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Framework for the Development of Financial Literacy Baseline Surveys: A First International Comparative Analysis

Elaine Kempson

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FRAMEWORK FOR THE DEVELOPMENT OF FINANCIAL LITERACY BASELINE SURVEYS: A FIRST INTERNATIONAL COMPARATIVE ANALYSIS

Elaine Kempson

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Financial Affairs Division, Directorate for Financial and Enterprise Affairs
Organisation for Economic Co-operation and Development
2 Rue André Pascal, Paris 75116, France
www.oecd.org/daf/fin/wp

ABSTRACT/RÉSUMÉ

Framework for the development of financial literacy baseline surveys: a first international comparative analysis (OECD WORKING PAPERS ON FINANCE, INSURANCE AND PRIVATE PENSIONS: No. 1)

There is growing concern, across a wide range of countries, about the levels of financial capability of consumers. A large number of initiatives are therefore being developed to address this issue; and countries are increasingly rolling out national strategies on financial capability. To do this effectively requires evidence on the areas where financial capability in the population is low and an identification of the extent to which these should be addressed by financial education and/or consumer protection measures. Yet there is remarkably little robust information in this area and none that is comparable across countries.

This report is aimed at informing the work of the OECD International Network on Financial Education (INFE) in this field, by 1) elaborating a set of draft good practice guidelines for the design of national financial literacy surveys and; 2) proposing guidelines for the design of a core set of good practice questions for embedding within any national surveys aimed at measuring financial literacy levels.

JEL codes: C83, D14, D18, D91, D92, I22
Key words: financial literacy, financial capability, financial education, consumer protection, financial literacy survey, budget, spending, saving, financial planning.

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Cadre pour le développement des connaissances financières à un niveau international : première étude comparative internationale OECD WORKING PAPERS ON FINANCE, INSURANCE AND PRIVATE PENSIONS : No. 1)

De nombreux pays s'inquiètent de plus en plus des niveaux de compétences financières des consommateurs. Un grand nombre d'initiatives sont mises en place pour augmenter les niveaux de connaissances financières et les pays se sont attelés à ces enjeux et ont commencé à développer des stratégies nationales en matière de capacité financière. Pour que cette démarche soit efficace, il faut recueillir des données dans les domaines où les connaissances financière de la population sont faibles et identifier jusqu'à quel point des mesures en matière d'éducation financière et/ou de protection des consommateurs peuvent aborder ces difficultés. Or, il existe extrêmement peu d'information solide dans ce domaine et elle ne s'avère pas comparable entre les pays.

Le but de ce rapport est d'informer sur les travaux que mène le réseau international sur l'éducation financière de l'OCDE (INFE) sur cette question à travers 1) l'élaboration d'un projet de bonnes pratiques pour la conception d'enquêtes nationales sur les niveaux de capacité financière ; et 2) la proposition de lignes directrices pour l'établissement d'un ensemble de questions fondamentales de base à intégrer dans toute enquête nationale visant à mesurer le niveau de compétence financière des consommateurs, s'appuyant sur des bonnes pratiques en la matière.

Codes JEL : C83, D14, D18, D91, D92, I22
Mots clés : Connaissances financières, capacité financière, éducation financière, protection des consommateurs, enquête des connaissances financières, budget, dépenses, épargne, planification financière.

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SUMMARY OF PROPOSED BEST PRACTICE GUIDELINES

By Elaine Kempson[1]

I. Introduction

Following the 2nd Meeting of the International Network for Financial Education on 20 October 2008, the OECD has established the Financial Literacy Measurement Sub-group to address the need for internationally comparable survey data on financial literacy and capability**.** This second interim report was discussed at the meeting of the Sub-group and, subsequently, by the INFE meeting held in Rio de Janeiro on 14 December 2009. It sets out best practice guidelines for national surveys of financial literacy and capability and, in a separate volume recommendations for a set of core questions for inclusion in those surveys that are designed to produce data that is broadly comparable between countries.

It is aimed at policy makers who want to commission a survey of the financial literacy or capability of the adult population, but who have limited or no experience of survey design. It will not enable the reader to become a survey expert, but is intended to provide sufficient information for an informed discussion with experts in sampling and survey and questionnaire design to ensure that the survey commissioned fully meets the needs of the organisation commissioning it.

II. Who to survey

It is important, at the outset, to decide who the survey will cover and, just as importantly, who will be excluded as this will determine the survey design and content and will need to be included in the brief given to the organisation that will be undertaking the survey. It is therefore proposed that:

- National surveys should be of individuals rather than households.
- There should be a lower age limit for respondents of 18 but no upper age limit, but, importantly, surveys should collect the exact age of respondents.

If any groups will be excluded (or likely to be excluded) from the survey for practical or cost reasons this should be recorded. This might include people: who live in institutions or who do not manage their own finances through mental incapacity; who live in very sparsely populated areas or lack a telephone, or who cannot speak the language of the majority of the population.

III. Survey method

Having decided who to include in the survey, the next area for careful consideration is the preferred survey method. Existing surveys have used a range of methods including: personal interviews which are

[1] Professor Elaine Kempson is Professor of Personal Finance & Social Policy at the Personal Finance Research Centre (University of Bristol), England. The views expressed are the sole responsibility of the author and do not reflect those of her organisation. The author is solely responsible for any errors.

either face-to-face or by telephone and self completion surveys which are either paper-based or use the web. Each method has its advantages and disadvantages and the cost varies quite considerably.

Countries planning a national survey should consider collecting the data using a personal interview survey, rather than a self-completion one. Whether the interviews should be by telephone or face-to-face should, however, be decided locally, bearing in mind the points raised above. It should, however, be remembered that data collected in these two ways is not strictly comparable.

