

## A Survey of Financial Literacy among Students, Young Employees and the Retired in India



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# Introduction<sup>1</sup>

The role played by governments and employers in managing investments on behalf of individuals has shrunk significantly in the recent past. This is mostly due to the reforms in the financial markets and changes in the social support structure across the world. The reduced role of the government and employers has heightened individuals' responsibility in managing their own finances and securing their financial future.

Market forces continue to increase the range and complexity of financial products presented to the investors. Individuals are given an increased role in managing their finances on the assumption that they are capable of a nuanced understanding of the risk-return characteristics of the investment opportunities and are able to optimally choose from among them. These abilities are collectively referred to as 'financial literacy' around the world.

In this context of increasing role and complexity, any lack of awareness about the available choices and their characteristics and the consequent inability to choose products optimally, could significantly affect individuals' financial outcomes. Research from different countries has documented a certain degree of association between financial literacy and outcomes which could adversely influence the household well-being. For instance, the financially less literate are found to be associated with high interest rate borrowing, less participation in financial markets, and poor retirement planning.<sup>2</sup>

Evidence from around the world presents alarming and widespread deficiencies in financial literacy. This evidence has led to the launch of financial literacy programs in many countries. Largely, these are targeted to raise the understanding about the principles and conventions of savings and money and to enable individuals to take optimal financial decisions consistent with their goals. The programmes vary widely in their scope and approach across countries.

Several studies have attempted to examine the level of financial literacy in India. Most of them report that the level of financial literacy in India is poor. For instance, the VISA (2012) study ranks India at the 23-rd position among the 28 countries surveyed.<sup>3</sup> Their study found that the children and the young have significantly lower level of literacy compared to adults.

The wide cultural and socio-economic diversities in India make it difficult to evolve a unified view about the prevailing level of financial literacy in the country. A nationwide and comprehensive research on financial literacy and its related aspects could provide a much deeper understanding for effective policy formulation. This study is a modest attempt in that direction.

The study adopts the questionnaire developed by the Organisation for Economic Cooperation and Development (OECD) to facilitate international benchmarking.<sup>4</sup> The OECD approach is more comprehensive as it attempts to measure the most probable dimensions of financial literacy – financial knowledge, financial behaviour and financial attitude. Insights about these individual dimensions could potentially provide valuable insights beyond those provided by financial literacy alone.

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<sup>1</sup> The results of the study are only preliminary. Please do not cite without prior permission. The corresponding author is Prof. Joshy Jacob (joshyjacob@iimahd.ernet.in)

<sup>2</sup> For more details read, Van Rooij, M., Lusardi, A., & Alessie, R. (2007). Financial literacy and stock market participation. National Bureau of Economic Research. Downloaded from <<http://deepblue.lib.umich.edu/bitstream/2027.42/57575/1/wp162.pdf>>.

<sup>3</sup> VISA Inc., (2012), VISA International Financial Literacy Barometer 2012 downloaded from <[http://www.practicalmoneyskills.com/resources/pdfs/FL\\_Barometer\\_Final.pdf](http://www.practicalmoneyskills.com/resources/pdfs/FL_Barometer_Final.pdf)>.

<sup>4</sup> Written consent was received from the OECD, for using the OECD-INFE Core Questionnaire and Guidance Notes, on April 2, 2012. The two questionnaires which are part of the OCED financial literacy survey approach are:

<sup>a</sup>OECD INFE (2011) Measuring Financial Literacy: Core Questionnaire in Measuring Financial Literacy: Questionnaire and Guidance Notes for Conducting an Internationally Comparable Survey of Financial Literacy. Paris: OECD. Downloaded from <<http://www.oecd.org/dataoecd/44/53/49319977.pdf>>.

<sup>b</sup>OECD INFE (2012) Supplementary Questions: Optional Survey Questions for the OECD-INFE Financial Literacy Core Questionnaire. Paris: OECD downloaded from <<http://www.oecd.org/dataoecd/43/61/49878153.pdf>>.

The study attempts to map the financial literacy level of three important demographic groups, young working adults, retired and students. The study also attempts to understand the investment behaviour of both the retired and the working adults.

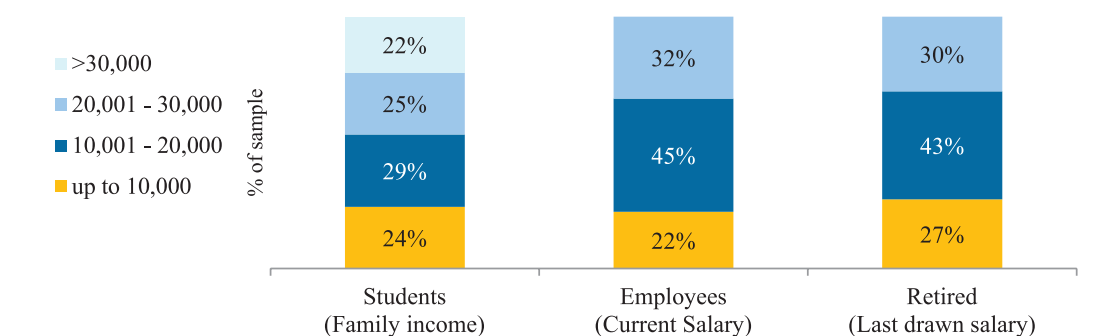
The study among the employed and the retired could provide insights to formulate effective financial education interventions at the beginning and at the end of the employment period. Insights about the financial literacy of students could help to formulate effective initiatives to build financial literacy at a very early age. Survey on the retired also could provide admittedly limited insights about the influence of knowledge on financial outcomes.

While several widely used definitions exist for financial literacy, all of them generally imply the ability of individuals to obtain, understand and evaluate information, which is required to make decisions to secure the financial future of the individual. We adopt the OECD definition of financial literacy, which defines it as – “A combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing.” (OECD INFE, 2011).

## Sample characteristics

| Respondent Category | Students                                    | Employees   | Retired  |
|---------------------|---|---|--|
| Sample Size         | 1001  | 983   | 983  |
| Education Levels    | First year of graduate or Diploma programme | Graduates and Post-Graduates comprise about 89%                                 | 47% have education of graduation or above,<br><br>16% have passed higher secondary, 23% are matriculates, the remaining are educated only up to primary or lower |
| Work-Experience     | None  | Less than 5 years of work experience (42% have about two years work experience) | Retired after 20 to 40 years of work-experience in formal employment. Only about 10% are either employed or self-employed after retirement                       |
| Age                 | Between 17 and 22 years                     | Between 20 and 40 (about 94% fall within the 20-30 age bracket)                 | Between 40 and 95 years (72% fall in the 55-70 age bracket)  |
| Gender              | More than two-thirds male                   | Males 78%, females 22%  | Males 83%, females 17%   |
| Marital status      | Mostly single                               | Singles about 75%   | Married 91%, widowed 7%,   |
| Domicile            | Nearly two-thirds from towns and cities     | 99% from towns and cities, 1% from villages                                     | 93% from towns and cities, 7% from villages  |

Income characteristics of sample (groups based on monthly ₹ Income) is given below.



The sample for all the three groups are drawn from all the over the country. It more or less represents the above average income group in the country. Only less than 5% of the respondents have income levels below the national per capita income.

The sample largely represents urban groups. Most of the respondents are of urban origin across the different groups. Only among students there is a sizeable representation from the rural regions. Most of the urban respondents are from the largest cities in India.

The respondents in the sample by and large are educated groups compared to the general level of education in the country. Most among the employees have education of graduation or above. Nearly half of the retirees are graduates. All the students are in the first year of either graduate or diploma programmes.

The groups are dominated by males. Most of the retired and nearly one-fourth of the employees are married. Most of the students are single. All the employees have work-experience below five years and could be considered at the start of their career.

# Financial Knowledge

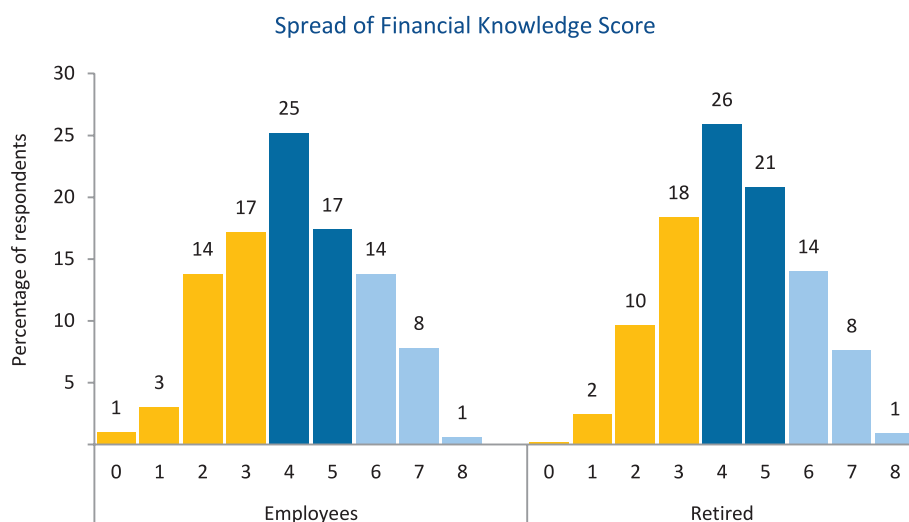
The level of financial knowledge of the employed and retired is measured with a set of eight questions to capture their understanding of interest calculations, relationship between inflation and return, inflation and prices, risk and return, and the role of diversification in risk reduction. The correct answer for each question is given a score of one and respondents with score of 6 or above are considered as highly knowledgeable to handle the challenges in personal financial matters.<sup>5</sup> Scores in the range of 4 -5 are considered as moderate financial knowledge and 3 or below are regarded as poor financial knowledge.

The financial knowledge of the students is assessed by examining their understanding of the basic principles underlying savings and debt such as simple and compound interest, time value of money, impact of inflation on investment returns (referred to as 'inflation and interest' and the influence of inflation on price levels (referred to as 'inflation and prices'). The five related questions included do not require any difficult computational effort, and hence a correct response could be reliably regarded as understanding of the underlying principle. These questions are widely used all over the world to understand the basic numeracy among students and adults.<sup>6</sup> These questions are also part of the items used to capture the financial knowledge of adults.

We do not examine and measure financial behaviour and financial attitude among the students. We feel that their limited direct exposure to financial decisions might lead to unreliable results.

## Financial knowledge of employees and retired

The proportion of employed young and retired Indians who score 6 or above is only about 22% and 23% respectively. This is a relatively low score compared to the OECD survey across the 13 countries<sup>7</sup>, where on average, more than half of the respondents score very high on financial knowledge. The lowest scoring country in the OCED survey, South Africa, has about one-third respondents who have scored 6 or above. Rest of the countries in the OCED survey have more than 40% of respondents with high financial knowledge.



The performance on different dimensions suggests the real lack of understanding of the basic principles related to money in everyday life. Nearly one-third of the employed adult respondents are unable to

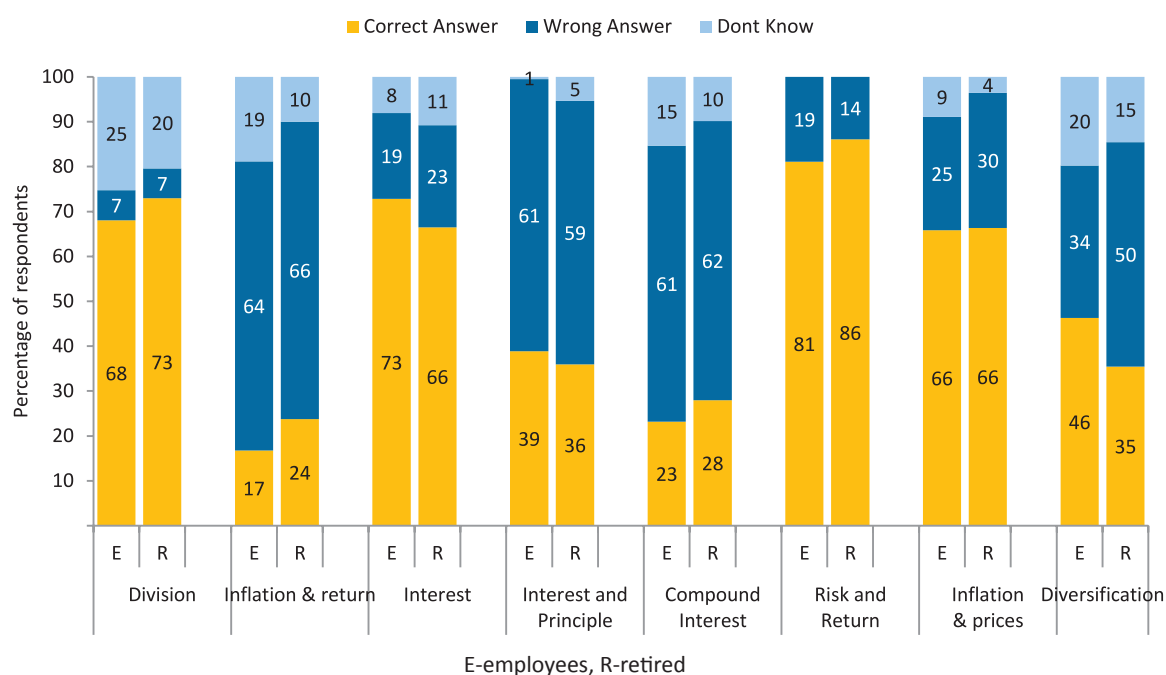
<sup>5</sup> The financial knowledge scoring adopted by us follows the approach recommended by the OECD.

