacy concerning investment and insurance issues. However a clear trend could be observed concerning knowledge in investment and level of income; those with lower levels of Household income (annual Household income less than Rs 7000) were more likely to have the lowest level of financial literacy. . One possible reason as to why higher income earners perform better is that, they are the ones with enough funds to carry out any sort of investment and as such are much more informed about investment practices than lower income groups.

The above is in conformity with past research which divulged that compared to those with high-incomes, low-income persons are much less likely to have bank accounts (Jacob, Hudson, & Bush, 2000), less likely to save or invest (Haveman & Wolff, 2000), and more susceptible to predatory lending practices (Consumer Federation of America and National Consumer Law Center, 2002). While these financial practices may largely result from a lack of resources, it has been argued[47] that knowledge deficiencies and the inefficient handling of personal finances also are problematic. The limited access many low-income people have to financial and community institutions may, in turn, exacerbate their knowledge deficiencies. In addition, several studies have found that low-income persons lack information about available public benefits, which contribute to the underutilization of such services (Anderson, 2002; Anderson and Gryzlak, 2002; Julnes et al., 2000).

[47] See Hogarth & Lee (2000).

Likewise, the analysis of variance clearly demonstrates that the level of income of an individual significantly impact on his financial literacy [F (3, 582) =34.72, < .05]. This trend is thought to persist because the individual ANOVAs further confirm this income group difference among *all* the financial literacy themes.

4.2.3.6 Financial Literacy and Occupation

Literacy skills are also associated with occupational outcomes; the International Adult Literacy Survey (IALS), concludes that after taking into account factors like gender and education, higher literacy scores are associated with a lower likelihood of being employed in a blue-collar job and a higher likelihood of being employed in a high-skill white-collar job.[48] In this regard, Delpachitra (2003) stipulated that working in a more highly skilled occupation and having more work experience will impact positively on financial knowledge and skills. The following table relates to the different mean score percentage of Mauritian respondents according to their occupational level.

	Personal Finance	**Borrowings**	**Savings**	**Investment**	**Debit/Credit cards**	**Insurance**	**Total**
Occupation:							
Manual work	42.71%	37.70%	38.54%	20.56%	56.94%	25.69%	
Skilled trade	48.61%	50.26%	50.46%	31.85%	75.93%	25.93%	
Service worker	54.33%	50.12%	57.06%	28.71%	78.23%	25.6%	
Professional worker	64.03%	58.02%	63.01%	43.27%	77.42%	35.33%	
Other or don't know	49.46%	42.31%	47.35%	30.11%	63.04%	28.13%	
F Statistics	14.98*	13.84*	15.75*	12.90*	11.92*	3.92*	24.45*

*Significant at the 0.05 level

Table 4.13: Crosstabs financial literacy themes* Occupation

The present results concord with the literature findings; respondents in jobs requiring higher education and qualifications are those who obtained the highest mean score. Professional workers even reached the medium knowledge level with mean score percentages >60% in personal finance, savings and debit/credit cards. Hence the better the job description of an individual the more will be his exposure to personal finance matters. This is in line with the traditional school of thought, which argues that given blue collar job workers are the least educated workers and the least paid, they are thus the

[48] Source: Human Resources and Social Development Canada (2003).

least financially literate. Furthermore, the ANOVA gives support to the above, as the f-statistic reveals that the overall financial literacy of an individual is dependent of his occupation [F (4, 562) =24.25, < .05]. Moreover, the findings divulge that this trend is persistent for each financial literacy dimension.

4.2.3.7 Financial Literacy and Parents' Occupation

An individual's learning is influenced by an interplay of their individual, school and family characteristics. Families differ widely in how they shape their children's behaviour and attitudes and in their ability to provide learning opportunities for their children. It has been argued that more family financial resources, which are associated with parents' occupation and educational attainment, often imply increased learning opportunities for the children. In this perspective, Murphy (2005) concluded that parent's education level was a factor that affected the financial literacy. The table below presents the score performance of the sample with regards to the respondents' "parents' occupation".