Likewise whether a stand-alone survey is commissioned or questions added to an existing survey will need to be decided locally. Although it should be borne in mind that replies can be influenced by the other questions included on the existing survey. Existing surveys should only be considered where they are run by a reputable body, are robust in their sampling and design and are surveys of individuals rather than households.

IV. Sampling

Sampling (including sample size and design) is a complex area and one where the help of a statistician will be needed.

In general a random sample is to be preferred, although where response rates to such surveys are low within a country consideration might also be given to random location sampling for face-to-face surveys and random digit dialling for telephone ones. In such cases, detailed quotas are required to ensure a representative sample.

V. Questionnaire design

The review of existing surveys showed that the broad-ranging surveys covered four conceptually different areas: day-to-day money management; financial planning; choosing appropriate products and financial knowledge and understanding.

Consideration should be given to covering all four areas in a national survey and the questionnaire designed by drawing on the questions used in previous surveys. Those where extensive development and testing was undertaken to inform their design are particularly useful (e.g. United Kingdom (FSA baseline survey), Statistics Canada, Ireland, and Netherlands CentiQ).

We have also investigated in some detail the questions used in previous surveys in each of these four subject areas to identify core ones that would permit the collection of internationally comparable data. These questions were selected using five criteria:

- first, questions that meet best practice for question design generally (including drawing on the cognitive testing undertaken for the Statistics Canada, Irish and UK surveys);
- secondly, questions that can be ‘scored’, with replies ranked from most to least capable;
- thirdly, ones that are common to a number of surveys and are equally relevant across a range of countries;
- fourthly, questions that are equally applicable across all sections of the population,
- and finally, those which are correlated strongly with the concept being measured.

In doing this, some areas were identified where internationally comparable data could not be collected but questions should never-the-less be included in a national survey. A linked report gives further details of this work.[2]

1. Day-to-day money management

Nine potential core questions have been identified.

Financial control

- Whether people have a budget
- Whether and how people keep records of their spending
- How accurately people know how much money they have for daily living costs

Making ends meet

- How often run short of money and actions taken when money runs out
- How easy it is to keep up with payments on bills and other financial commitments

Attitude questions on approaches to financial management

- I am impulsive and buy things even when I can't really afford them
- I buy things on credit rather than waiting and saving up
- I am organised with regard to managing money
- I am more of a saver than a spender

2. Financial planning

This covers provision for an emergency or 'rainy day'; savings/insurance held; financial provision for retirement; financial provision for anticipated expenses such as health care, education or a known event. We have identified four potential core questions in the first two areas, plus a further three attitude questions

Provision for an emergency

- How would meet daily living costs if lost the main wage (or had a substantial drop in income if no income from employment) for three months
- How would meet an unexpected expense of a set multiple of monthly income

[2]Kempson Elaine, Measuring levels of financial literacy at an international level – Appendix: Developing a set of core questions, OECD, January 2010.

Savings/insurance held

- How much money is put aside in savings for an emergency
- Types of insurance held

These questions need to be considered together as it is a matter of choice whether to have savings or insurance cover and used to judge the adequacy of provision people say they have made in the previous two questions.

Attitudes to financial planning

These are included to identify poor people who would plan for future financial needs if they could and rich ones who only do so because they have a surfeit of money. Proposed questions include:

- I live for today and let tomorrow take care of itself
- I find it more satisfying to spend money than save it for the long term
- I save money for a rainy day

Provision made for retirement and financial planning for anticipated expenses

These are two important areas and most surveys will want to include questions to assess the adequacy of the financial provision individuals have. It has not, however, been possible to identify a core of questions that meet our criterion of having been used in a number of previous surveys and are equally relevant across all countries. It is, however, possible to identify core attitude questions (see above).

3. Choosing appropriate products

The ability to choose appropriate products is an important area to cover as most national surveys show that capabilities are low. It is, however, potentially a difficult area in which to assess behaviour because previous surveys have found that a significant minority of people have not personally made a decision about which product to buy within a relatively recent past. This means that they cannot be asked about their actual behaviour and their replies to more generic questions about how they choose products would be meaningless. There is no easy solution to this dilemma. In general, it is better to ask people about actual behaviour and note that some people have no score for this domain.

With this in mind we have been able to identify only two possible core questions covering:

- Whether people shop around before buying financial products
- What product features were considered when making a recent purchase (ideally the most complex product they have bought

4. Financial knowledge and understanding

Although this topic is covered widely in surveys the questions asked vary widely and many do not meet our criteria set out above. There are seven possible core questions:

Keeping up-to-date with financial matters

- What people monitor and how often, and
- The information sources they use to do so

Understanding of key concepts

- Ability to weigh up risk and return
- Understanding of inflation
- Understanding of interest rates

Knowledge of financial products and services

- Knowledge of key features of products held
- General attitude statement 'I know enough about financial products to choose ones that meet my needs'.

Other areas considered, include:

- Knowledge of financial products generally
- Knowledge of consumer rights
- Knowledge of how to get redress

These are all recommended as optional rather than core questions as in all instances the situation varies widely between countries and it is not possible to design a generic question.

5. Explanatory variables

In addition, to these core questions to measure financial literacy/capability the questionnaire will need to include a range of what are known as 'explanatory variables'. These include: age, gender, family circumstances, work status, income (and possibly income stability), educational level and region of the country, as well as questions that capture appetite for risk, time horizons and the extent of engagement with financial services. Knowledge of financial products can also be considered an explanatory variable.

6. Analysing and reporting the results

Having collected the data, consideration then needs to be given to analysing and reporting the results. Past surveys have adopted three broad approaches, but with wide variation in the extent to which these are covered.

Survey data should be analysed and reported using cross tabulations.

In surveys with a relatively large number of questions, scores should be calculated using factor analysis. Further exploratory analysis needs to be undertaken to undertaken develop a method of scoring data collected across a range of countries using a set of core questions.

Segmentation of the population, either by ranking people by their scores or using cluster analysis, also has a good deal to commend it.