<sup>6</sup> For instance, Van Rooij, M., Lusardi, A., & Alessie, R. (2007). Financial literacy and stock market participation. National Bureau of Economic Research. Available for download from <<http://deepblue.lib.umich.edu/bitstream/2027.42/57575/1/wp162.pdf>>.

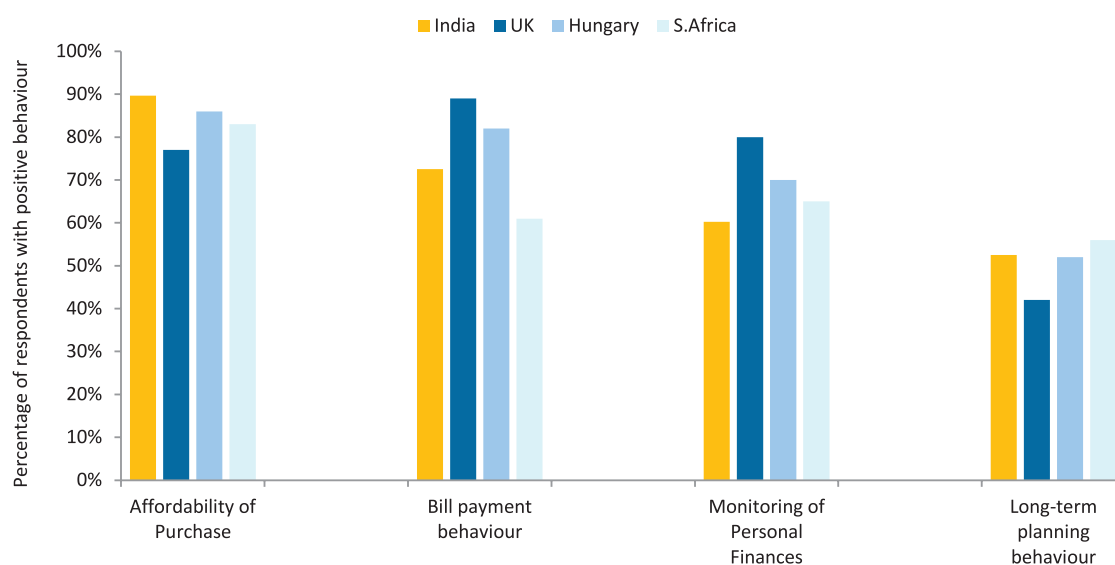
<sup>7</sup> Atkinson, A. and F. Messy (2012), "Measuring Financial Literacy: Results of the OECD / International Network on Financial Education (INFE) Pilot Study", OECD Working Papers on Finance, Insurance and Private Pensions, No. 15, OECD Publishing.

perform the simple numerical task involving division. On this simple numerical task, the performance of the retired respondents is not significantly different. Further, meaningful understanding of inflation is not widespread. Only about 17% of the young correctly understand the impact of inflation on the rate of return. Even on the other dimensions of financial knowledge, the young Indians do not fare very high. These scores are relatively low compared to the countries surveyed by the OECD. The performance of the retired is not significantly different in most dimensions, except in their understanding of inflation.

#### Performance on Dimensions of Financial Knowledge



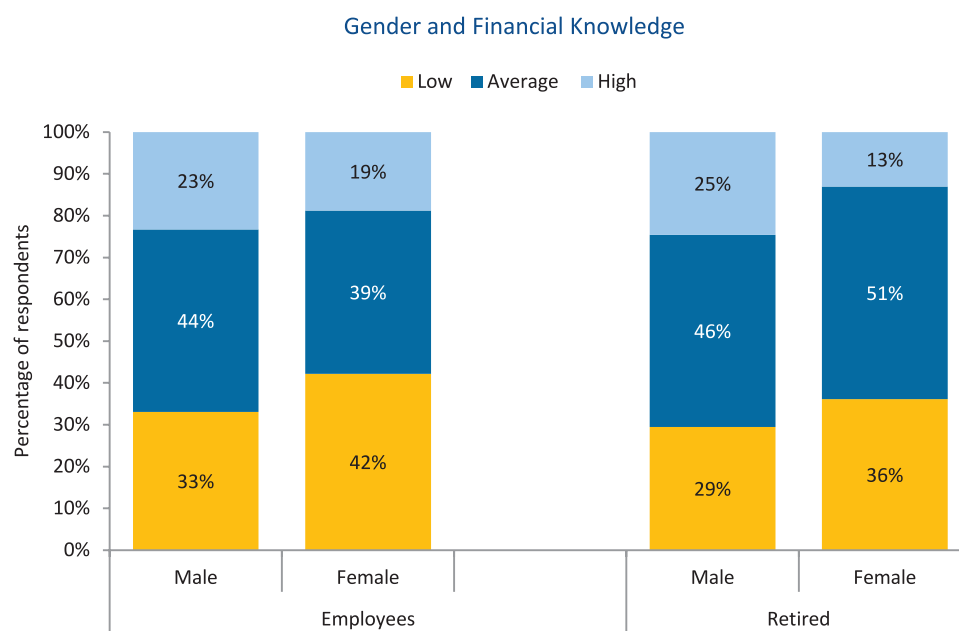
#### Financial Behavior - Comparison across Countries



\* The figures for India represent the employed respondents.

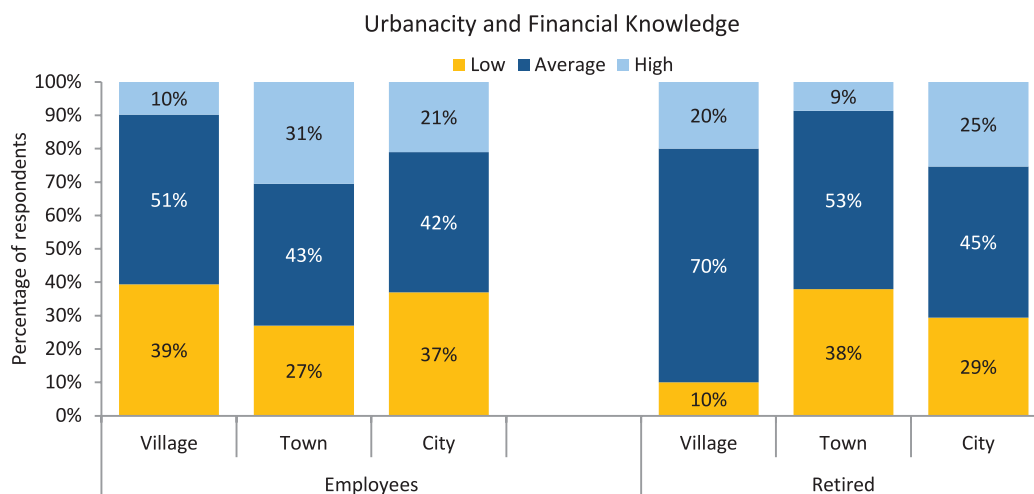
## Variation in financial knowledge across sub-groups

As reported from other countries, the level of financial knowledge appears to be relatively poor among women compared to men. Particularly, the proportion of women with low financial knowledge is found to be greater than that of men. However, the financial knowledge gap between men and women in India is not significantly greater compared to that reported in the OCED survey. For instance, among the employed and retired Indians about 5% and 10% more men respectively score high on financial knowledge compared to women. It is far greater in most of the countries surveyed by the OECD, except in Hungary, Malaysia and South Africa. The financial knowledge gap in India also needs to be viewed against the backdrop of the typical Indian household where the financial responsibility is most often assumed by men than women.

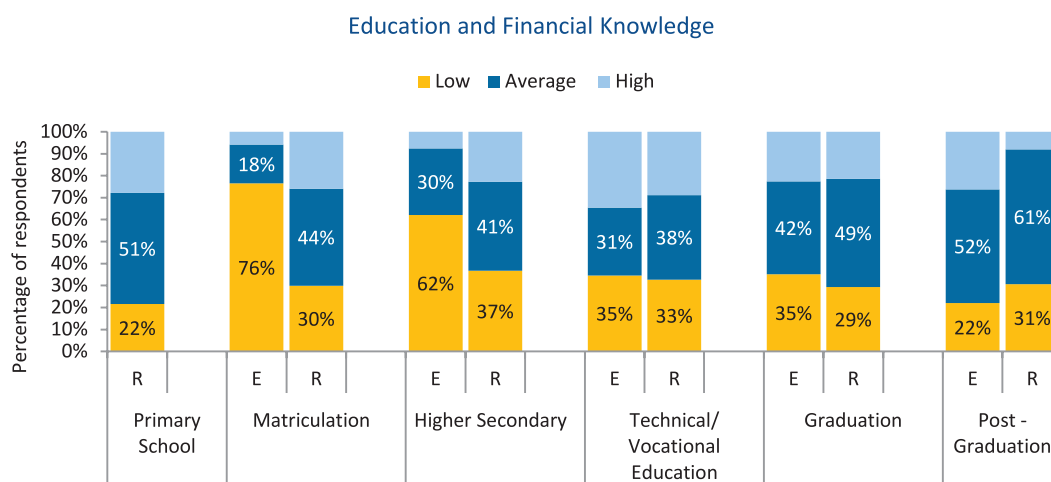


Among the employed, the proportion of respondents from villages with high financial knowledge seems to be lower compared to those from cities and towns. A similar pattern is found among the retired, between the towns and the cities. Our sample size for village origin respondents among the retired is very small and the observations are not reliable.



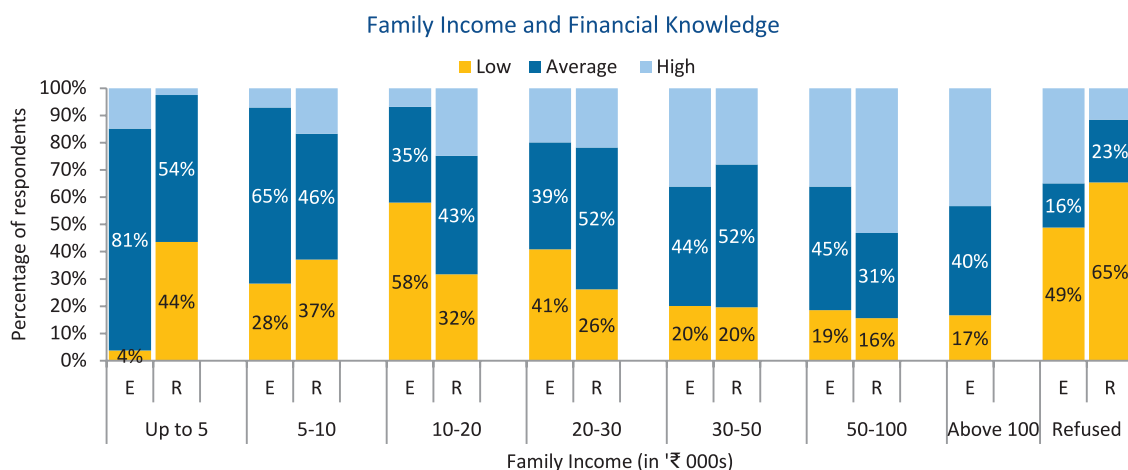


The education level appears to be a significant factor in explaining the level of financial knowledge of the young employed. The highly educated, graduates and post-graduates seem to have greater levels of financial knowledge. This difference does not appear to hold in the case of the retired. The rather long exposure of the retired to personal and household financial matters might be making them more aware and knowledgeable.



Respondents in the higher income groups appear to have greater financial knowledge. Respondents from categories below the Indian per capita income score poorly on financial knowledge. This observation is true for both the categories of respondents. Similar observation is made in other countries, including the developed countries in a number of studies.