	Personal Finance	Borrowings	Savings	Investment	Debit/Credit cards	Insurance	Total
Parent's Occupation:							
Manual work	53.04%	45.37%	53.76%	31.81%	71.50%	28.11%	
Skilled trade	51.50%	53.71%	59.75%	34.40%	77.00%	29.50%	
Service worker	58.68%	52.89%	59.50%	34.88%	74.79%	29.55%	
Professional worker	57.21%	54.79%	54.85%	39.53%	72.06%	30.88%	
Other or don't know	54.17%	46.46%	47.97%	31.87%	66.26%	31.30%	
F Statistics	1.67	4.09*	4.13*	1.69	2.03	0.36	24.45*

*Significant at the 0.05 level

Table 4.14: Crosstabs financial literacy themes* Parents' Occupation

No remarkable pattern can be observed from Table 4.14; surprisingly, while respondents whose parents fall in the "skilled trade" group best-answered savings and debit/credit cards questions, participants who declared that their parents were in the 'professional worker' group had a relatively higher knowledge regarding borrowings and investment matters. Lastly, 'Service worker' group and the 'other or don't know' group respectively got the best score concerning personal finance and insurance. Lastly, while the ANOVA performed on the above data indicates that the respondent's 'parents' occupation' considerable impact on his financial knowledge [F (4, 567) =3.10, < .05], the individual

f-statistics nevertheless revealed that the mean differences were statistically significant for borrowings and savings only.

4.3 Hypothesis Testing

While the ANOVA findings-with specific attention to financial literacy as a whole-suggest that the gender of the individual, his age group, his level of education, his marital status, his income group, his occupation as well as his parents' occupation may have an influencing effect on the respondents' financial knowledge, they did not asses the degree to which these variables are related. In this respect, Tabachnick and Fidell (2001) argues that it is important to assess the degree of relationship to avoid publicizing trivial results as though they had practical utility. As such, 7 hypotheses have been put forward and correlation will be used to assess the association between the variables.

4.3.1 The Normality Test

Before assessing the strength of the different relationships mentioned above, it is important to investigate how well the dataset approximates the normal distribution so that the right measure of association is chosen. In this respect, the Kolmogorov-Smirnov and the Shapiro-Wilk test for normality have been used. The following table gives the results obtained for the normality test:

H_0: The data follows a normal distribution

H_1: The data does not follow a normal distribution.

Data	Normality Test	Result	Conclusion
Total marks obtained for the whole questionnaire	Kolmogorov-Smirnov	0.000	Reject Ho
	Shapiro-Wilk	0.022	
Total marks obtained for the personal finance section	Kolmogorov-Smirnov	0.000	Reject Ho
	Shapiro-Wilk	0.000	
Total marks obtained for the borrowings section	Kolmogorov-Smirnov	0.000	Reject Ho
	Shapiro-Wilk	0.000	
Total marks obtained for the savings section	Kolmogorov-Smirnov	0.000	Reject Ho
	Shapiro-Wilk	0.000	
Total marks obtained for the investment section	Kolmogorov-Smirnov	0.000	Reject Ho
	Shapiro-Wilk	0.000	
Total marks obtained for the debit/credit section	Kolmogorov-Smirnov	0.000	Reject Ho
	Shapiro-Wilk	0.000	
Total marks obtained for the insurance section	Kolmogorov-Smirnov	0.000	Reject Ho
	Shapiro-Wilk	0.000	

Table 4.15: Results of normality test for each financial literacy dimension.

Table 4.15 shows that none of the data above that is total marks obtained for the whole questionnaire, total marks obtained for the personal finance section, total marks obtained for the borrowings section, total marks obtained for the savings section, total marks obtained for the investment section, total marks obtained for the debit/credit section and the total marks obtained for the insurance section, follow a normal distribution. For all the different data above, the significance value of the Kolmogorov-Smirnov and Shapiro-Wilk test is less than 0.05 or 5%. This leads us to reject the null hypothesis and conclude at 5% level of significance that the data does not follow a normal distribution.

Overall, the normality test results reveal that the *p*-values from the Shapiro-Wilk test of normality are less than 0.05, implying that it is acceptable to assume that the present distributions are not normal (or bell-shaped).

4.3.2 Hypothesis Testing Results

The Spearman' correlation coefficient non-parametric statistic will be used since the data is non-normally distributed. The results of the hypothesis tests are tabled below:

#	Hypothesis	Result	Conclusion
1	H_{01}: Financial literacy is the same for male and females	-0.10*	Reject H_{01}
	H_{11}: Financial literacy is not the same for the male and females.		
2	H_{02}: There is no association between the age group of an individual and his level of financial literacy	-0.11**	Reject H_{02}
	H_{12}: There is an association between the age group of a person and his/her degree of financial literacy.		
3	H_{03}: An individual's ability to tackle financial problems is not related to his level of education	0.45**	Reject H_{03}
	H_{13}: An individual's ability to tackle financial problems is related to his level of education.		
4	H_{04}: There is no link between an individual's level of financial literacy and his status.	-0.12**	Reject H_{04}
	H_{14}: There is a link between an individual's level of financial literacy and his status.		
5	H_{05}: The level of financial knowledge is the same for all income groups.	0.09*	Reject H_{05}
	H_{15}: The level of financial knowledge is not the same for all income groups.		
6	H_{06}: An individual's occupation has no effect on his knowledge of financial matters.	-0.02	Do not reject H_{06}
	H_{16}: An individual's occupation has an effect on his knowledge of financial matters.		
7	H_{07}: There is no link between an individual's level of financial literacy and his parent's level of education	0.02	Do not reject H_{07}
	H_{17}: There is a link between an individual's level of financial literacy and his parents, level of education		

* Correlation is significant at the .05 level (2-tailed)
** Correlation is significant at the .01 level (2-tailed)

Table 4.16: Hypothesis testing results.