MEASURING LEVELS OF FINANCIAL LITERACY AT AN INTERNATIONAL LEVEL: COMMISSIONING A SURVEY

I. Introduction

There is growing concern, across a wide range of countries, about the levels of financial capability of consumers. A large number of initiatives are therefore being developed to address this issue; and countries are increasingly rolling out national strategies on financial capability. To do this effectively requires evidence on the areas where financial capability in the population is low and an identification of the extent to which these should be addressed by financial education and/or consumer protection measures. Yet there is remarkably little robust information in this area and none that is comparable across countries.

Following the 2nd Meeting of the International Network for Financial Education on 20 October 2008, the OECD has established the Financial Literacy Measurement Sub-group to address this issue. This sub-group has undertaken a data gathering exercise to identify work undertaken in individual countries. To inform its work, the OECD has commissioned the Personal Finance Research Centre (PFRC) to bring together an overview of the ways that individual countries have attempted to measure the level of financial literacy of their populations. Members of the Financial Literacy Measurement Sub-group assisted with the identification of these surveys and provided details of their coverage.

The first interim report, covering that initial data gathering exercise, was discussed at a meeting of the Sub-group and, subsequently, by the INFE meeting held in Paris on 19 May 2009. A revised report submitted to the OECD in June 2009. This set out a multi-step methodology for assessing and comparing levels financial literacy/capability cross-nationally.

The OECD has subsequently commissioned the Personal Finance Research Centre to bring forward the programme of work of the INFE and initiate the first concrete steps of this agreed-upon methodology towards the ultimate objective of developing internationally comparable data on financial literacy. The objectives of this follow-up work were:

1. To elaborate a set of good practice guidelines for the design of national financial literacy surveys. Based on existing surveys (including both "broad-ranging" and "knowledge-based" ones) the good practice guidelines will cover all considerations linked to the elaboration of national wide-ranging surveys to measure the level of financial literacy/capability of a population. They will cover the technical aspects of measurement for future surveys, including their content, coverage, design, analysis and reporting. The guidelines will be aimed at benefiting the largest range of economies.

2. To design a core set of good practice questions for embedding within national surveys. Building on the good practice guidelines, a set of core questions will be developed that can be used by countries wanting either to design a stand-alone baseline survey for the first time – or to include questions on financial literacy and capability on a wider questionnaire. These questions will be selected using three criteria:

a. questions that meet best practice for question design generally;

b. those that are common to a number of surveys and are equally relevant across a range of countries; and

c. those which are correlated strongly with the concept being measured.

This will be based on a detailed analysis of individual questions.

This second interim report was discussed at the meeting of the Sub-group and, subsequently, by the INFE meeting held in Rio de Janeiro on 14 December 2009. It covers both of these objectives, with a further linked report covering the identification of the core questions in more detail. It is based on a detailed investigation of 19 national and two international surveys, which were described in detail in the first interim report, along with the author's own experience of designing and commissioning surveys over the past 20 years. It comprises a checklist of things to be considered when designing and commissioning a survey of financial literacy or capability, along with an indication of best practice.

It is aimed at policy makers who want to commission a survey of financial literacy or capability, but who have limited or no experience of survey design. It will not enable the reader to become a survey expert, but is intended to provide sufficient information for an informed discussion with experts in sampling and survey and questionnaire design to ensure that the survey commissioned fully meets the needs of the organisation commissioning it.

This report

The report begins, section II, with a consideration of who is to be surveyed and who will not. It then considers, in section III, the range of survey methods that can be used, drawing out their advantages and disadvantages before discussing, in section IV, various aspects of sampling. section V considers survey content and questionnaire design, while section VI covers survey administration. The final substantive chapter, section VII, discusses the analysis and reporting of the results.

II. Who to survey

It is important, at the outset, to decide who the survey will cover and, just as importantly, who will be excluded as this will determine the survey design and content. It will need to be included in the brief given to the organisation that will be undertaking the survey. In this context, it should be noted that these guidelines are designed primarily for surveys with adult populations.

1. Individuals or households?

One of the first things that will need to be decided is whether the survey will assess levels of financial literacy or capability of individuals, of households collectively, or of the most knowledgeable person in a household. The most common approach, by far, is a survey of individuals and this is the approach that is recommended. Households are, in many cases, not stable over time, as people form and dissolve relationships. At the same, it is important to recognise that individuals operate within a household context and that behavioural outcomes may be influenced by the financial capability of others. For this reason it is important that a survey which goes beyond measuring knowledge alone should ascertain the role played by the individual in all the areas of decision making that are covered.

2. Deciding who is to be included

Secondly, upper and lower age limits need to be set for inclusion in the survey. The most common approach is to cover all adults aged 18 and over, with no upper age limit. This is the approach we would recommend. In most developed economies, 18 is the age when most individuals begin to adopt some autonomy with regard to their finances and become legally permitted to use the various sources of credit, including current accounts that can be overdrawn. Some surveys set an upper age because some very elderly people have difficulty taking part in a survey and, indeed, others may manage their finances for them. If no age limit is set, it will be important to screen out people who do not manage their own financial affairs due to mental impairment. This can apply to some younger people too.

To ensure that data collected is comparable with other countries, it is important to collect the exact age of survey participants, as opposed to collecting it in age bands. This allows greater flexibility when analysing the results and enables cross country comparisons to be drawn even when the age limits differ.

It is common practice to exclude from national surveys people who are living in residential institutions, such as care homes, hospitals, prisons, and homeless people's hostels. This is done for a number of practical reasons. Many of those living in such institutions are not able to undertake a survey and, in any case, few will have independent control of their finances. In addition to this, it will be necessary to negotiate access through thirds parties, including the manager of the institution and close relatives. Countries wanting to develop a survey should consider following general practice and exclude such groups from the survey unless there are compelling reasons to include them. Any excluded groups should be recorded.