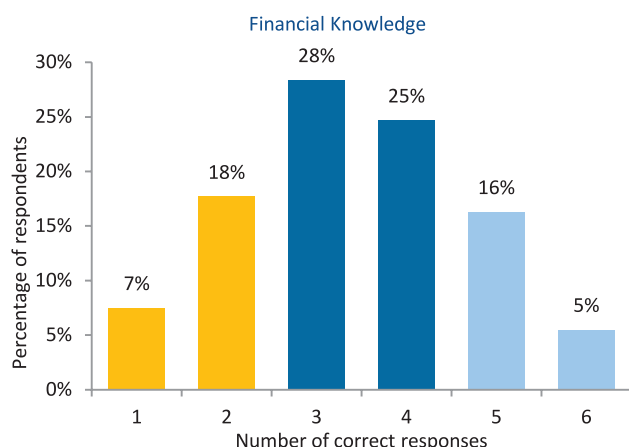
While one may argue that knowledge must be independent of the income level, the income level itself could proxy for a number of factors such as education. Or it could be that greater disposable income demands more attention to active saving and planning and hence builds fluency in these matters among the high-income group. At this stage, it would be very difficult to conclude that poor financial knowledge leads to lower income.



Note: Sample size of Retirees with family income more than ₹1,00,000 is negligible.

## Financial knowledge of students

Only one in every 20 students is able to give correct responses for all the questions. About one-fourth of the students are unable to give correct answers for more than two questions and about 7% students are not able to answer any of the questions correctly. This would imply that a large section among the students do not sufficiently understand the basic principles underlying personal finance.

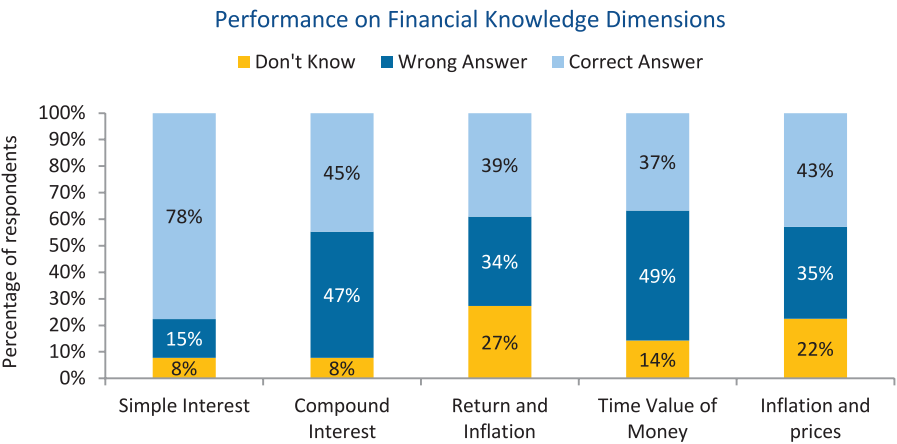


A measure of students' financial knowledge is obtained by summing up the number of correct responses given by each student. As score of 4 or above (out of maximum of 5) is taken as high financial knowledge, a score of 3 as moderate financial knowledge, and 2 or less as poor financial knowledge. Judged by these criteria only about 22% of the students have high financial knowledge and alarmingly more than 50% score only a 'very low'.

An item-wise analysis offers valuable insights about the extent of their financial knowledge. While about 78% of the students are able to understand and give correct answer to the question on simple interest, only about 45% give correct response to the question on compound interest. The lack of understanding about compound interest, which universally underlies the evaluation of investment opportunities or debt products, does not seem to reflect a very high level of financial numeracy among the surveyed students.

A certain amount offered today is not equal to the same amount offered tomorrow is one of the foundational principles of investments. However, the understanding of time value of money does appear to be very low. The related question is correctly answered by only about 37% of the students and nearly half the respondents give a wrong answer.

The understanding about inflation also does not appear to be very high. Only about 39% of the students are able to correctly understand how inflation would impact the rate of return on investments and only about 43% correctly understand how inflation affect price levels.

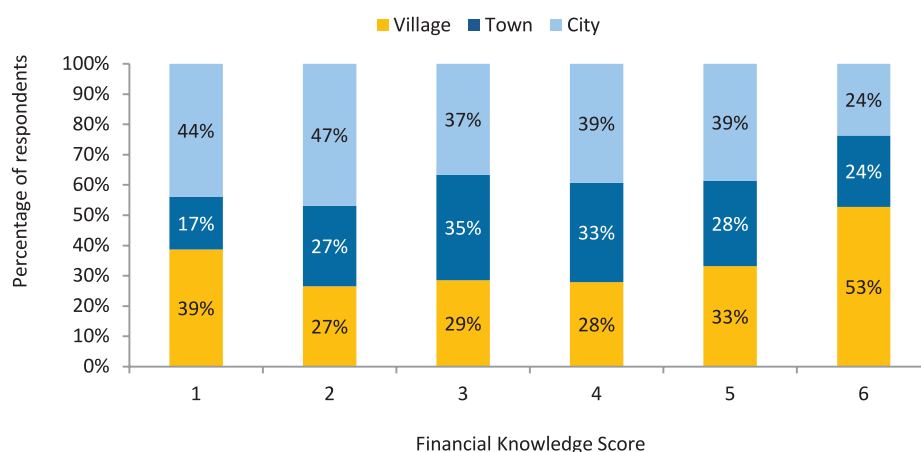


As most of the personal and household financial decisions involve concepts of compound interest, time value of money and inflation, the lack of understanding of these principles by the majority of the students is a matter of concern.

No significant difference is observed in the proportion of male and female students scoring a certain level of financial knowledge, which is somewhat contrary to the case of adults, where men outperform women on financial knowledge. Perhaps the relatively greater exposure of adult men to personal and household finance makes them marginally better compared to women, which is not the context among students.

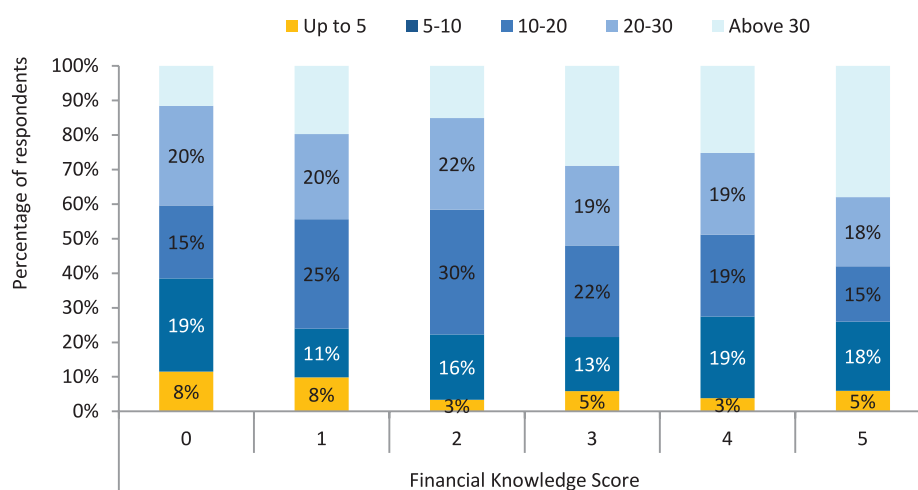
The students who have their origin in villages do not fare poorly compared to their urban counterparts, instead they appear to perform marginally better.

### Urbanicity and Financial Knowledge



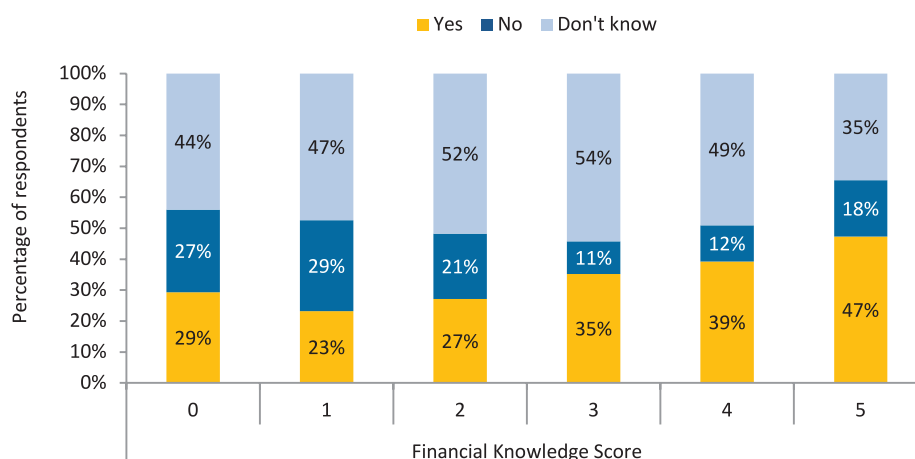
It appears that students from families with higher income have a better understanding of the basic principles of personal finance. For instance, students from families with monthly income level above ₹30, 000 are more likely to be in the high financial knowledge category. This is observed almost in every country included in financial literacy surveys. Without a deeper examination of the association, it would be difficult to conjecture whether higher income leads to greater financial knowledge or whether income levels proxy for a set of important socio-economic factors such as education, which also seem to influence financial knowledge.

### Financial Knowledge and Income Level (in '₹ 000s)



The survey indicates that students from families which plan for expenditures and savings are more likely to fall into the high financial knowledge category. On the contrary, students from families which do not have a family budget are more likely to have lower financial knowledge. This seems to suggest students from families with a more disciplined approach towards personal and household finance become more concerned about the underlying principles of money.

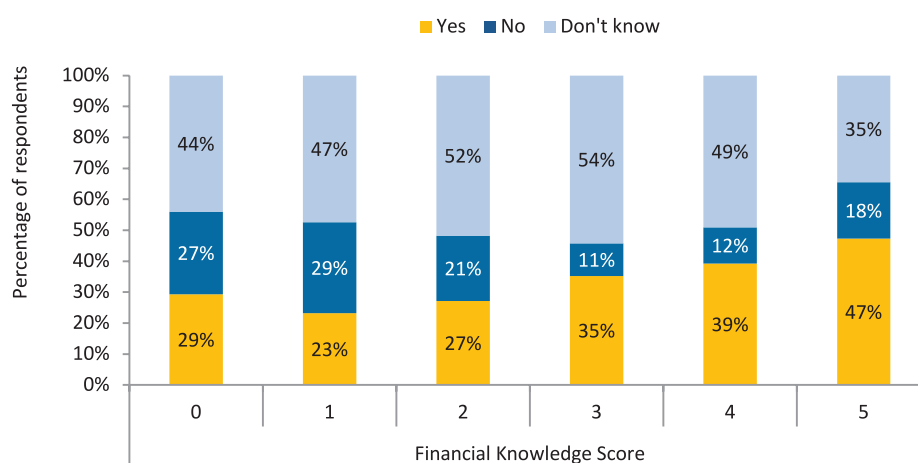
### Family Financial Behavior and Financial Knowledge



Interestingly, students who have prior exposure to courses related to the questions involved like accounting or economics do not appear to outperform students from the other streams. If anything, they seem to marginally underperform students from the other streams. Students from the engineering courses seem to outperform students from the other streams. This result could possibly be due to two reasons. Firstly, there is a tendency for students with higher academic merit to join science and engineering streams. Secondly, it could be due to the poor educational outcomes themselves.

Children of parents who are graduates or above are less likely to be in the low financial knowledge category. However, at the overall level, the financial knowledge of the students does not appear to be strongly related to parents' education level. Students of employed or self-employed parents are also less likely to be in low financial knowledge category. Noticeably, students from families where father is self-employed seem to have a relatively better understanding of the principles involved in personal finance. Perhaps, this suggests that the family involvement in businesses make their children more conscious of personal financial principles. The likelihood that some of these socio-economic factors could also proxy for income leaves no room for strong conclusions.

### Exposure to Related Courses and Financial Knowledge



Among the different regions in India, more students from the West score high on financial knowledge than from other regions. It is interesting to note that the proportion of households with participation in the financial markets from the West is also one of the highest in India. Perhaps the greater involvement of households in the markets leads to a higher financial fluency for the children. On the other hand, more students from North score relatively poorly on financial knowledge among the different states. However, these results need to be examined for other omitted influences including family income, before taking any strong and final view.