Table 4.16 shows the output matrix giving the correlation coefficient between: (1) financial literacy and gender, (2) financial literacy and age group, (3) financial literacy and the educational level of the individual, (4) financial literacy and marital status, (5) financial literacy and income group, (6) financial literacy and occupation and (7) financial literacy and parents' occupation.

With regards to the first hypothesis, that is whether financial literacy is the same for male and female, the significance value for the related correlation coefficient (-0.10) is less than .05. It can be concluded therefore that there is a significant inverse relationship between an individual's financial literacy and his gender, although this correlation is fairly weak. The results regarding the second hypothesis, which investigates whether there is an association between the age group of an individual and his level of financial literacy, reveals that there is a significant negatively weak correlation (-0.11) between an individual's age and his financial acumen at 1% significance level. This implies that older individuals have lower levels of financial literary. While this finding may repeal the past research findings[49] like that of Argawal et al (2007) who found that the sophistication of financial choices peaks at about age 53, it gives further support to the findings of Table 4.9 which showed that adults falling in the age categories '20-29' and '30-44' were financially more literate than respondents falling in the other age groups- '45-59' and '60+'.

The following may be explained by the fact that education was restricted to a privileged class in Mauritius until 1976 where free education was given through the secondary level. The financial illiteracy of older Mauritian individuals may be therefore attributed to the restriction on education in their youth. A cross tabulation between age group and level of education indeed reveal that those with higher education attainment mainly fall in the '20-29' and '30-44' age categories. The findings of the third hypothesis, which tests whether an individual's ability to tackle financial problems is related to his level of education, gives support to the above. Table 4.16 factually reports a rather strong positive correlation coefficient (0.45) indicating that there is a statistically significant (p <

[49] See also Chen and Volpe (1998, 2002) and Henry et al (2001).

.001) linear relationship between these two variables such that the more education a person has, the higher his financial literacy level.

Similarly the result of the fourth proposition, which examines if there is a link between an individual's level of financial literacy and his status, shows that the latter negatively affects the former at 1% significance level. On the other hand, the income level of an individual was positively related to his level of financial knowledge at 1% significance level. This implies that as the income level of an individual improves, there is a corresponding improvement in his financial literacy level.

On the other hand, the significance values for the correlation coefficients of the two last hypotheses are greater than 0.05; therefore it can be concluded that the occupation of an individual and his parents' occupation do not significantly affect his financial acumen. Even if the ANOVA indicated that the respondent's 'parents' occupation' considerably impacted on his financial knowledge, the fact that no linear association have been found between financial literacy and the individual's occupation can be understood since the individual analysis of variance revealed statistically significant group differences for borrowings and savings only (refer to Table 4.14). However, this is in high contrast with the ANOVA results regarding the individual's occupation and his financial knowledge, which showed that the overall financial literacy as well as each financial literacy dimension of an individual were dependent of his occupation (see Table 4.13).

4.4 Causes of low levels of financial literacy among Mauritian people

4.4.1 Culture

Though Mauritius is a country with a literacy rate exceeding 80%, it has been found that a large number of its 'educated' people are financially illiterate with the concept of good financial 'housekeeping' apparently having been omitted from our daily routine. Since financial literacy has not been adequately integrated within the Mauritian education system, the financial knowledge, skills and leaning is gained through 'hands on' experience in managing money. Although Mauritians do not seem to be aware of alternative means of savings and investment beyond the traditional interest bearing bank

deposit accounts, it must be emphasised that, given the tough economic times in which we are living, for many households saving up enough surplus income which would warrant an active search for more lucrative investment opportunities may indeed be a rare occurrence. While culture also accounts for financial behaviours and decisions, the above may explain why Mauritians do not have a culture of responsible financial management.

4.4.2 Access to Education

Past studies have found that the provision of financial education programs tend to raise both financial and net worth sharply, even more so, for those families at the bottom of the wealth distribution and those with low level of education. As such, a lack of financial education programs may result in financial illiteracy.

Furthermore, it is argued that a lack of financial education programs might not be the sole reason for financially illiteracy. It might be that those financial education plans are not offered in the appropriate format. Therefore, the design of the plan is important as it is directly related to the amount of information that is retained by the attendees. Moreover even if some employers offer financial education programs to their employees, the quality of the financial plans offered may be seriously questionable.