It is also common for face-to-face surveys to exclude people living in extremely sparsely populated areas, as it is too costly to include them in the survey. This problem is, however, overcome by the use of a telephone survey; but this, too, can create biases especially where there is not universal access to a telephone, as we discuss in section III. If it is decided to use a face-to-face survey, it will be important to discuss with the survey firm that undertakes the fieldwork what restrictions, if any, they place on the population that will be covered. Likewise consideration will need to be given in a telephone-based survey to coverage of people who lack a telephone (or who only have a mobile one). Any restrictions in the population surveyed need to be recorded.

Most countries have some minority ethnic groups which may mean that a range of languages are spoken across the population. It is, therefore, important to consider whether provision needs to be made for the survey to be carried out in minority languages where needed, bearing in mind that some ethnic groups may be bilingual and, therefore able to undertake the survey in the majority language. Because the costs of doing so can be high, this is usually decided by setting a lower limit for the size of a particular linguistic group that will have the survey administered in their mother tongue. Again, this needs to be recorded.

3. Summary of proposed best practice guidelines

Based on best practice, it is proposed that:

- National surveys should be of individuals rather than households.

- The lower age limit for respondents should be set at 18 but there should be no upper age limit. All surveys should collect the exact age of respondents.

If any groups will be excluded (or are likely to be excluded) from the survey for practical or cost reasons this should be recorded. This might include people: who live in institutions or who do not manage their own finances through mental incapacity; who live in very sparsely populated areas or lack a telephone, or who cannot speak the language of the majority of the population.

III. Survey method

Having decided who to include in the survey, the next area for careful consideration is the preferred survey method. Existing surveys have used a range of methods including: personal interviews which are either face-to-face or by telephone and self completion surveys which are either paper-based or use the web. Each method has its advantages and disadvantages and the cost varies quite considerably. For this reason we discuss the options in turn. It should, however, be noted that there is (technical) methodological work showing that the survey method influences the replies given to apparently identical questions.

1. Personal interview surveys

Personal interview surveys are most commonly used (12 of the 18 surveys) and especially so for broader-based surveys covering behaviour and attitudes as well as knowledge. Only one of such surveys (The Dutch CentiQ) was not based on personal interviews.

Personal interviews have a number of advantages over self-completion surveys for a survey of financial literacy or capability. The most obvious of these is that they do not require respondents to have a basic level of literacy and accommodate people with impaired sight. The other main advantage is that they can be longer and include more un-prompted questions, that is questions where respondents can answer in their own words (with the interviewer coding the reply) rather than choosing from a list of pre-determined options. Linked to this, the interviewer can probe to get a full reply. It is also possible for interviewers to provide an indication of any respondents who appeared not to be answering the questions frankly.

Moreover, they can be more complex in their questionnaire design, with questioning tailored to individual circumstances, while paper-based self-completion questionnaires work best if they are designed so that everyone answers all of the questions. If there is complex routing through a self-completion questionnaire, the respondent can get lost and answer the wrong questions. Web-based surveys do not suffer the same disadvantage.

The quality of the data collected by personal interviews depends on the skill of the interviewer. Poor interviewers deliver low response rates, incomplete interviews (with sensitive questions unanswered) and can influence the responses given by respondents. For this reason it is important that the interviews are undertaken by an organisation that has interviewers who are skilled and experienced in social surveys (as opposed to market research).

Face –to-face interviews

Five of the 18 national surveys for which full survey details were available used face-to-face interviews. The advantage of this approach is, firstly, that the interviews can be longer – up to an hour is generally considered acceptable. Secondly, response rates (both overall, and for individual questions) tend to be a good deal higher than for other methods. It is also possible to build in self-completion of some questions that might otherwise be too sensitive for people to answer.

In addition, national sampling frames (records from which samples of people are selected for surveys) tend to be better for addresses than they are for telephone numbers.

Face-to-face interviews do, however, have two main disadvantages, relating to cost and representativeness of the sample. There is no doubt that face-to-face surveys are the most expensive of survey methods (often twice the cost of telephone ones). Moreover, for practical reasons the sample needs to be clustered to some degree – in other words a sample of locations is selected for the survey rather than the sample being spread across the entire population. Face-to-face surveys are also difficult and very costly in sparsely populated areas and, as a consequence, such locations are generally excluded. The use of entry-

phones, especially where there are gated communities, can restrict access to some sections of the population and affect the representativeness of the sample.

Despite these reservations face-to-face interviews are considered the 'gold standard' in many (but by no means all) countries.

Telephone surveys

Seven of the 18 national surveys for which full survey details were available used telephone interviews. In general, telephone interviews tend to be preferred in countries with a low population density in order to cover the whole country, rather than just the cities and other densely populated areas. They do not require the sample to be clustered. They are also a good deal cheaper than face-to-face surveys.

They do, however, place limitations both on the length of interview that can be conducted – half an hour is often considered the maximum length – and on the types of question that can be asked. Face-to-face interviews often rely on showing individuals cards with a range of possible responses. On the telephone these have to be read out which both increases the length of time a question takes and limits the list of possible replies. It also limits the use of questions where respondents are asked to react to or use written information – a common example is extracting information from a sample bank statement. Furthermore, it is not possible for interviewers to verify information by checking paperwork or help respondents with written prompts. Telephone surveys can also be problematic for people who have hearing problems or who are not being interviewed in their first language. People with hearing difficulties often rely on facial expression and a degree of lip reading; while communication difficulties between people with differing first languages can be exacerbated on the telephone.

Telephone-based surveys may also have a risk of biased sampling, depending on the penetration of telephones and whether the records used for sampling purposes cover cell phones as well as land lines. This is discussed further in section IV.2.