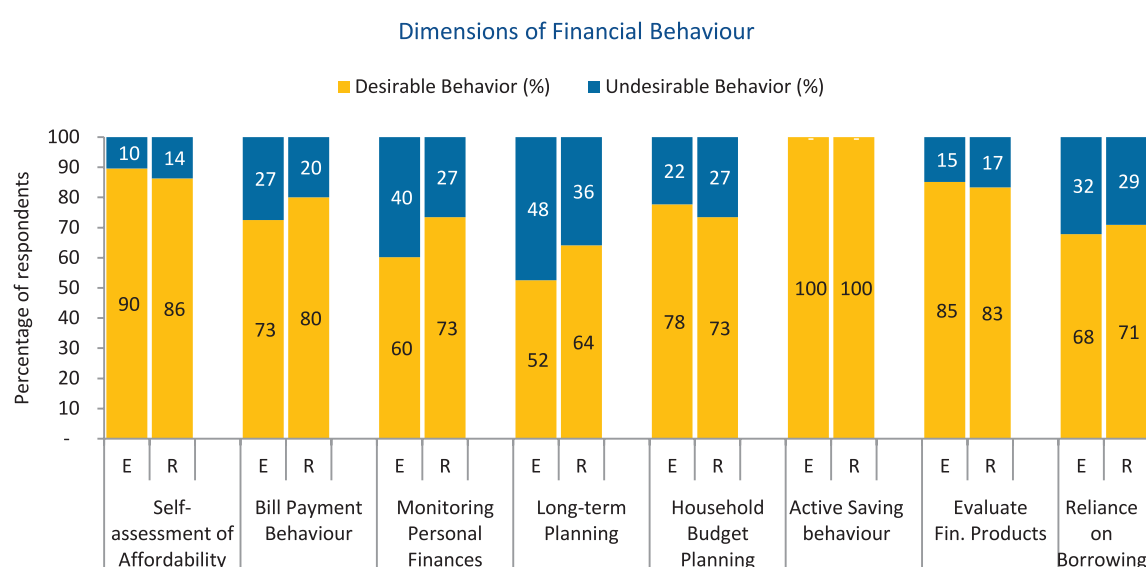
The knowledge of the basic principles of personal finance is not sufficiently widespread among students. Family income levels, family financial discipline and parents' occupation seems to influence the financial knowledge of children. However, these associations could only be regarded as tentative before deeper investigations.

As the financial knowledge among students is largely dependent on their learning outcomes rather than direct experience, this finding also reflects poorly on the academic outcomes, related to money and finance, of a large section of students. The finding that students with exposure to finance and economics curriculum do not fare better also reinforce the suspected role of poor educational outcomes.

These results tentatively suggest that one of the ways to improve financial knowledge among the students would be to improve the quality of school education itself.

# Financial behaviour

The survey attempted to understand the financial behaviour of the respondents as reflected in the way they deal with money in their daily lives. A total of eight items are employed to capture the important dimensions about the respondent's handling of personal finances. These dimensions include, assessment of affordability of products and expenditures, behaviour related to timely payment of bills, planning and monitoring of the household budget, active saving habits, and borrowing propensities. The respondent's behaviour dimensions are mapped to a scale in terms of their desirability. Respondents scoring 6 out of 8 on the desirability scale are classified as having positive behaviour towards money and finance. Those scoring 3 to 5 are classified as neutral and less than 3 is considered as having negative financial behaviour. The proportion of respondents scoring high on positive behaviour is mostly used in the analysis of financial behaviour.



It appears that the majority of the respondents engage in desirable financial behaviours when dealing with personal money and household finance. Based on the financial behaviour score, about 68% of the employed and 75% of the retired could be classified as having positive financial behaviour. This is comparable with the financial behaviour reported from Germany, Norway, Ireland, Malaysia and Peru through the OECD survey, where around 60% score high on financial behaviour.

About 90% of the employed and 86% of the retired report that they are strongly inclined to assess the affordability of items. On this dimension, it appears that the Indians are not distinctly different from many other countries which had been surveyed by the OECD. In fact, Indians appear to be one among the best in their propensity to assess the affordability. Similarly, on the timeliness of the payment of bills the Indians score very similarly to the countries in the OECD survey.

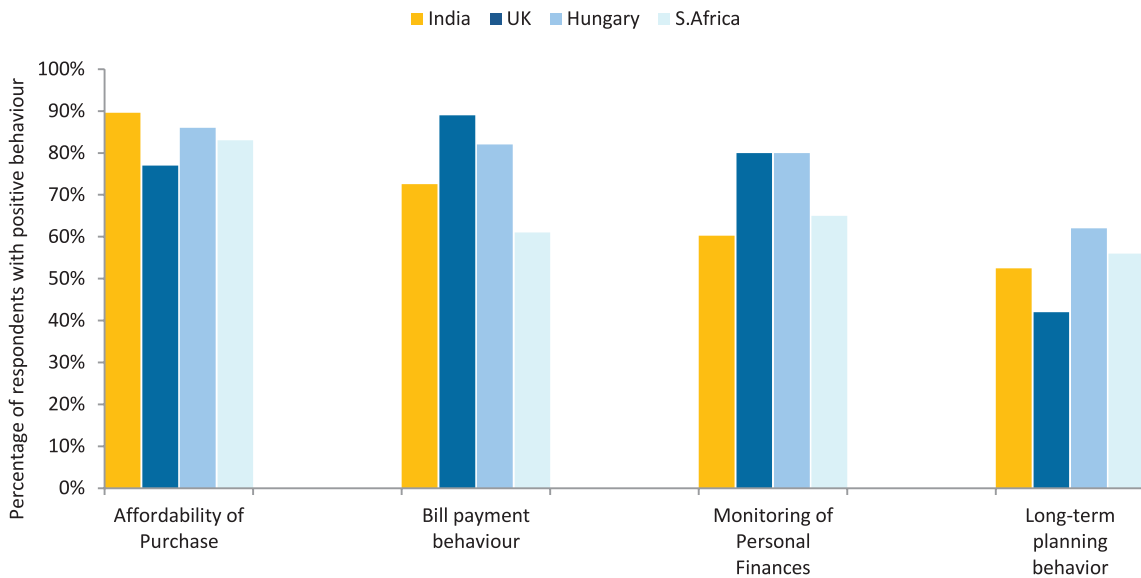
The practice of financial goal setting among Indians also appears to be not distinctly different from the countries included in the OECD survey. The young Indians are not among the best on this dimension.

Most Indians, about 68% of the employed and 70% of the retired, report that they have avoided borrowing by depending on their savings or assets during periods of financial difficulty.

All the respondents report that they have saved some money in the past 12 months and more than 80% of the respondents report that they have attempted to carefully evaluate the financial products.

These high scores reported by both the young employed and retired Indians probably suggest that they are reasonably self-disciplined in their dealing of money and household finance. The relatively high level of financial-discipline shown by the Indians could perhaps be due to their relatively low level of per capita income and the lack of general social support systems.

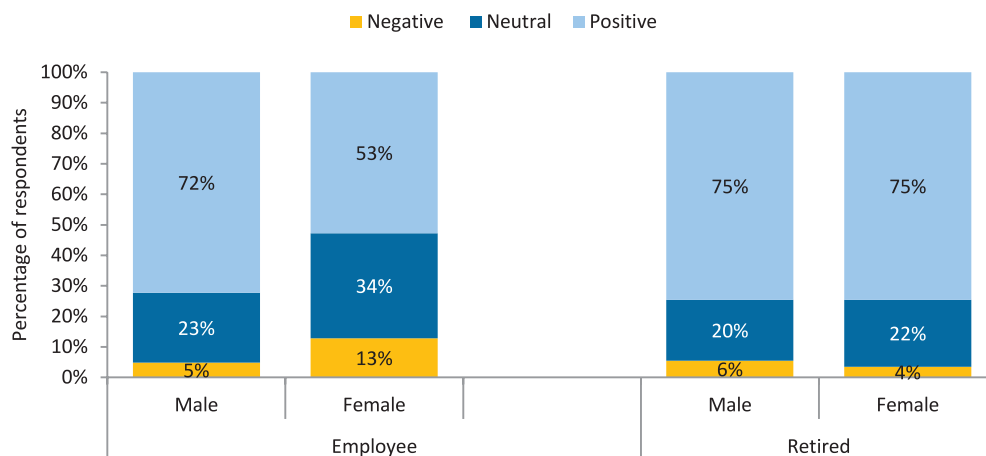
### Financial Behavior - Comparison across Countries



### Variation in financial behaviour across sub-groups

Among the young, it appears that men, respondents of urban origin, and married show relatively more positive behaviour in dealing with money and household finance. The relatively greater score of the urbanites could probably be due to their better exposure and education. The better behaviour score of the married could also be understood in the context of the greater financial burden involved in raising a family. Among the retired there are no significant differences between sub-groups based on any of the above criteria, except that less among the divorced exhibit positive financial behaviour.

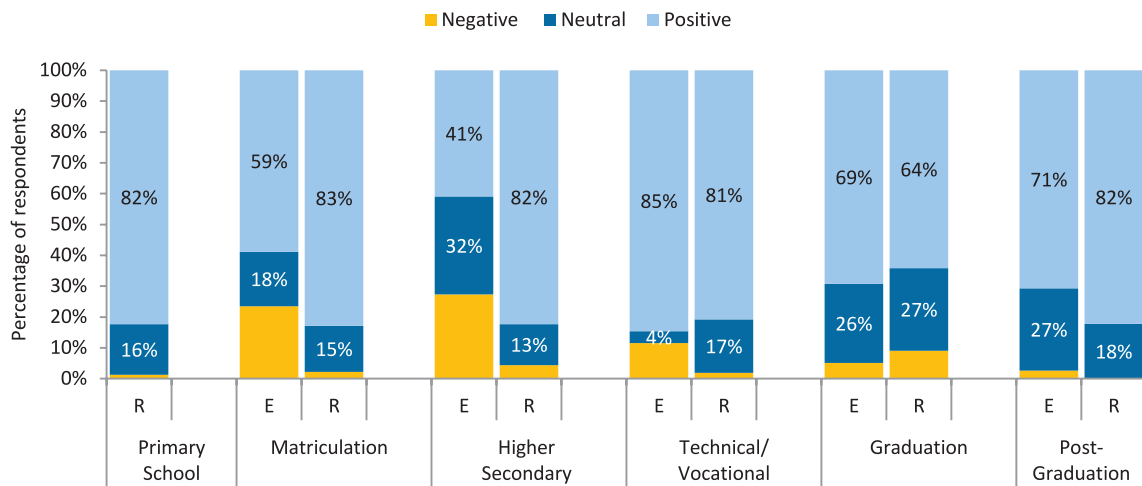
### Gender and Financial Behaviour



The education level seems to influence the reported financial behaviour of the employed. Respondents with education of graduation or above seem to show a more positive behaviour compared to their counterparts with lower educational attainments. The financial behaviour of the highly educated and less educated is similar among the retired group. Perhaps, the rich experience of life events makes them more attentive, cautious, and thrifty.



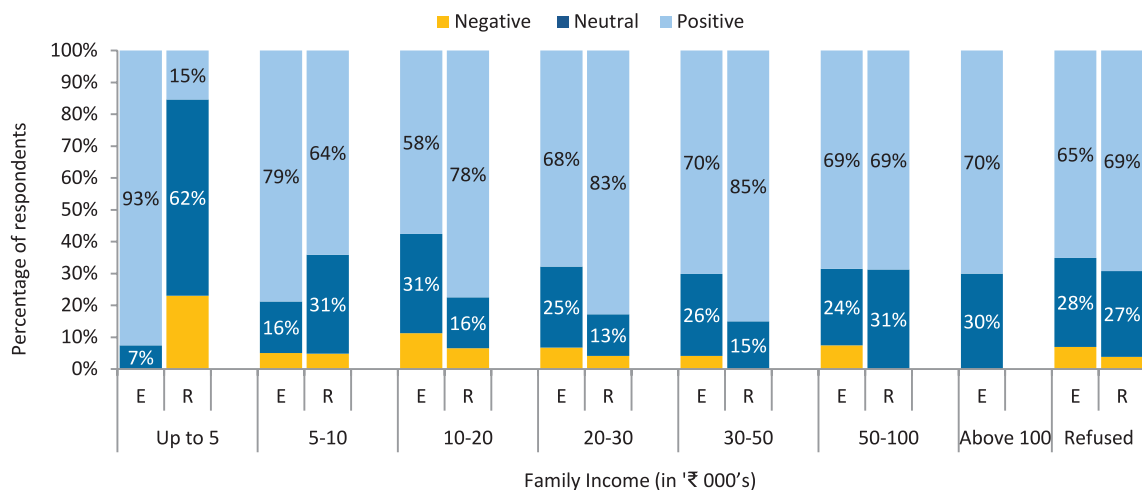
### Education and Financial Behaviour



Among the employed, the financial behaviour does not appear to be significantly different across the income categories. On the contrary, it appears that respondents in the lower income category show more positive behaviour. This result suggests that the relatively low-income group is more careful about expenses, borrowing, saving and financial planning.