4.4.3 Complexity of financial decisions

Today's financial world is highly complex when compared with that of a generation ago. Bull markets, bear markets, rising interest rates, falling interest rates and the increased visibility of finances in the press further add to the complexity of financial decisions.

CHAPTER 5

SUMMARY

&

CONCLUSION

The major objective of financial education is to inculcate individuals the knowledge of how to manage money efficiently. Sebstab and Cohen (2003) argued that the aim of financial education is to enable people to become more informed financial decision makers; to develop awareness of personal financial issues and choices, and to learn basic skills relating to earning, spending, budgeting, savings, borrowing, and investing money. Thus, by being financially literate, it is easier for people to set their financial goals and optimize their financial options.

In this perspective, the main objectives of the present study are: to determine the level of financial literacy in Mauritius; depict any relationship between financial literacy and related issues like savings, investment, good credit management practice and sound cash flow management; identify possible causes of financial illiteracy and formulate policy measures to improve the level of financial. To that end, the survey research method was used to gather information from a sample of 800 respondents drawn from the list of the estimated resident population for 2004 obtained from the central statistical office of Mauritius. The response rate was 74.86%, that is, 599 questionnaires were successfully completed and returned.

The results of the survey showed that, overall, Mauritians had a medium financial knowledge about the debit/credit card theme but relatively low levels of knowledge regarding savings (Mean score percentage=54.36%), borrowings (Mean score percentage=49.70%) suggesting hence a need to learn basics. On the other hand, respondents were found to be financially illiterate in investment (Mean score percentage=33.56%) and insurance issues (Mean score percentage=29.76%).

These above findings suggest that while respondents are at risk in making uninformed decisions when going for borrowed fund, they also do not have a sound knowledge of savings issues and are thus likely to have poor savings records. Moreover, the relative poor knowledge of respondents regarding insurance undeniably shows the respondents' inability to discern protection and savings choices, discuss insurance and related financial issues without discomfort, plan for the future, and respond competently to life events that

may affect their everyday exposure to risk and financial decisions in the context of changes or events in their personal lives and in the economy.

Furthermore, it was found that some segments were more financially literate than others. In this respect, the analysis of variance further confirmed that gender, age group, education, marital status, level of income, occupation and the respondent's parent occupation significantly affected overall financial literacy [p-value < .05]. Yet, more in-depth analysis divulged only a significant, but negative and fairly weak association (-0.10) between gender and financial literacy. Similarly, the results also revealed a significant negatively weak correlation (-0.11) between an individual's age and his financial acumen at 1% significance level which goes against the findings of Argawal et al (2007) who found that the sophistication of financial choices peaks at about age 53. This may be attributed to the fact that older Mauritian individuals did not have access to free education during their early years.

On the other hand, a rather strong positive correlation coefficient (0.45) was noted between education and the financial acumen of an individual, such that the more education a person has, the higher his financial literacy level. In high contrast, no significant linear association between the occupation of an individual and his literacy rate could be established. A similar conclusion was reached with regards to a person's financial knowledge and his parents' occupation

Implications

- For the individual

While reported financial literacy deficiencies can affect an individual's or family's day-to-day money management and ability to save for long-term goals such as buying a home, seeking higher education, or financing retirement, ineffective money management can also lead to decisions that may make consumers vulnerable to severe financial crises. Moreover, the costly consequences of financial illiteracy make individuals worry about

their finances such that their productivity in workplaces is affected. When individuals cannot manage their finances, it becomes a problem for the society.

- For the Financial sector and the economy as a whole

From a broader perspective, market operations and competitive forces are compromised when consumers do not have the skills to manage their finances effectively. Indeed, informed participants help create a more competitive and a more efficient market. As knowledgeable consumers demand products that meet their short- and long-term financial needs, providers compete to create products having the characteristics which best respond to those demands. Moreover, a low level of financial literacy may adversely impact on the economic growth of the country.

SUGGESTIONS

&

RECOMMENDATIONS

5.0 Introduction

Following the data collected from the survey questionnaire, this research has resulted in a series of recommendations for improving the financial literacy rate in Mauritius. The recommendations are as follows:

5.2.1 Financial education

The findings of the study strongly supports the need for an education program that promulgate financial concepts to consumers and provides mechanisms that help consumers make informed financial decisions. More explicitly, the programmes should help financial consumers understand the pros and cons as well as the risks of different types of financial products and services.

Moreover, while improving the financial literacy of Mauritians is an ongoing sustained effort, constantly reviewing the programmes will be essential to ensure that they reach the right target group and remain relevant. Although study results show that a literacy program would be very beneficial, there remains concern over whether Mauritians would actually participate in financial literacy programs if they were to be offered.