2. Self-completion surveys

The main advantage of self-completion surveys is their cost as they are a good deal cheaper than personal interview surveys. It can be argued that people may be more likely to give an honest reply to sensitive question in an anonymous self-completion survey. On the other hand, it is also possible to avoid being completely honest and/or to give replies that are deliberately wrong. Whereas this can be noted by an interviewer and a decision taken about whether to exclude the information collected from the survey data, this is not possible with self-completion surveys.

Moreover, it is not possible to probe replies in the ways possible in personal interviews – as noted above.

As noted above as well, people with literacy problems or who are not literate in the language of the survey, will be excluded from the survey and generally, the number of people affected in this way is not known. As seriously, there will be some people with literacy difficulties who attempt to complete the survey and misunderstand the questions. Self-completion surveys are also problematic for people with impaired sight.

The other main disadvantage is that response rates tend to be a great deal lower than in personal interview surveys and this introduces bias into the data which it may not be possible to correct. Web surveys that are embedded within a website have particularly low response rates – often in single figures – and samples generated in this way cannot reasonably be considered representative of the population.

Paper-based surveys

Three of the 17 surveys for which full survey details were available were self- completion using a paper-based questionnaire. Two of the three were surveys of knowledge rather than broad-ranging surveys.

Paper-based self-completion questionnaires generally need to be very short, contain simple questions and be very simple in their design. This is in contrast to personal interview or web-based questionnaires which can include more complex questions and be tailored to the circumstances of individuals by skipping irrelevant questions.

Web-based surveys

Three of the 17 surveys for which full survey details were available were web-based. Two of the three were surveys of knowledge rather than broad-ranging surveys.

Web-based self-completion questionnaires do not need to be as simple as paper-based ones as they can be programmed to take the respondent to the questions that are appropriate for them, based on replies they have already given. There is also some evidence from the Dutch CentiQ survey that, under some circumstances they may not suffer from the same length constraints.

The suitability of a web-based survey depends on the proportion of the population that has access to the Internet and the risk of having a biased sample. It is for this reason that we cannot recommend it as a general approach to collecting data, although it should be noted that the Dutch DNB survey recruits respondents by telephone and provides internet access to recruits who lack it. This is, however, costly as it involves both providing the equipment and training to survey respondents. This cost was justified for the DNB survey as it is a panel survey, with the same people interviewed each year.

3. Using an existing survey

An option that is worth considering is to add questions to an existing survey, rather than commission a stand-alone survey. Here there are two possibilities. Many countries have existing national surveys that ask about household finances, often interviewing all individuals within a household. These tend to be annual. The other option is to use what is known as an 'omnibus survey'. These are surveys that are run regularly (often monthly) and routinely collect personal and economic details of respondents (for example, age, gender, employment). The remaining questions are commissioned by other organisations so that the content of the survey varies greatly from one month to the next and in any one month will cover a diverse range of subjects, depending on who has commissioned additional questions.

There are real advantages to using an existing survey – provided they are run by a reputable body and are robust in their sampling and design. They are a very cost effective way of collecting data as the fixed costs of the survey are shared with others. And some of the information needed will already be included in the survey although this will vary and should be investigated in detail as it will affect the cost of your own module of questions. Moreover, it is possible to judge in advance how robust the data provided will be.

On the other hand, there will be a limit on the number of questions that can be included, and this will vary from survey to survey. And it is important to note that the other questions asked in the survey can have an influence on the replies to the ones commissioned.

4. Summary of proposed best practice guidelines

Countries planning a national survey should consider collecting the data using a personal interview survey, rather than a self-completion one. Whether the interviews should be by telephone or face-to-face

will, however, need to be decided locally, bearing in mind the points raised above. It should, however, be remembered that data collected in these two ways is not strictly comparable.

Likewise whether a stand-alone survey is commissioned or questions added to an existing survey will need to be decided locally. Although it should be borne in mind that replies can be influenced by the other questions included on the existing survey. Existing surveys should only be considered where they are run by a reputable body, are robust in their sampling and design and are surveys of individuals rather than households**.**

IV. Sampling

Sampling is a complex area and one where the help of a statistician will be needed. This section therefore sets out best practice from existing surveys to inform discussions with these experts. It covers both sample size and design and provides an overview of the different methods of sampling, including their advantages and disadvantages. This section refers only to personal interview surveys as that is our recommended approach.

1. Sample size and sample design

A statistician advising on the sample size and design will need to consider the population size and its heterogeneity as well as how you will want to analyse the data.

There are, therefore, a number of things that you will need to consider. First, how much detail do you want in your analysis? When producing tables of, for example, how people in different age groups reply to individual questions, you will need 100 people in each age group to meet normally accepted statistical standards, although samples of between 50 and 100 can be quoted with warnings about the small sample size. Samples of less than 50 people should never be reported. It is, therefore, important to design the sample size and design with this in mind, telling the statistician exactly how you propose to analyse the data.

Secondly, you need to decide what level of precision you require in the data. In general, the larger the sample size the greater the precision. But it will also depend on the likely distribution of replies to a question. So it is worth investigating the replies to key questions in other surveys to help with these deliberations.

Thirdly, you need to consider whether you want to carry out separate analysis of particular groups in the population. Two examples include separate analysis of data for particular ethnic groups; or of particular geographical or administrative units (eg states in Australia, countries in the UK, provinces in Canada). There are two ways of doing this. The first is to increase the overall sample size, as was done in the Statistics Canada survey. But because very large samples are expensive, the approach more commonly adopted is to over-sample the groups of interest – often known as 'booster samples' – to ensure that there are sufficient numbers of people within certain categories to be able to undertake meaningful analysis. The Australia, Netherlands (CentiQ), New Zealand and UK surveys had booster samples of people from specific minority ethnic groups. The UK survey also had booster samples in Scotland, Wales and Northern Ireland to permit detailed analysis within the four countries of the UK. These booster samples have to be weighted back to the population averages for analysis of the whole sample, in order to prevent them having undue influence on the findings, but they can also be analysed separately. A statistician can advise on how this should be done.