However, among the retired respondents more among the higher income levels exhibit positive behaviour, except for the highest income group. Possibly, those with lower income, particularly the sub-group with less than ₹5,000 of income, cannot comfortably meet all their living and family expenses.

### Family Income and Financial Behaviour



Overall these findings suggest that both the young employed and the retired are very conscious about their level of affordability, need for saving, need for individual and household financial planning, and are reasonably disciplined in meeting their expenses.

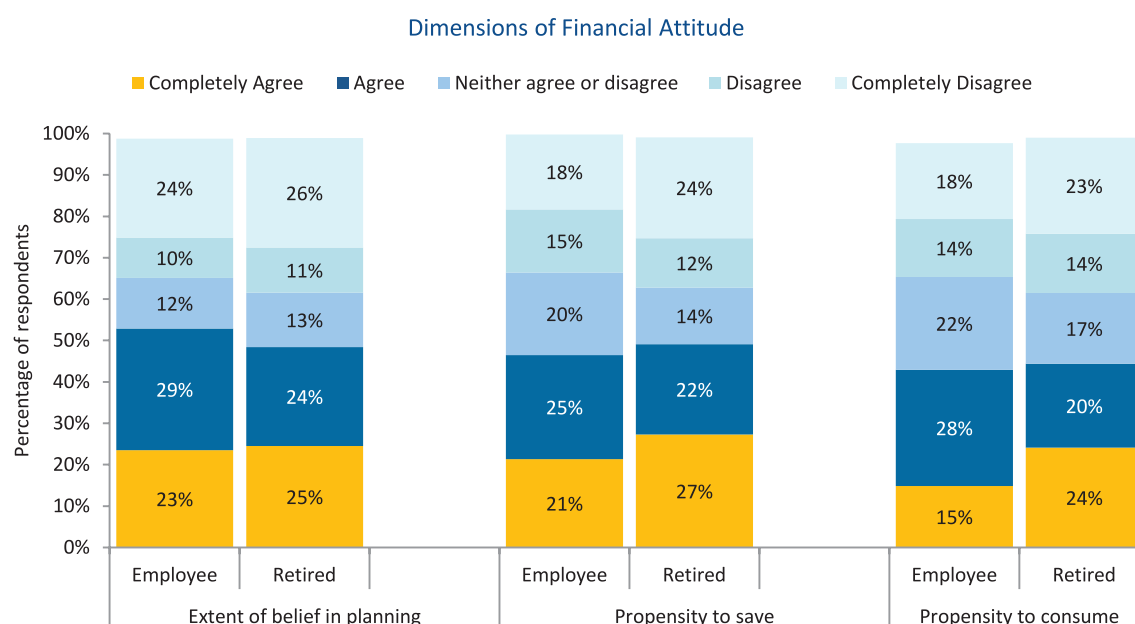
These results present a picture of positive financial behaviour among the Indians. Ideally, the positive behaviour could help them to secure their financial goals, despite being in one of the low-income countries in the world. This positive behaviour is possibly corroborated by the documented evidence of the relatively high level of savings by the Indian households. Overall, the financial behaviour of Indians is at par or better than that reported from other countries.

# Financial attitude

It is believed that the attitude towards money and finance could affect the behaviour towards savings, borrowings, risk-taking etc. Based on this belief, the OECD has developed a scale to measure the financial attitude. In the lines of the OECD survey, this survey has attempted to understand the attitudes of the respondents towards two interrelated aspects - financial planning and consumption. These are measured with three items as recommended by the OECD survey.

The items sought response in terms of agreement or disagreement towards three statements. The following aspects are reflected in the three statements (i) the extent of belief in planning (ii) propensity to save, and (iii) propensity to consume.

The attitude responses are mapped to a scale based on its desirability. The maximum score for each item, indicative of its desirability, is 5. The scores across the three items are then averaged. An average score of 3 or above is considered as a positive attitude as used in the OCED survey.

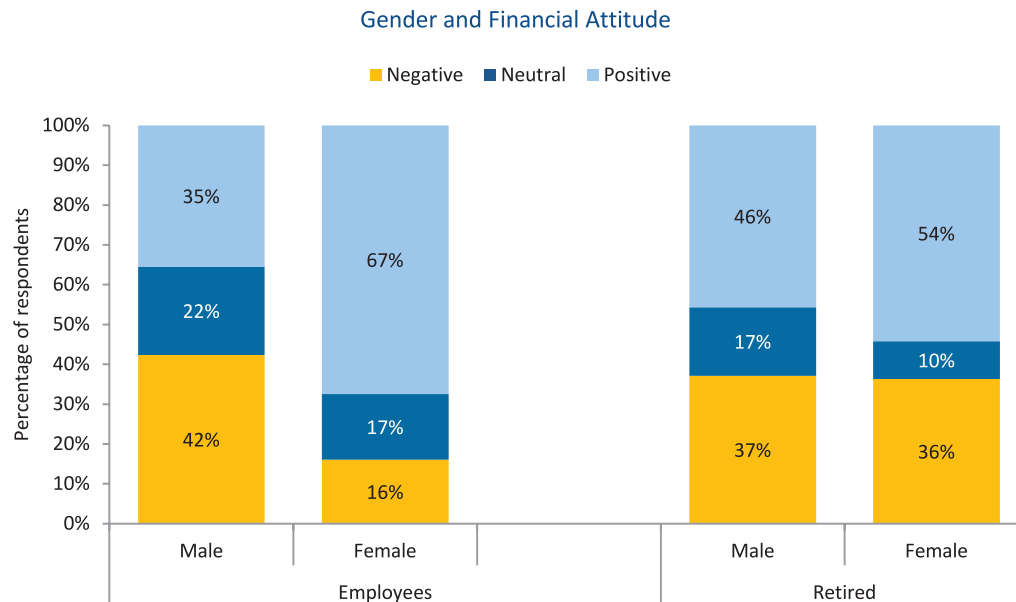


Close to half of the respondents in both the categories seem to have a positive attitude towards financial planning and do not seem to show a very high propensity for consumption as indicated by their responses towards individual items. This is comparable to the levels observed in the OECD survey in Estonia and United Kingdom. However, this is significantly lower compared to many other less developed countries in the Eurozone like Czech Republic, Hungary and Albania.

## Variation in financial attitude across sub-groups

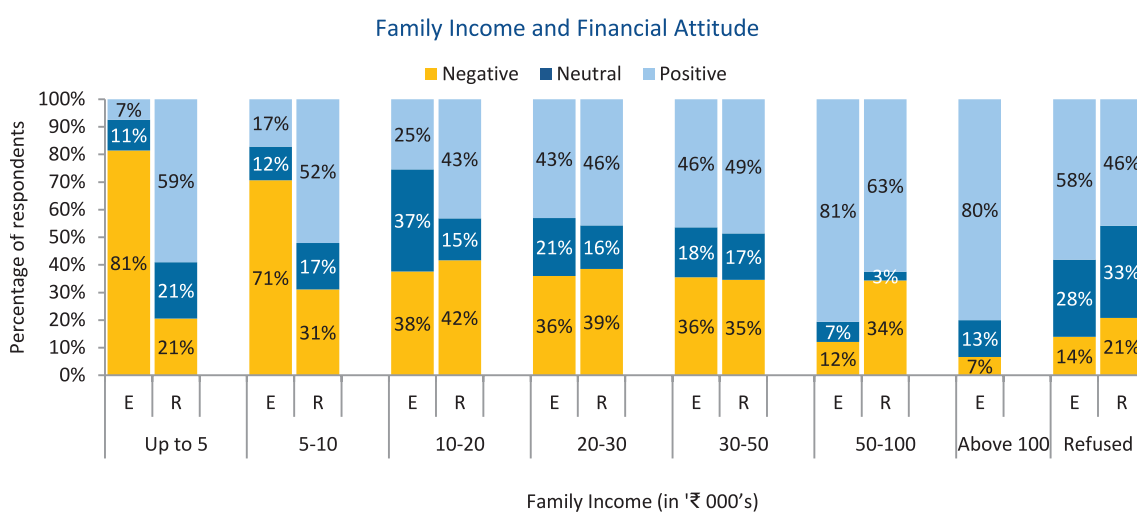
Among the employed, women are found to have positive attitude relative to men. Among the retired, the men and women have similar attitudes. The survey results do not indicate that respondents of urban origin are more likely to have positive attitudes towards finance.

As observed in the case of financial behaviour, among the young, the married appear to be more positively inclined to plan financially and consume more cautiously. However, among the retired these differences are not very significant. Being part of a joint family does not appear to influence the aggregate attitude towards finance examined in the survey.



The level of education does not seem to influence the financial attitudes as much as it is found to influence the financial behaviour or the financial knowledge. However, given that the survey has concentrated on a rather educationally homogenous group of employed respondents it would be difficult to draw reliable conclusions about the influence of the education level. Hence these results are not reported. May be the financial attitudes are shaped mostly from stimuli other than education.

Positive financial attitude seems to be related to income levels. A significantly larger number of respondents from the high income brackets have positive attitude towards consumption and planning to achieve future goals. The income groups below the per capita income level in India seem to have lower number of respondents with positive attitude.

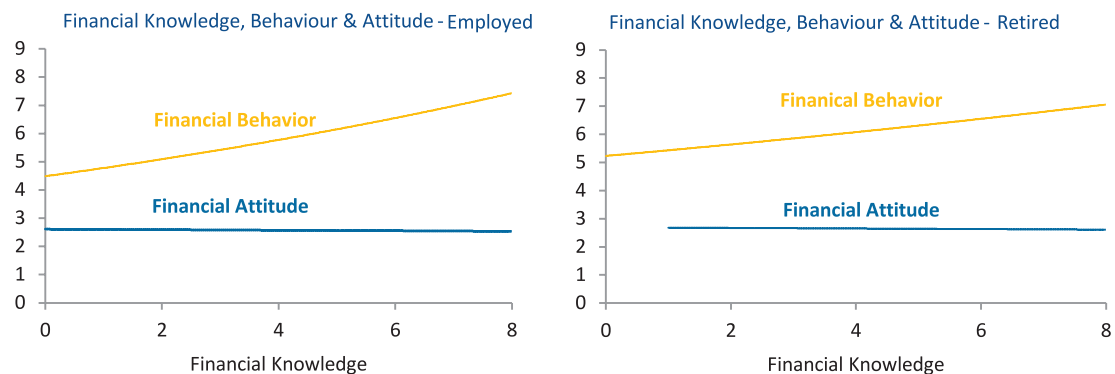


Overall, these results seem to show that majority of the Indians maintain a healthy attitude towards planning for future financial goals and consumption. This is despite the fact that the Indians have reported a lower score on financial knowledge.

# Financial knowledge, behaviour and attitude: Inter-linkages

It is likely that the different dimensions of the financial literacy could be related to each other. For instance, high financial knowledge could influence both the financial behaviour and attitude. Alternatively, poor financial attitude could lead to less desirable behaviour. These relationships are examined to gain more insights about how the different aspects of financial literacy influence each other. These insights could be helpful as the financial literacy literature has not so far evolved any distinct or reliable explanatory model about how individuals obtain high financial literacy. Such a model could be helpful to formulate effective financial education policies and delivery methods.

There is some support for the notion that high financial knowledge leads to more positive financial behaviour. The attitude appears to be almost unaffected by the financial knowledge. This might imply that focussing financial numeracy skills may not lead to the desired change in attitude towards money among individuals. We also do not observe any identifiable relationship between the financial attitude and financial behaviour, which is somewhat puzzling. If anything, it appears to be negative relationship. May be the scale used to measure the financial attitude with only three items is not a very valid measure to capture the relationship, even if it exists. These results are true for the employed and retired.