5.2.1.1 Types of programs

▪ School Age Programs

• School savings programs;

• Educational programs that become more sophisticated as students get older;

• Field trips to banks, guest speakers, investment clubs, stock market simulation games.

• Adult Programs

• Presentations to local community and religious organizations;

• On-the-job financial literacy seminars conducted in conjunction with employers;

• Educational outreach tailored to consumers with limited English proficiency provided in partnership with community-based organizations.

Specific programmes may be offered to the general public. For instance, workshops and seminars may be offered at the national level by the tertiary institutions, The Stock

Exchange of Mauritius, the Bank of Mauritus and the Financial Services Commission. It was argued that to achieve a higher participation from the population, these seminars and workshops had to be organised in community centers with the help of community leaders, NGOs and other local organisations. Bringing financial literacy programmes to people instead of people coming to these programmes is expected to produce better results. Information guide can be distributed via banks and local communities to explain basic financial terms to the general population. In certain cases, these guides can be written in the local language, Creole, to reach a wider population.

- Important issues pertaining to financial education programmes

Financial education provided by financial institutions should be regularly assessed to ensure it meets consumer needs. This may be achieved through partnerships with independent, non- profit financial advisory bodies that may have a better relationship with consumers, particularly those facing disadvantages when investing on the financial markets. Financial institutions should be encouraged to train their staff on delivering financial education and develop codes of conduct for the provision of general advice about investment and borrowing, not linked to the supply of a specific product.

Moreover, the effectiveness of financial education programmes is sometimes counteracted by powerful psychological or behavioural traits, such as inertia and lack of willpower. Hence, another major challenge will be to encourage participation. In addition, more needs to be learned about the financial education needs of consumers at various stages of their lives before effective and relevant financial education programmes can be designed.

5.2.1.2 Means and ways

In addition to the type of information to be provided, an equally important aspect of the feasibility of a financial literacy program is to determine how best to offer it to the public and to those who need it. A national financial education programme will be ineffective without the active participation of and funding by the government. There is a need to set a proper network both at a national level and a regional level. Potential partners that

could be identified are the education sector (primary schools, colleges and tertiary institutions), non-governmental organizations (NGOs) major players in the financial sectors (banks, insurance companies and other financial intermediaries), regulatory bodies (Bank of Mauritius, the Financial Services Commission), the Stock Exchange of Mauritius and community centres.

The most important stakeholder to launch the financial education programme is the Ministry of Education, supported by other ministries. Funding can be secured locally (the government, the private sector) and/or from abroad (United Nations Development Programme, World Bank and the European Union Development Fund). The population needs to be targeted at both the national and regional level. Moreover, the chosen programme should cater for different target groups namely the young, the middle-aged, and the elderly.

Another important consideration is the choice of the venue would be most viable. In order to achieve a wider coverage and exposure, the use of different types media for the dissemination of education messages should be promoted. For instance, the University of Mauritius and the Mauritius College of the Air may jointly create financial education programmes. The national broadcasting station can air these programmes at specific times to reach the target population. Running these programmes in Creole will help those with basic literacy level. Local newspapers may create a special column to explain the basic finance skills to people. Given that the elderly population prefers family as a source of financial knowledge, educating families first will ease the job of the task force.

5.2.1.3 Expected benefits of educational programmes for the financial sector

Financial education is important for both the security of individuals and the security of nations. The financial sector has a lot to gain from providing such financial education programs. If they are financially illiterate, consumers might not be able to assess the returns and risks of the various financial transactions that they undertake. The consumers are unfortunately in a position where they cannot compare the different financial products in a meaningful way. Such a lack of understanding has led to frequent complaints against

the financial sector. Dealing with consumer complaints can be costly for a firm, not only in terms of resources required, but also in terms of the damage to its reputation. Many of these costs could be avoided if consumers had a better understanding of what they were buying and why. Moreover, providing financial education can also help the financial service sector increase their consumer base.

Hence, a financially literate population will better understand the working mechanisms of the financial institutions. Individuals will be able to make wiser financial decisions and as such reduce the confusion surrounding the increasingly complex economic society. These in turn may increase economic opportunity by enabling individuals to overcome their reluctance or inability to take full advantage of technological developments and product innovation. Moreover, financial education equips consumers with the fundamental knowledge required to choose wisely among a wide range of products and providers in the financial services industry. This will in the end result in increased economic activities and growth.

In addition, financial education programs have the power to instigate saving initiatives among those who participate in them. Higher savings is advantageous from both a societal and economic point of view. From the social point of view, a rise in saving is beneficial to the individual himself or herself as it enables him or her to be prepared to meet adverse events. Moreover, a financially stable individual is less likely to engage in unscrupulous actions like theft and burglary. Hence, given that financial literacy programs leads to higher savings and improved financial behaviour, it can be argued that those plans are beneficial to society.