2. Sampling method

There are various ways of selecting a sample for a survey but these come down to two main ways: a random sample and a quota sample, each of which is described below. There is a third possibility – namely self-selection, which is sometimes used in self-completion surveys. This should be avoided as it provides a very biased sample.

Random samples

Random (sometimes known as probability or pre-selected) samples are ones where each individual has an equal chance of being selected for the survey and a pre-identified individuals are identified for interviewers to contact. This approach was used by five of the 11 stand-alone surveys where sampling details were provided and most obtained response rates of between 60 and 65 per cent.

Random samples produce the most representative samples and are generally to be recommended. But they do require an accurate, comprehensive and up-to-date list (or sampling frame) of the population to be surveyed. Ideally, this should be of all individuals in the population or, failing that, of addresses/telephone numbers. In the latter case, however, it is important to select one person at random within the household (not the person who opens the door or answers the telephone) and to ensure that smaller households are not oversampled. A statistician can advise on both these points.

The availability of suitable sampling frames may determine the survey method used. A face-to-face survey requires a list of individuals with their addresses or, failing this, a list of addresses within which an individual is selected for interview. Telephones, however, can pose a problem where there are separate listings for land lines and cell phones or, worse still, no listing at all for cell phones. The first would lead to over-sampling people who have both a landline and a cell phone; the latter would lead to the exclusion of people with only a cell phone from the survey. Some countries have facilities whereby telephone subscribers can opt not to have their telephone listed in directories and/or register their wish not to receive unsolicited telephone calls. Both can introduce bias into a telephone sample.

Quota samples

Six of the eleven surveys used quota sampling – where a sample of survey locations is selected (face-to-face surveys) or random digit dialling is used (telephone surveys) and interviewers are given instructions on the numbers of particular *types* of people to be interviewed (specifying age, gender and sometimes other characteristics) and are then left to identify people who are willing to take part in the survey. In such cases, therefore, no response rate can be quoted. Quota sampling runs a high risk of biases in the sample, depending on the number of characteristics on which the quota is operated. If it is only based on age and gender, for example, there is a real risk that people who are at home during the day are over-sampled. For this reason interviewers sometimes receive instructions that a certain proportion of the fieldwork should take place in the evening or at weekends. Including economic activity status in the quota would also ensure that people who work full time are not excluded from the survey.

Three of these surveys used a method known as random location quota sampling, which is a sophisticated form of quota sampling for face-to-face surveys that avoids most of the biases of the simple quota methods by minimising interviewer discretion about where and who to interview. In general, such surveys involve selecting at random a large number of tightly defined locations, each of which has a relatively small population (a particular post code for example). Interviewers are then left to identify a fixed and small number of people to approach for an interview within a tightly defined quota. It would also be common for them to have to carry out a certain proportion of the fieldwork in the evening or at weekends. Where response rates to random sample surveys are falling, such random location samples are often considered to provide as robust a sample.

In general, the more characteristics that are included in a quota the more representative the final sample will be; but at the same time, the costs of sampling will increase. It is also important to ensure that the characteristics include ones that are pertinent to the survey. In the area of financial literacy or capability, past surveys suggest that this would include age, gender, education level and degree of engagement with financial services. The US FINRA telephone survey used random digit dialling operated quotas on age, gender, income, ethnicity, education level, and region. The UK face-to-face baseline survey of financial capability used random location sample, selecting locations with probability proportional to size from a listing of small areas (300 households on average) across the country, stratified by region and neighbourhood type[3]. Quotas were operated within these areas on age and gender within working status.

[3] This was based on a classification of residential neighbourhoods that uses census and other data to classify postcodes into descriptive categories, based on typical characteristics of their residents.

3. Summary of proposed best practice guidelines

The advice of a statistician should be sought on sample size and design.

In general, a random sample is to be preferred although, where response rates to such surveys are low within a country, consideration might also be given to random location sampling for face-to-face surveys and random digit dialling for telephone ones. In both cases, detailed quotas are required to ensure a representative sample.

V. Questionnaire design

The review of surveys identified a wide diversity both in their coverage and in the nature of the questions that were asked. The broad-ranging surveys covered four conceptually different areas: day-to-day money management; financial planning; choosing appropriate products and financial knowledge and understanding.

Consideration should be given to covering all four areas in a national survey and to the questionnaire designed by drawing on the questions used in previous surveys. There was extensive development and testing work undertaken to inform the design of national financial literacy surveys worldwide (United Kingdom (FSA baseline survey), Statistics Canada, Ireland, and Netherlands CentiQ). Result of this work can be particularly useful.

We have also investigated in some detail the questions used in previous surveys to identify core ones that would permit the collection of internationally comparable data. These questions were selected using five criteria:

- first, questions that meet best practice for question design generally (including drawing on the cognitive testing undertaken for the Statistics Canada, Irish and UK surveys);
- secondly, questions that can be 'scored', with replies ranked from most to least capable;
- thirdly, ones that are common to a number of surveys and are equally relevant across a range of countries;
- fourthly, questions that are equally applicable across all sections of the population,
- and finally, those which are correlated strongly with the concept being measured.

Some areas were identified where internationally comparable data could not be collected but questions should never-the-less be included in a national survey. A linked report (Kempson Elaine, "*Measuring levels of financial literacy at an international level – Appendix: Developing a set of core questions*", OECD, January 2010) gives full details of the conclusions of this work and this report, therefore, gives only an overview of the key conclusions.