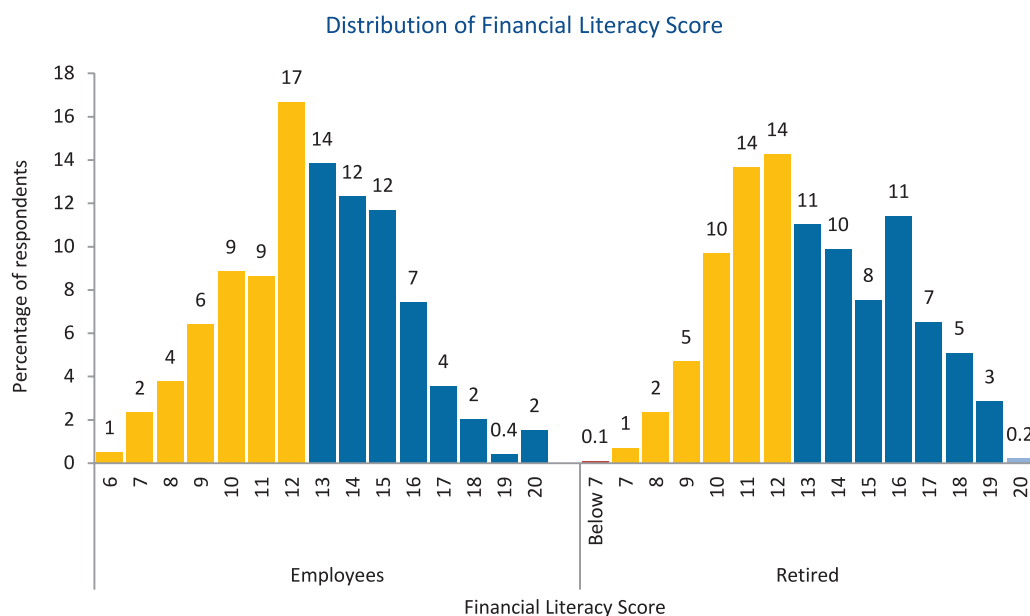


The results suggest that financial behaviour is influenced by financial knowledge, which tend to suggest that financial education is a valuable tool to achieve desirable financial behaviour. We intend to examine the relationship across the possible dimensions of financial literacy as a future agenda of research.

# Financial literacy

Financial literacy is often hypothesised as the essential knowledge of financial matters and desirable attitudes which leads to outcomes related to money and finance. Hence, it is ideal to measure the financial literacy through a combination of its most likely dimensions – financial knowledge, behaviour and attitude as discussed above. The lack of a very high level of association among these different dimensions also supports such a combined measure to better capture the financial literacy. Through such a combination, we have attempted to map the financial literacy level in India.<sup>8</sup>

The financial literacy score is obtained by adding the scores of the three different dimensions – financial knowledge, financial attitude, and financial behaviour. The maximum possible score for the financial literacy measure is 21 (8 for financial behaviour, 8 for financial knowledge, and 5 for financial attitude). The average score of 13.7 observed in the OECD survey across the set of 13 countries is used the benchmark to compare India with the rest of the world. Also we examine how the different socio-demographic groups fare compared to the overall average. Largely, the analysis is based on the percentage of respondents scoring above the OECD/Indian average score of financial literacy.



The average financial literacy score of the respondents is about 13.7 for both the groups which is almost the same as the average observed for the countries in the OECD survey.<sup>9</sup> Compared to the average score range of 12.4 to 15.1 observed for the countries included in the OECD survey, these results would imply that the average financial literacy level of Indians is not exceedingly poor.

However, it is alarming to note that only about 39% of the employed respondents have financial literacy scores above the OECD average. Similar figure for the retired is about 56%. This seems to suggest that for the majority of the young employed and for a large number of the retired Indians the financial literacy level is not very high. This is despite their relatively better score for financial behaviour and their almost at par score for financial attitude.

The major reason for the relatively lower financial literacy score is the poor score of Indians for financial knowledge. The inadequacy in the basic numeracy skills observed through our survey is also corroborated by the poor educational outcomes observed in India.

<sup>8</sup>This follows the approach adopted by the OECD in their financial literacy survey.

<sup>9</sup> The actual average is inflated by multiplying it with 22/21 to match the maximum financial literacy score of the OECD survey.

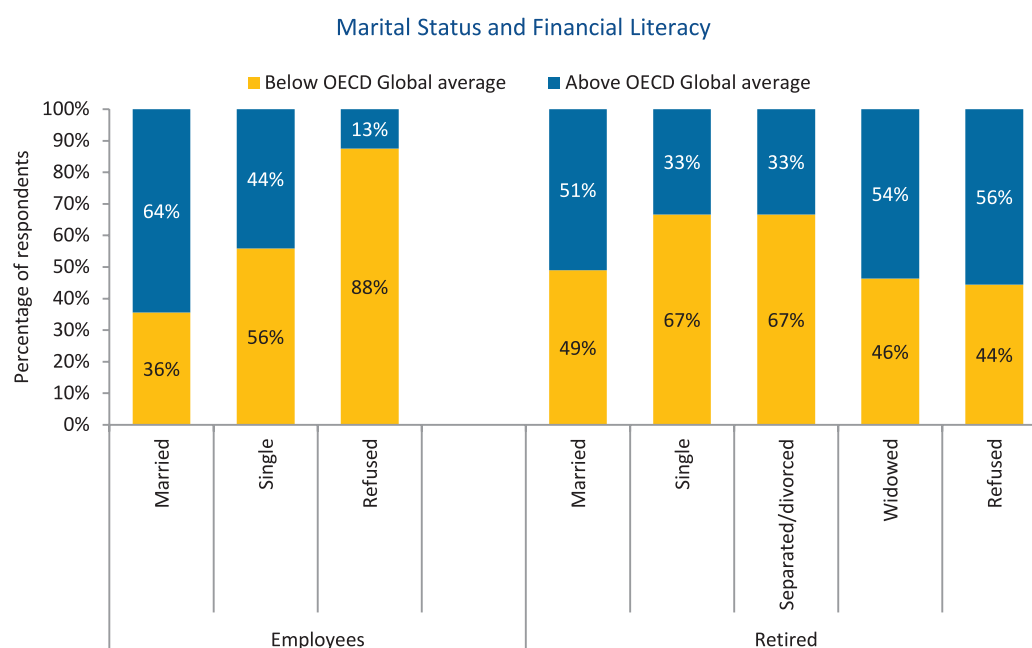
Relative to the overall average of the financial literacy score of the OECD survey, Indians perform better than several countries including South Africa, Armenia, Poland, Estonia, and Albania.

## Variation in financial literacy across sub-groups

The Indian women are not distinctly different from the men in terms of the overall financial literacy measure. This could be largely due to their better scores on behaviour and attitude compared to men, despite their relatively lower financial knowledge. However, still the lack of basic financial knowledge and numeracy skills probably keeps them ill-equipped to secure their financial goals.

Respondents of urban origin appear to marginally outperform those from the rural areas as observed for the individual components of financial literacy. This gap is largely due to the relatively poor financial knowledge score of the respondents from rural origin. Perhaps one can attribute this to the relatively poor academic attainments in the rural areas.

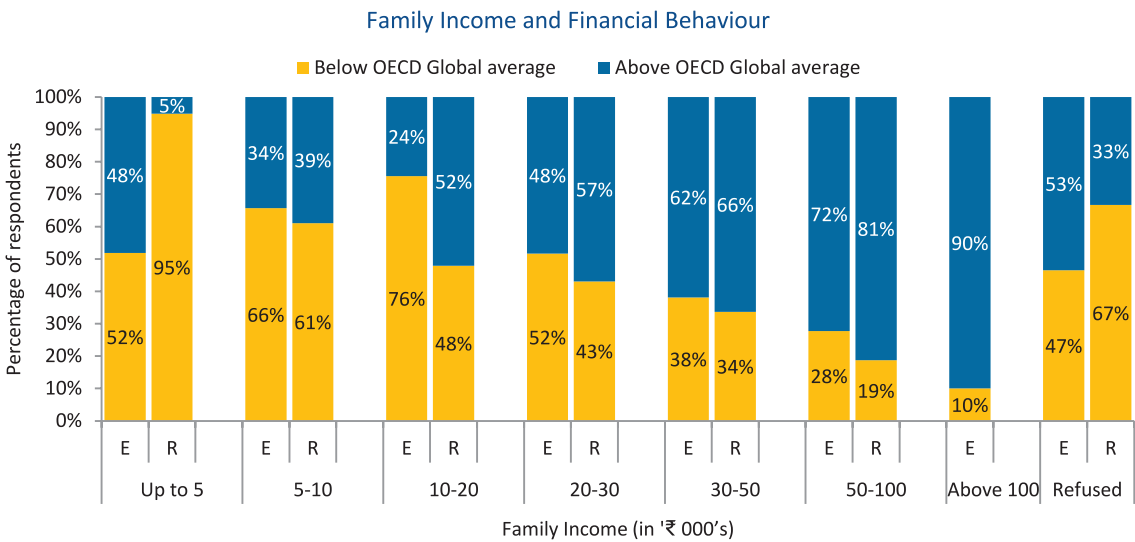
The married appears to be outperforming singles in terms of overall financial literacy. This is largely brought about by their better behaviour and attitude towards money and household finance. It is interesting to observe, how raising a family brings about significant changes in the behaviour and attitude towards saving and consumption, borrowing, and financial planning, among the young. It could be that the incremental expenditures involved in raising a family brings about thriftiness and caution among the married.



As discussed earlier, education levels are somewhat homogenous for the employed respondent group that we have surveyed, and therefore may not offer reliable insights about the impact of education on financial literacy. Among the young employed, it appears that the educated tend to score high on the financial literacy. However, there is no perceptible relationship between education and financial literacy among the retired.

As observed, for the different dimensions of financial literacy, respondents in the higher income levels are financially more literate than those from the lower income levels. A similar observation emerges from all the countries surveyed by the OECD. The relatively poor financial literacy of the lower income group is

despite the reported at par or better attitude and behaviour towards money and finance. These observations suggest that perhaps it might be more helpful to target financial literacy programs to improve the basic numeracy skills of the low-income group.



## Self-reported measure of financial literacy

We also attempt to obtain the self-perception of the respondents about their financial literacy. The respondents are asked to report their perceived level of preparedness to manage expenses and savings, including knowledge about financial products on a scale of 1 to 5.

Nearly 48% of the employed and 60% of the retired respondents report that they are either equipped or completely equipped to deal with the challenges involved in managing their personal finances. This self-reported measure of financial literacy is marginally positively biased relative to the observed measure of financial literacy as only about 50% of the employed and 60% of the retired remain above the OCED average, and high literacy scorers are not widespread.

While, the overall relationship between self-reported financial literacy and measured financial literacy is positive for both the groups, it is interesting to note that there is a tendency for the financially less literate to overestimate their own skills as only about 15% from both the groups admit that they are either unequipped or completely unequipped. This level of self-perception is despite the fact that the financial knowledge of nearly 35% of the employed and 30% of the retired respondents may be regarded as poor.

This suggests that a number of respondents have misplaced expectations about their own financial literacy, which makes them vulnerable to loss of financial wealth. The possibly biased self-reporting of financial literacy is documented in many other studies.

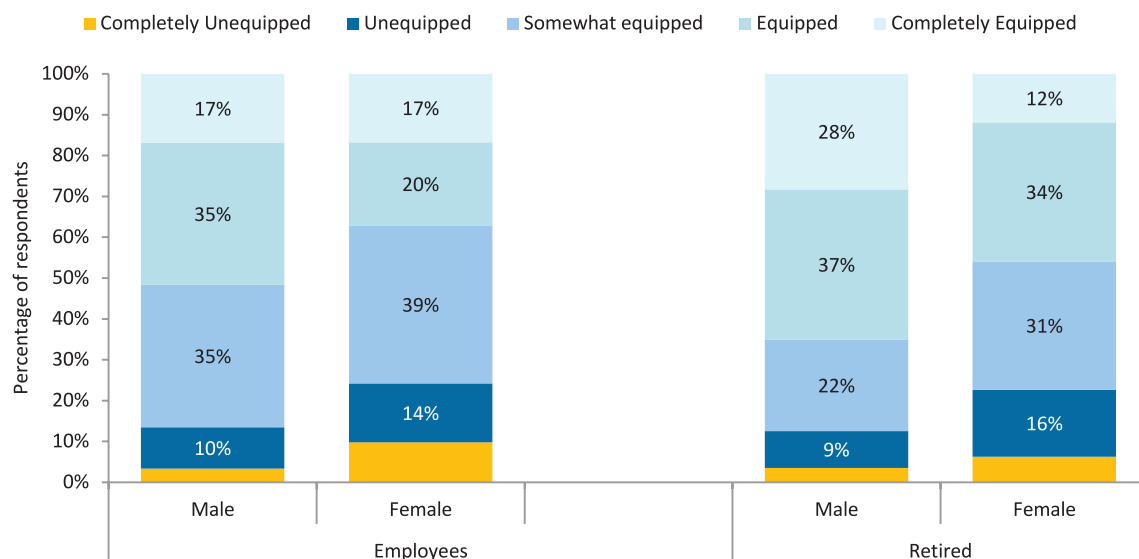
### Variation in self-reported financial literacy across sub-groups

Relative to women, more men are overconfident about their financial skills. This is similar to the widely documented findings in behavioural finance.