Lastly, improved decision-making in the workforce may result in improved productivity, less capital wastage with improved decisions on starting new businesses and home purchasing, increased flow of funds to Mauritius and more profitable businesses via better saving and investment decisions. Potential indirect benefits include: reduction in need for welfare benefits; increased economic opportunities; and the bolstering of national savings creation of well-informed consumers financial literacy.

5.2.2 Public action

Moreover, national campaigns should be encouraged to raise awareness of the population as to the need to improve their understanding of financial risks and ways to protect them against financial risks through adequate savings, insurance and financial education. Moreover, as proposed by the OECD (2005), specific websites should be promoted to provide relevant, user-friendly financial information to the public. Free information services should also be developed. Warning systems by consumers, professionals or other organisations on high-risk issues that may be detrimental to the interests of the financial consumers (including cases of fraud) should be promoted.

5.2.2.1 Means and ways

There are several ways to conduct financial literacy initiatives. Consumer educators and community organizations can convene information seminars, distribute pamphlets, use multi-media such as radio, television and newspapers, and post information on the Internet.

- Information seminars can be an especially good way of promoting financial literacy among the adult population. It is important that seminars be held in an environment that is culturally and linguistically comfortable to the attendees.

- Distributing pamphlets is a quick way to disseminate information to a large audience. However, pamphlets are most effective when given as part of a seminar or a training program, with readers having the opportunity to have the information in the pamphlets being elaborated upon by the financial educator. It is important that the written educational materials be attractive, engaging, and easy to follow.

- Most people own a television set and a radio regardless of their socio-economic status. Disseminating information through short videos and audiotapes may

therefore be effective tools to increase awareness regarding personal finance management. In addition, educational articles in newspapers, neighbourhood newsletters, magazines or journals are apt to reach the isolated or elderly audience who may have greater mobility constraints.

- The Internet may be another efficient and cost-effective way to highlight the importance of finance. Information offered through a website may be less useful to lower-income consumers if they do not have access to the Internet. Many local libraries, however, offer free Internet access to the community.

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APPENDIX

FINANCIAL LITERACY IN MAURITIUS: AN EMPIRICAL STUDY

Dear Sir/Madam/Miss,

Financial literacy pertains to the ability to understand and grasp financial terms and concepts and to translate that knowledge skillfully into behavior. Individuals may achieve greater wealth if they have a sound understanding of their finance. Though Mauritius is a country with a very high literacy rate of over 80%, findings with respect to their financial understanding is very scanty to say the least. Hence the main objective of this questionnaire is to investigate the level of financial literacy among the Mauritian population. You are kindly requested to fill this questionnaire. Please be assured that responses will be treated with strict confidentiality and only generalized inferences will be drawn.

(PLEASE TICK ONLY ONE ANSWER FOR THE FOLLOWING SECTION)

(1) The most liquid asset is

( ) Money in a certificate of deposit account.
( ) Money in a checking account.
( ) A car.
( ) A computer.
( ) A house.
( ) Don't know.

(2) Your net worth is

( ) The difference between your expenditures and income.
( ) The difference between your liabilities and assets.
( ) The difference between your cash inflow and outflow.
( ) The difference between your bank borrowings and savings.
( ) Don't know.

(3) Inflation may cause difficulty in many ways. Which group would have the greatest problem during periods of high inflation?

( ) Young couples with no children who both work.
( ) Young working couples with children.
( ) Older, working couples saving for retirement.
( ) Older people living on fixed retirement income.
( ) Don't know.

(4) Which of the following statements are NOT correct about most ATM (Automated Teller Machine) cards?

( ) You must have a bank account to have an ATM Card.
( ) You can get cash anywhere in the world with no fee.
( ) You can generally obtain information concerning your bank balance at an ATM machine.
( ) You can generally get cash 24 hours a day.
( ) Don't know.

(5) Which of the following credit card users is likely to pay more in terms of finance charges per year if all banks charge the same fee on the use of credit cards?

( ) Raja who has opted to pay off his credit card bill by the full amount.
( ) Rani, who has chosen to pay off her credit card bill as follows: 50% in the current period and 50% in the coming period.
( ) Ti Paul, who has chosen to pay his credit card by the full amount in two months time
( ) Ushad who prefers to pay his credit card bill as follows: 25% in four successive periods.
( ) Don't know.

(6) What is "net pay"?

( ) Your gross wages minus taxes and deductions.
( ) The amount you earn an hour.
( ) The bonus money for a person who receives a salary.
( ) Gross wages plus taxes and deductions.
( ) Don't know.

(7) What is "before tax money"?