1. Day-to-day money management

This covers three areas: financial control; making ends meet and general approaches to financial management

In this area we have identified nine core questions that could potentially be included, although this is probably too many and, following discussion, the number should be reduced. They are:

Financial control

- Whether people have a budget
- Whether and how people keep records of their spending
- How accurately people know how much money they have available for daily living costs

Making ends meet

- How often run short of money and a linked question on actions taken when money runs out
- How easy it is to keep up with payments on bills and other financial commitments

Attitude questions on approaches to financial management

- I am impulsive and buy things even when I can't really afford them
- I buy things on credit rather than waiting and saving up
- I am organised with regard to managing money
- I am more of a saver than a spender

2. Financial planning

This covers provision for an emergency or 'rainy day'; savings/insurance held; financial provision for retirement; financial provision for anticipated expenses such as health care, education or a known event. We have identified four potential core questions in the first two areas, plus a further three attitude questions.

Provision for an emergency

- How would meet daily living costs if lost the main wage (or had a substantial drop in income if no income from employment) for three months
- How would meet an unexpected expense of a set multiple of monthly income

Savings/insurance held

- How much money is put aside in savings for an emergency
- Types of insurance held

These questions need to be considered together as it is a matter of choice whether to have savings or insurance cover and they need to be used to judge the adequacy of provision people say they have made in the previous two questions.

Provision made for retirement

This is an important area and most surveys will want to include questions to assess the adequacy of the financial provision individuals have made for their retirement (the exception being where individuals receive adequate assistance from a state pension so that private provision is far less important). However, the nature of pensions provision, and therefore, how one would judge its adequacy for an individual, varies so much between countries that it is not possible to identify a core of questions that meet our criterion of having been used in a number of previous surveys and are equally relevant across all countries. It is, however, possible to identify core attitude questions (see below).

Financial planning for anticipated expenses

This is a topic that varies in importance across countries. Those where all individuals have to make their own financial provision to meet major expenses such as education or health care will want to include questions to assess the adequacy of the provision they have made for future costs. In other countries, such expenses are met out of general taxation. For this reason, it has not been possible to identify core questions in this area. Again, though, it is possible to identify core attitude questions (see below).

Attitudes to financial planning

These are included to identify poor people who would plan for future financial needs if they could and rich ones who only do so because they have a surfeit of money. Proposed questions include:

- I live for today and let tomorrow take care of itself
- I find it more satisfying to spend money than save it for the long term
- I save money for a rainy day

3. Choosing appropriate products

The ability to choose appropriate products is an important area to cover as most national surveys show that capabilities are low. It is, however, potentially a difficult area in which to assess behaviour because previous surveys have found that a significant minority of people have not personally made a decision about which product to buy within a relatively recent past. This means that they cannot be asked about their actual behaviour and their replies to more generic questions about how they choose products would be meaningless. There is no easy solution to this dilemma. In general, it is better to ask people about actual behaviour and note that some people have no score for this domain.

With this in mind we have identified two possible core questions covering

- Whether people shop around before buying financial products
- What product features were considered when making a recent purchase (ideally the most complex product they have bought)

Other areas considered included:

- Whether people read the terms and conditions of products bought – which might be considered for inclusion, although most people over-state the extent to which they read them and, consequently, replies can be unreliable. It may be most appropriate to include a question of this type in countries where legislation requires financial services providers to include summary (or Schumer) boxes that draw out the key features of a financial product in the information consumers receive before they are asked to sign a contract
- Whether people review current holdings of investment, insurance, or pension cover. This is not recommended for the core of questions as it does not apply to everyone in the population – only those who have these products.

4. Financial knowledge and understanding

Although this topic is covered widely in surveys, the questions asked vary widely and many do not meet our criteria set out above.

Many surveys ask how people keep up to date with financial matters, including:

- What they monitor and how often, and
- The information sources they use

Both could be considered for inclusion in the core questions.

In addition, there is a range of questions designed to measure respondents' knowledge and understanding. The three selected as possible core questions include ones that assess:

- Ability to weigh up risk and return
- Understanding of inflation
- Understanding of interest rates

Although the second and third of these measure mathematical ability as well as understanding of these concepts.

Two further possible core questions are:

- Knowledge of key features of products held - although replies cannot be independently verified for their accuracy. Existing surveys code a 'don't know; reply as indicating a low level of financial literacy/capability.
- And an attitude statement 'I know enough about financial products to choose ones that meet my needs'.

Other areas considered, but recommended as optional rather than core questions were:

- Knowledge of financial products generally, as this depends to a very large extent on people's level of engagement with financial services. The types of products available also differ between countries making it difficult to design a core question. It is, however, a useful explanatory variable.
- Knowledge of consumer rights – an important area, but as rights vary widely between countries it is not possible to design a generic question.
- Getting redress – which is a difficult area to cover. Knowing where to complain is not the same thing as being prepared to do so when the need arises. In existing surveys too few people claimed to have had a problem where they needed to seek redress to ask about actual behaviour.

5. Explanatory variables

In addition, to these core questions to measure financial literacy/capability the questionnaire will need to include a range of what are known as 'explanatory variables' these include: age, gender, family circumstances, work status, income (and possibly income stability), educational level and region of the country, as well as questions that capture appetite for risk, time horizons and the extent of engagement with financial services.

VI. Analysing and reporting the results

Having collected the data, consideration then needs to be given to analysing and reporting the results. Past surveys have adopted three broad approaches, but with wide variation in the extent to which these are covered. They include: reporting aggregate replies to individual questions; developing a score; and segmenting the population.

1. Replies to individual questions

The first and most straightforward approach to reporting the survey results is to create frequency tables. Here, the reporting focuses on the overall proportions of people answering particular questions in certain ways (such as the percentage agreeing with a particular statement). This approach can be used to report findings from all questions that are included in the survey and provides easily understood, headline figures.

Most surveys, however, go further and report the frequencies by socio-demographic and other variables such the ones proposed in section V.5. This is known as cross tabulations and provides an additional level of detail, and is useful for policy makers looking to identify groups of people most in need of financial capability interventions in very specific areas. It is, therefore, recommended.