We find that respondents of urban origin have relatively low levels of overconfidence compared to their rural counterparts. Perhaps, the relatively greater fluency of the urbanites in financial matters makes them more realistic. We do not observe any significant difference between the married and unmarried in the proportion of respondents quoting higher financial literacy. While not very distinct, respondents in the higher income brackets appear to be more confident about their own financial skills, which is possibly in line with the observations about their financial literacy. These results are true for both the respondent groups.

Most of the respondents (more than 5%) feel that they would benefit from training on how to manage their expenses and savings.

Gender and Self-Reported Financial Literacy





## Conclusions on financial knowledge, behaviour and attitude

The survey suggests that high financial knowledge is not widespread among Indians. Less than a quarter among the surveyed get ranked among the highly knowledgeable, based on the OECD approach. This is significantly lower than the figures reported from many countries including South Africa.

There is lack of understanding among Indians about the basic principles of money and household finance, such as compound interest, impact of inflation on rates of return and prices, and the role of diversification in investments. While more men are found to be knowledgeable than women, the gap is not high compared to the rest of the world. More of the respondents of rural origin score low on financial knowledge. Financial knowledge is more widespread among the more educated and the relatively wealthy.

Most Indians appear to have positive financial behaviour, which reflects discipline, planning, and thrift while dealing with personal and household financial matters. Saving behaviour appears to be widespread among Indians. On financial behaviour Indians score very high compared to the rest of the world. The financial behaviour appears to be associated positively with financial knowledge.

The attitude towards saving and consumption also appears desirable among the Indians. Generally, more women exhibit positive attitude than men. The spread of positive attitude among Indians in dealing with money is comparable to some of the countries surveyed by the OECD. This positive attitude is despite the relatively low financial knowledge among Indians. This suggests that for the majority of Indians, the widely documented behavioural bias the lack of self-control may not in itself significantly upset the attainment of their financial goals. However, some caution is required in interpreting these results as self-reported behaviour is likely to be positively biased.

On the measure of financial literacy; obtained by combining, financial knowledge, behaviour and attitude; the average score of Indians is very similar to the average score of the 13 countries surveyed by the OECD. However, the financial literacy is not widespread as a large number of them would be classified as financially less literate by the OECD average.

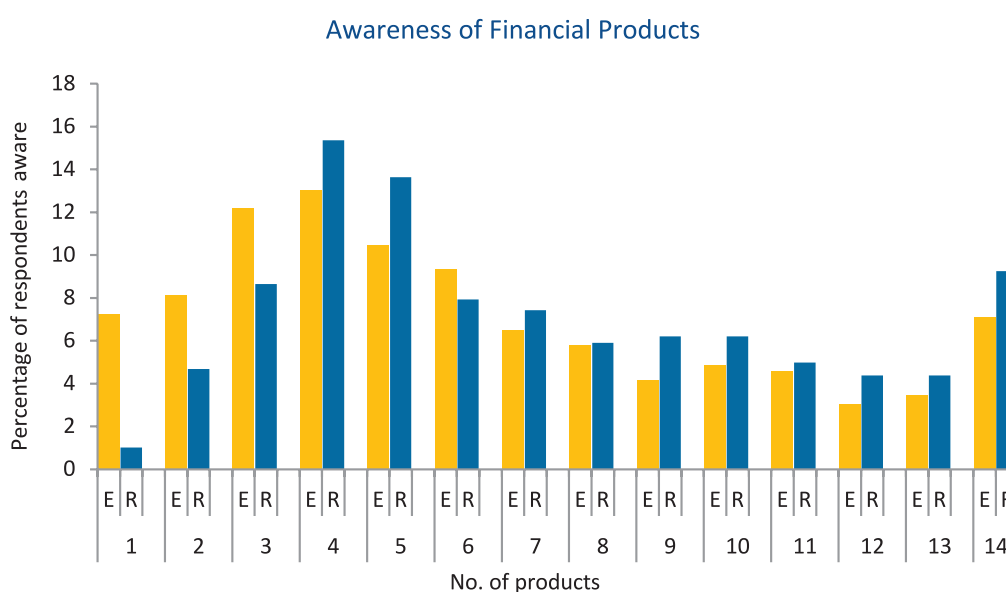
The survey results tend to suggest that while most Indians do not score high in their understanding of the principles underlying most financial products available, they are disciplined and cautious in their personal and household financial dealings. However, financial discipline may not be adequate in itself, when individuals and households have to deal with a complex and volatile economy and financial markets to secure their financial well-being, where understanding could be a decisive factor.

# Awareness of financial products and choice of investment advice

The survey examines the respondents' awareness about the most commonly available saving, insurance, and credit related products. Only about 7% among the employees have heard of all the products. The proportion is marginally higher among the retired (about 9%), probably due to their greater exposure to these products.

There are many interesting patterns that emerge out of the product-wise awareness. Firstly, the awareness about even fixed deposits, a very commonly available product, is not universal. Secondly, more than half of the young employees are not aware of employee specific vehicles for long-term wealth creation like the PPF and pension-fund. Thirdly, the awareness about many of the financial market saving vehicles, like shares, bonds, and mutual funds are not very high.

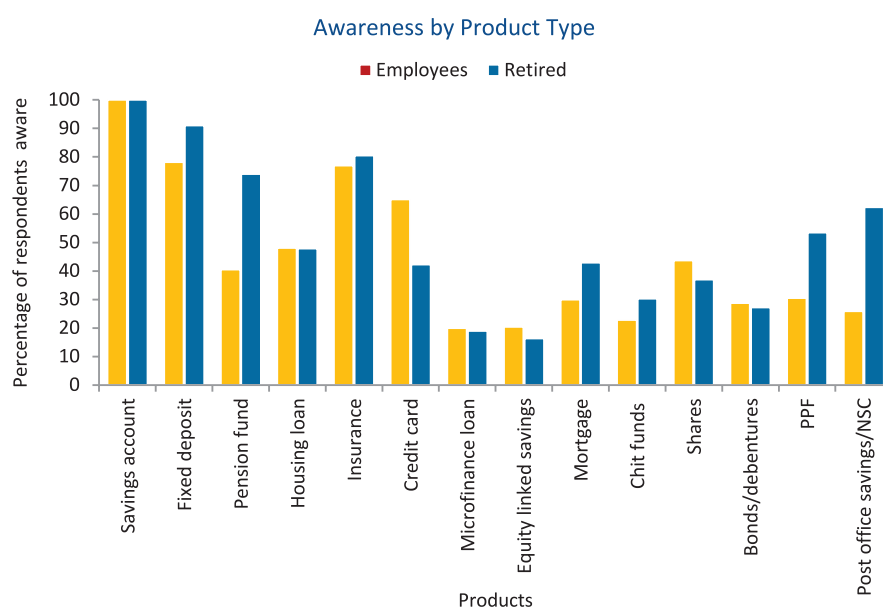
About one-fourth of the employees seem to be aware of only three products, which include savings account, fixed deposits, and insurance.



This lack of product awareness might limit the ability to diversify risk across products, which is not optimal for any investor. At the macro level too the low awareness could lead to inefficient allocation of capital.

Among the retired, the most frequently used source of advice in their choice of financial products appears to be friends and relatives who are not associated with the financial industry. They also frequently take decisions based on their personal experience with investments. The reliance on independent financial advisers and advertisements seem to be only among less than a quarter of the respondents. Moreover, the employer does not figure prominently among the sources relied on for investment advice.

As one would expect, the young employees rely more on the internet, than the retired, as a source of investment advice. They also seem to rely relatively more on their own experience. The rest of the response pattern of the employees is not significantly different from that of the retired.



## Conclusions about product awareness

It appears that the level of awareness about financial products is not universal even for commonly available products. This might adversely affect the ability of investors and borrowers to have optimal portfolios, which would meet their investment needs at different stages in life. While the young employees can probably afford a greater risk in their investments at early stages of life, their awareness about financial market related products remains relatively low. Further, the lack of diversification may also increase the risk of investments.

The low awareness about PPF and pension funds among the employees probably needs attention from the policy makers.

It appears that the employers are not commonly regarded as a source of investment advice. The employers could possibly play a much more active advisory role to the employees. Perhaps through independent financial advisers, it could be possible to spread greater awareness and offer more effective advice.

# Retirement financial planning

A critical stage in the life of most employed is retirement after which the income levels abruptly decline. Retired employees critically depend on the income from the savings accumulated during their employment. The savings accumulation during pre-retirement years and its judicious re-investment on retirement would largely decide the well-being during their post-retirement years. Incompetent decisions in the reinvestment of the accumulated savings could lead to a significant loss of wealth.

This part of the survey has attempted to understand how employees plan and save for their retirement. The key aspects of retirement which are investigated include (i) how employees identify their post-retirement income needs and estimate the required savings (ii) the saving habits during the pre-retirement years, and (iii) the preferences for disbursement or reinvestment of the amount available at retirement.

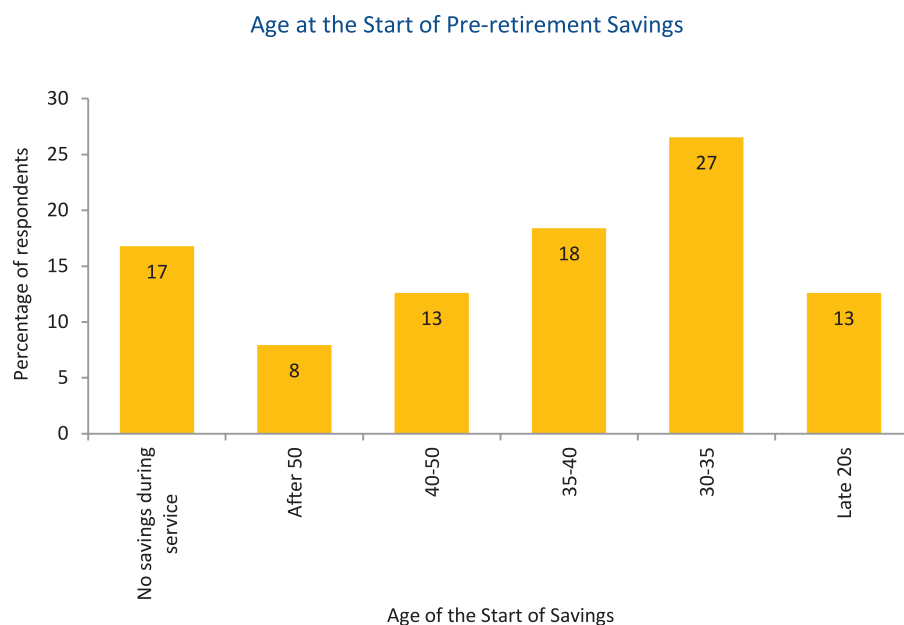
Only about 10% of the retired respondents depend on their children/spouse/relatives for their income. About 68% depends majorly on the pension. The other major sources of income after retirement includes interest on deposits and income from house property. This seem to suggest that majority of this generation has achieved a modest degree of success in their financial planning.

## Pre-retirement planning

More than half of the respondents (about 59%) report that they have attempted to estimate the saving needs, which could support their post-retirement expenses. About 17% report that they had no major savings during their service life. While it may appear worrisome that nearly 40% of the retired have not attempted to financially plan their retirement, in a country like India without any significant social support, a large number of the respondents are part of defined pension schemes. Due to the assured pension support probably active involvement by employees was limited.

It appears that there is some degree of association between financial knowledge and the proportion of those who financially plan for their retirement.