( ) Money earned that you do not have to pay income tax on.
( ) Money spent on having your taxes filed.
( ) An insurance policy for accountants.
( ) None of the above.
( ) Don't know.

(8) When the expenses and the income of a budget are equal, it is called:

( ) A balanced budget .
( ) Equal budget.
( ) Zero budgets.
( ) Rubber stamped budget.
( ) Don't know.

(9) If you co-sign a loan for a friend, then

( ) You become responsible for the loan payments if your friend defaults.
( ) It means that your friend cannot receive the loan by himself.
( ) You are entitled to receive part of the loan.
( ) Both A and B.
( ) Both A and C.
( ) Don't know.

(10) Mathew and Robin are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Matthew has borrowed Rs100 000 to buy a car. Robin has borrowed Rs100 000 to take a foreign vacation. Who is likely to pay the lowest finance charge?

( ) They will both pay the same because they have almost identical financial backgrounds.
( ) Robin will pay less because people who travel overseas are better protected against risks.
( ) Matthew will pay less because the car is used as collateral for the loan.
( ) They will both pay the same because law sets the rate.
( ) Don't know.

(11) Which of the following statements are true? *(Choose as many as apply)*

( ) If you missed a payment more than 2 years ago, it cannot be considered in a loan decision.
( ) People may have several loans with different institutions; it is very unlikely that one bank will know your credit history with another bank.
( ) Banks and other lenders share the credit history of their borrowers with each other and are likely to know of any loan payments that you have missed.
( ) Your poor loan payment record with one bank will not be considered if you apply to another bank for a loan.
( ) Don't know.

(12) What does standard variable interest rates refer to?

( ) An interest rates that goes up and down, depending on the Bank of Mauritius's base rate.
( ) This rate is fixed for a set period. During this time, your payments always stay the same, no matter if the rate goes up or down.
( ) The amount you pay moves with the base rates. You usually pay a set percentage above the base rate for a set time or the full mortgage term.
( ) These rates won't rise above a certain level for a set period of time.
( ) Don't know.

(13) In times of high inflation what type of interest rates would you prefer for your loan or borrowing?

( ) Standard variable.
( ) Fixed interest rates.
( ) Tracker (It is a rate that is linked to an underlying public interest rate by a predetermined margin).
( ) Don't know.

(14) People borrow money from banks and credit cards to finance homes, cars, education and businesses. If the borrower wants to secure the loan with an asset that they own, that asset is called a

( ) Collateral.
( ) Credit.
( ) Signature Loan.
( ) Debt.
( ) Don't know.

(15) A mortgage on your home is considered a secured or unsecured debt?

( ) Secured.
( ) Unsecured.
( ) Don't know.

(16) Do you happen to know the interest rate on your savings account? {Choose one}

( ) Yes.
( ) No.
( ) Not sure/Not applicable.

(17) If you invest Rs1, 000 today at 4% for a year, your balance in a year will be:

( ) Higher if the interest is compounded daily rather than monthly.
( ) Higher if the interest is compounded quarterly rather than weekly.
( ) Higher if the interest is compounded yearly rather than quarterly.
( ) Rs1,040 no matter how the interest is computed.
( ) Rs1,000 no matter how the interest is computed.
( ) Don't know.

(18) Which of the following investments require that you keep your money invested for a specified period or faces an early withdrawal penalty?

( ) Stocks
( ) Current account that pays interest.
( ) Time Deposit
( ) Money market mutual fund.
( ) Passbook savings account.
( ) Don't know.

(19) Vinesh and Booba are the same age. At age 25 Bouba began saving Rs 20,000 a year while Vinesh saved nothing. At age 50, Vinesh realized that he needed money for retirement and started saving Rs 40,000 per year while Booba kept saving his Rs 20,000. Now they are both 75 years old. Who has the most money in his retirement account?

( ) They would each have the same amount because they put away exactly the same 7.0%
( ) Vinesh, because he saved more each year .
( ) Booba, because he has put away more money.
( ) Booba, because his money has grown for a longer time at compound interest.
( ) Don't know.

(20) Which of the following instruments is NOT typically associated with spending?

( ) Credit card.
( ) Cash.
( ) Certificate of Deposit.
( ) ATM (Automated Teller Machine) Card.
( ) Don't know.

(21) When you deposit money into a savings account, what does the bank do with your money?

( ) Loans your money out to other bank customers
( ) Puts into a safety deposit box
( ) Keeps it in their drawer.
( ) None of the above.
( ) Don't know.

(22) A person purchases Treasury Bills (T-Bills) rather than keeping his money in a savings. Which of the reasons below may explain this? *(Choose only one)*

( ) He will earn more money in the same amount of time.
( ) His money can be used and spent easier.
( ) T-Bills can be easily cashed in banks.
( ) T-Bills are safer than savings in banks.
( ) Don't know.