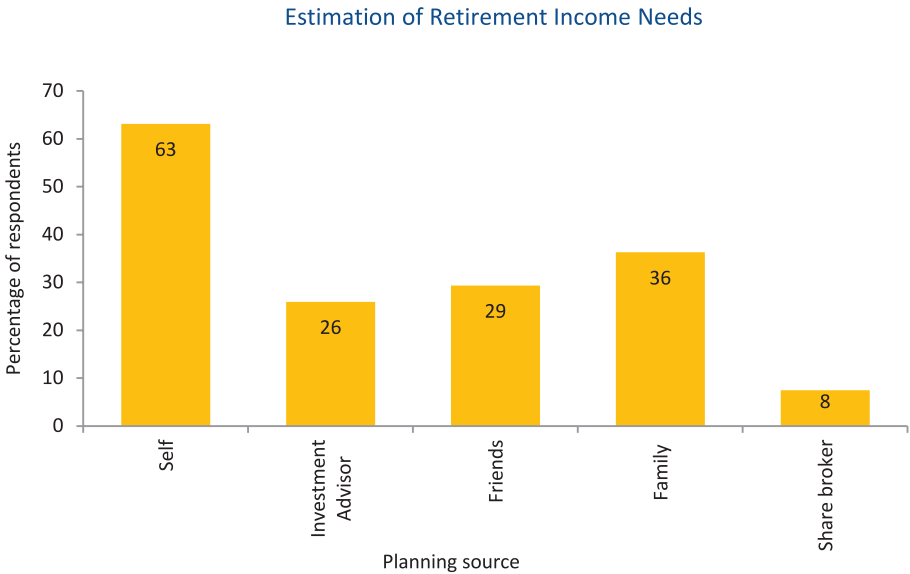
Nearly 40% seem to start saving well-beyond their provident fund contributions before their mid-30s. This is probably not very late in their life given that many of the retired respondents would have started their employment in the early 30s. The reported saving propensity is in line with their reported financial behaviour.



Again, the more financially literate tend to have started their savings at a relatively younger age. However, this is not a very distinct association across sub-categories.

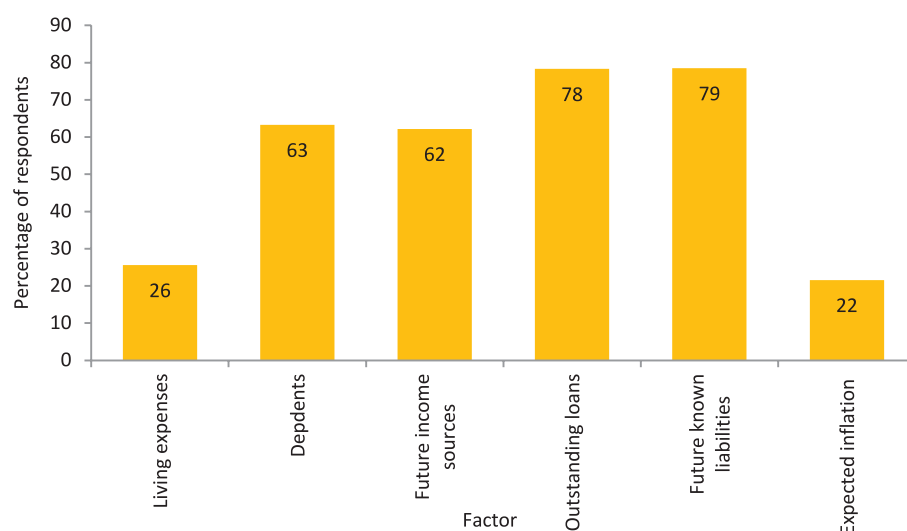
More than 60% of the respondents have attempted to self-estimate their saving requirements and about a quarter of them were dependent on advisers. We do not observe that the highly literate group were more likely to self-estimate their savings requirements compared to the less literate.

The employer does not figure among the sources of advice for retirement planning and about 72% report that their employer did not provide any training on retirement financial planning.



Among those who have self-estimated the saving requirements, most of them did not consider either living expenses or expected inflation, the two key factors which could impact their postretirement well-being. The failure to account for inflation and living expenses is probably a reflection of the lack of understanding about inflation. The factors considered are similar across groups with varying financial literacy.

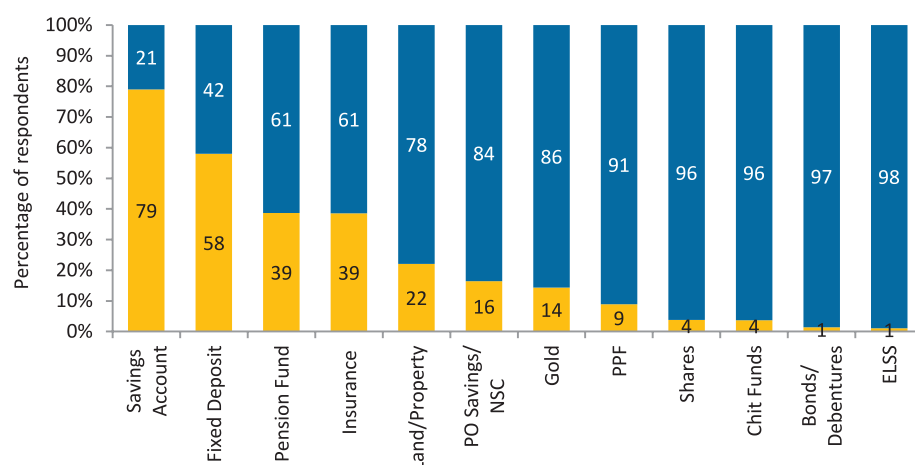
Factors Considered in the Estimation of Savings Requirements



## Pre-retirement savings

Only about one-fourth report that they had not saved every year for retirement. Nearly half of the respondents (about 46%) claim that they have saved a certain percentage of salary every month per year for retirement. Another 20% claim that they have saved a certain amount every year though they could not save every month. These findings about systematic savings can be regarded as a reflection of their positive financial behaviour.

Investment Vehicles Chosen for Retirement Savings



The more frequently used investment vehicles for pre-retirement saving appear to be the relatively less risky avenues, such as a savings account, fixed deposits, and insurance apart from pension funds. Equity or bonds did not appear frequently among the preferred investment vehicles. This tends to suggest a low

diversification in their investment portfolios during the pre-retirement period. This could partly be due to the poor awareness about the available products.

## Post-retirement investment behaviour

The survey finds that about two-thirds commuted their pension on retirement with about 20% commuting nearly 50% of their pension. The most frequently cited motivation for commutation is tax saving (40%). The other frequently cited motivations are repayment of liabilities (32%), payment to dependents (26%), and attractive investment opportunities (24%). About 30% report that they have commuted their pension as advised by friends and relatives.

These observations suggest that there is a significant preference for lump sum receipt on retirement in place of regular monthly income. The commutation of pension for investment purpose places additional burden on the retired to safely invest the amount. The decision to commute might increase the chance for wealth loss given the poor product awareness and relatively low financial literacy.

Often the employed receive a sizeable lump sum on retirement, which includes gratuity, provident fund, and other superannuation benefits apart from the lump sum from pension commutation. The way in which this lump sum is disposed off or invested is likely to leave a lasting impact on their financial well-being. It appears that about 62% of the retired have saved substantially from the amount received on retirement, while the remaining have either repaid liabilities or given it away to their dependents.

Among those who have re-invested the lump sum received on retirement, most of them seem to have spread the investment across a number of avenues. The savings account is a preferred choice. Substantial investments, involving more three-fourth of the lump sum, are parked in relatively less risky opportunities like savings bank, fixed deposits, and post office or NSC except for land or property. These observations reflect the somewhat judicious choice of the retired by selecting less risky opportunities for post-retirement investment.

## Conclusions on retirement planning

It appears that majority of the employees financially plan for retirement and start their savings early in life. Majority of them claim to have estimated their post-retirement income requirements. Relatively more among the financially literate plan for retirement compared to the less literate.

Most of them appear to have saved systematically for retirement and the frequently used investment avenues are the relatively safe assets, such as savings account and fixed deposits. These findings are in line with the financial behaviour observed among the respondents.

The retirement financial planning seems to be done commonly by self. However, in the estimation of the income required to support post-retirement living, the two key aspects, inflation and living expenses, appear to be ignored. This seems to underscore the need for greater financial knowledge.

Commuting a significant proportion of future pension is a widespread practice and the most commonly cited motivation is tax savings. The amount available to employees on retirement appears to be invested in relatively safe assets, which is a desirable practice. However, this preference for lump sum instead of regular monthly income may put additional investment management burden on the retired and could perhaps increase the risk for the financially less literate.

These observations about the retired suggest that most of them are conscious about future requirements and appears to have saved systematically. However, these findings need to be treated with a certain level of skepticism for several reasons.

First, most of the retired surveyed by us had stable and regular jobs which allowed them to save systematically. However, most of today's employed are in relatively less stable jobs and might not be able to save systematically at every point in their life cycle. Second, most of the retired have invested in an era of administered interest rates and possibly would have had only very limited exposure to market linked instruments. The investment in relatively safe and low volatility opportunities would have helped them to better protect their wealth, although it might have earned them only a lower rate of return.

These changes in the environment might make it difficult to expect the same outcome for the current generation of employees. The erratic nature of income from employment itself might call for reasonably sophisticated investment approaches, which requires a certain degree of comfort with the financial concepts. The volatility in the macroeconomic environment would also demand sound investment skills.



## Tentative conclusions and future directions

This study is an attempt to understand the financial literacy levels of three important demographic groups, young working adults, retired and students in India. The employed and retired are surveyed on financial knowledge, behaviour and attitude. The students are surveyed only on financial knowledge as they might not have significant direct exposure in dealing with personal or household finance. The survey involves nearly 3,000 respondents from the three groups distributed across the country.

The findings suggest that high financial knowledge is not widespread among Indians. Less than one-fourth rank among the highly knowledgeable by the OECD approach. The financial knowledge among Indians appears to be low by global standards. The basic principles of money and household finance, such as compound interest, impact of inflation on rates of return and prices, and the role of diversification are not well understood. As most personal financial decisions involve these concepts, their limited understanding is a serious matter.

The financial behaviour of Indians appears to be positive. The employed and the retired score high on behavior relative to the rest of the world. Indians match the best of the OECD sample in their propensity to assess affordability and have a high level of financial discipline. Most employed and retired borrow less and depend on their savings. Positive financial behaviour among Indians appears to be associated with higher financial knowledge.

There is positive financial attitude among Indians. The spread of positive attitude among Indians in dealing with money is comparable to some of the countries surveyed by the OECD. There is desirable attitude towards saving and consumption among Indians.

More men are found to be financially knowledgeable than women. However, the gap is not high compared to the rest of the world. More respondents from rural regions score low on financial knowledge. Financial knowledge is more widespread among the more educated and the relatively wealthy.

The financial behaviour and attitude of women are marginally better compared to men. Married and those with higher incomes tend to believe in planning, saving and consumption. Education and urban background have no influence on the financial attitude.

Information on retirement financial planning was also gathered from the retired in addition to financial knowledge, behaviour and attitudes. It appears that majority of them financially plan for retirement and start systematic savings early in life. Majority of them claim to have estimated their post-retirement income requirements. The investment avenues frequently chosen are the relatively safe assets. Their retirement financial planning appears moderately successful as 68% of the retired depend on pensions.

The awareness of financial products is generally low. This could limit the diversification of investment portfolios across asset classes. Less than a quarter of the respondents depend on independent financial advisers and advertisements.

The striking conclusion from the study is that financial knowledge in India is very poor even by low global standards. A large part of this is due to the poor numeracy and is probably due to the poor performance of the Indian primary education system as documented in other studies. The low financial knowledge of students, which largely depends on their learning outcomes rather than on direct experience in financial matters, also reflects poorly on the academic outcomes.

However, this poor knowledge appears to be offset by prudent financial behaviour and good financial attitudes that lead to an overall score of financial literacy that is on par with the admittedly poor global standards. The result has been a somewhat benign outcome for the current generation of retirees in terms of adequacy of savings and choice of savings vehicles.

It would be a mistake however to extrapolate from this outcome to the current generation of employees for several reasons. The current generation has to cope with defined contribution plans rather than the defined benefit plans that the earlier generation enjoyed. Rising longevity and increasing financial market

volatility pose threats to retirement savings. The current generation is likely to face greater job insecurity and income uncertainty. Greater access to consumption credit and other liability products could alter financial behaviour over a period of time. The informal sources of financial advice that served the old generation reasonably well are unlikely to perform equally well in an age of nuclear and sub-nuclear families and an environment of increasing financial complexity.

There is an urgent need for government policy measures to improve financial literacy. Fortunately, knowledge deficits are easier to remedy than problems in attitudes and behaviour. The relatively good behaviour and attitude scores of the Indians provide a strong base on which a financial literacy programme focused on improving knowledge can be built.

Equally, it is important to build regulatory frameworks that improve the delivery of financial services and financial advice to serve the more complex and challenging needs of the present generation.

There is need for lot more research on financial literacy in India. Despite our own study and other recent studies, we know too little about financial literacy in India. India is a vast country with many languages. Regional differences in education levels and economic development are very large. These suggest that the often-employed survey results need to be supplemented with other methodologies, such as focus group interviews, experiments and longitudinal studies.





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