(23) If interest rates rise, the price of a Treasury bond will:

( ) Increase.
( ) Decrease.
( ) Remain the same.
( ) Trade at a premium.
( ) Be impossible to predict.
( ) Don't know.

(24) Which of the following two are likely to yield higher returns?

( ) Government bonds where you earn interest and a promise to get your money back in the future. They are more secure than corporate bonds.
( ) Corporate bonds that are similar to government bonds, except that they are loan made to companies.
( ) Government bonds and corporate bonds yield the same returns.
( ) Don't know.

(25) Mutual Funds invest in:

( ) Stocks.
( ) Bonds.
( ) Real estate.
( ) All of the above.
( ) Don't know.

(26) What is a stock dividend?

( ) The amount of money that a stock rises or drops each day.
( ) A payment to share holders from the company.
( ) The cost to buy and sell stocks through a broker.
( ) Money that is given to employees at the end of the week.
( ) Don't know.

(27) Which of the following statements is NOT true about most ATM (Automated Teller Machine) cards?

( ) You must have a bank account to have an ATM Card.
( ) You can get cash anywhere in the world with no fee.
( ) You can generally obtain information concerning your bank balance at an ATM machine.
( ) You can generally get cash 24 hours a day.
( ) Don't know.

(28) What is the difference between a debit card and a credit card?

( ) When you are using a debit card you are subtracting money from your own bank account, while with a credit card you are using money made available to you by a bank or other financial institution, like a loan.
( ) There is no difference between a debit and a credit card.
( ) A credit card is more easily obtained than a debit card.
( ) A credit card allows you to make purchases on credit without carrying around a lot of cash, while with a debit card, you still need to have cash with you.
( ) Don't know.

(29) Auto insurance companies determine your premium based on:

( ) Age of insured.
( ) Record of accidents.
( ) Type and age of vehicle.
( ) Completion of a driver education course.
( ) All of the above.
( ) Don't know.

(30) If each of the following persons had the same amount of after tax salary, who would need the greatest amount of life insurance?

( ) A young married man without children.
( ) An elderly retired man, with a wife who is also retired.
( ) A young single woman without children.
( ) A young single woman with two young children.
( ) Don't know.

(31) An insurance deductible is the amount of money that an insurance policy holder would have to pay if they have an accident. The lower the deductible

( ) The lower the premium.
( ) The higher the premium.
( ) The quicker the payment to the policyholder.
( ) The higher the car repair costs.
( ) Don't know.

(32) Life insurance, which covers a policyholder for a set number of years, is called:

( ) Life insurance.
( ) Term life insurance.
( ) Whole life insurance.
( ) None of the above.
( ) Don't know.

TICK THE APPROPRIATE ANSWER for the following questions:

(33) Maturity date on a Certificate of Deposit (CD) is the date that the money in the CD becomes available without penalty. (Tick the relevant one)

☐ TRUE ☐ FALSE ☐ DON'T KNOW

(34) A mutual fund is an investment company that enables its shareholders to pool their funds for professional management as a single investment account.

☐ TRUE ☐ FALSE ☐ DON'T KNOW

(35) The main advantage of a credit card is instant access to more cash that you may have on hand.

☐ TRUE ☐ FALSE ☐ DON'T KNOW

(36) A credit card gives the authorization to purchase goods and services up to a predetermined amount, called a credit limit.

☐ TRUE ☐ FALSE ☐ DON'T KNOW

PERSONAL DETAILS

1. Gender:

Male ☐
Female ☐

2. Age Group:

20-29 ☐ 30-44 ☐ 45-59 ☐ 60 + ☐

3. Level of education:

Primary ☐ Secondary (SC) ☐ Secondary (HSC) ☐

Tertiary Education/Professional Qualifications ☐

4. Status:

Single ☐ Married ☐ Widowed ☐ Divorced ☐ Separated ☐

5. Level of income (MONTHLY):

< Rs7 000 ☐ 7 000-24 999 ☐ >25 000 ☐ Don't work ☐

6. Occupation (Actual or Future):

☐ Manual Worker like a bus driver
☐ Skilled Worker like a mechanic
☐ Service Worker like a secretary or fireman
☐ Professional Worker like an accountant
☐ Other or don't know

7. Level of Education of your mum or dad:

☐ Manual work, such as truck driver, laborer, farm worker.
☐ Skilled trade, such as plumber, electrician.
☐ Service worker such as secretary, food service worker, office worker, police officer, firefighter.

☐ Professional worker, such as nurse, computer programmer, lawyer, doctor, teacher, engineer.
☐ Other or don't know

THANK YOU for your contribution and time.