2. Developing a score

Individual questions do not, however, give an overview of capabilities. For this, some form of scoring is required, collating the replies from some or all of the questions. It is particularly important whether the number of questions in a survey is large, in which case the need to summarise is very apparent, or is based on the core of questions suggested in section V, when individual questions have been selected as measuring an indicative behaviour.

Simple arithmetic scores are appropriate for knowledge-based surveys that include questions with replies that are either correct or not. They are not, however, recommended for broad ranging surveys covering behaviour and attitudes as well and where questions have differing levels of importance in a score and may be measuring very different capabilities. For example, a question on whether or not someone is not able to pay all their bills and other financial commitments might be considered of greater importance than one assessing the ability to calculate the impact of inflation on savings. And they are certainly measuring different types of capability.

There are statistical methods that can be employed to help with these problems and the report on the UK baseline survey rehearses the advantages and disadvantages of these for a broad-ranging survey of financial literacy (Atkinson et al, 2006). The most widely-used method, both for surveys of financial capability surveys and more generally for surveys to measure, for example, levels of deprivation or health, is known as ‘factor analysis’. For this reason it is the approach we recommend that countries consider, particularly where the number of questions in a survey is large. You will need the help of a statistician or survey analyst with this.

Factor analysis identifies questions that are correlated and therefore measure some underlying concept, or factor, and enables the analyst to create one or more new variables that can be used to reflect the much larger number of original variables entered into the analysis. The analysis still requires an element of subject expertise in order to explain and name the underlying concept that is identified through the correlations.

There are particular data requirements for using factor analysis – it cannot be used with ‘nominal’ variables (variables with responses that cannot be ordered). As is the case when creating an arithmetic

score, it is important to know which responses indicate the 'right' answer. Questions clearly need to be designed with this in mind.

Factor analysis can also be used to create a score based on the replies to the questions it contains. A facet of this technique is that it will identify broad areas of capability that are distinct from one another. If this turns out to be the case, however, it will not be possible to calculate a single meaningful score combining all questions. Instead it would be used to calculate separate scores for particular areas of capability. Analysis of this kind on the survey data in Ireland and the UK shows that the five main (and distinct) capabilities are: financial control; making ends meet; financial planning; choosing financial products and financial knowledge and understanding.

It is recommended that, if data can be collected on a set of core questions across a number of countries, further development work is undertaken on how best to score the replies.

3. Population segmentation

The third approach to analysis and reporting makes use of some kind of segmentation approach. Analysts seek to describe sub-groups of people with similar financial literacy or capability and the results can be used as a tool for identifying groups that should be targeted by initiatives to raise levels of financial capability. There are several methods that can be used to segment the population.

The simplest is to rank people according to their scores, and then put them into a number of equal sized groups. More commonly segmentation is undertaken using a more complex statistical technique known as cluster analysis. Described simply, cluster analysis identifies people who are most similar in terms of their responses to the specific questions included in the analysis, and separates them from others who do not share these similarities. It can also be used to segment people by their 'factor scores' in different areas of financial capability.

It should be noted that the final decision about how many clusters to create is decided by the analyst (informed by the statistics), although it is also dependent on the data used to create the clusters. It will, therefore, inevitably vary across surveys. So while it will be very useful for national policy makers, who want to know which groups to target with initiatives intended to raise capability in particular areas, it is less likely to be useful for international comparisons.

It is, however, a form of analysis that has many advantages. Like score development, it will require the assistance of a statistician or survey analyst who is familiar with the statistical techniques.

4. Summary of proposed best practice guidelines

Survey data should be analysed and reported using cross tabulations.

In surveys with a relatively large number of questions, scores should be calculated using factor analysis. Further exploratory analysis needs to be undertaken to undertaken develop a method of scoring data collected across a range of countries using a set of core questions.

Segmentation of the population, either by ranking people by their scores or using cluster analysis, also has a good deal to commend it.

The assistance of a statistician or survey analyst will be required for factor and cluster analysis.

VII. Next steps

Following consultation with countries that are members of the INFE , these guidelines will be finalised and work will be undertaken to produce a set of questions that can be tested across a range of volunteer countries, either in a stand-alone survey or added to an existing survey. When the surveys are completed it will be possible to explore ways of analysing and reporting the data.

It will then be possible to ascertain whether it is worth attempting the difficult task of designing a cross-national survey as set out in the first interim report.

APPENDIX 1 - WEB LINKS TO SURVEY REPORTS AND QUESTIONNAIRES

Country	Organisation	Hyperlinks
Broad ranging surveys		
Australia	ANZ Bank	• http://www.anz.com/Documents/AU/Aboutanz/AN_5654_Adult_Fin_Lit_Report_08_Web_Report_full.pdf
Austria	Oesterreichishe Nationalbank	• http://oenb.at/en/presse_pub/period_pub/volkswirtschaft/geldpolitik/monetary_policy_and_the_economy_07q3.jsp
Canada	Statistics Canada and Human Resources and Skills Development Canada	http://www.statcan.gc.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=5159&lang=en&db=imdb&adm=8&dis=2
Iceland	Ministry of Business Affairs & Icelandic Investor/ Shareholder Association	http://www.fe.is/index_files/Page524.htm
Ireland	Financial Regulator	• http://www.financialregulator.ie/publications/Pages/statistics-research.aspx
Indonesia	Bank of Indonesia	Not available yet
Italy	PattiChiari Consortium and The European House Ambrosetti	• http://www.ambrosetti.eu/_modules/download/download/it/documenti/ricerca/112008_ExSum_PattiChiari_ITA.pdf
Malaysia	Bank Negara Malaysia	Not available yet
Netherlands	CentiQ	• http://www.wijzeringeldzaken.nl/centiq_sites/objects/8ff2caf24ddbe4037044eaf6008bb788/summary_financial_insight_amoung_the_dutch.pdf • http://www.wijzeringeldzaken.nl/centiq_nl/publicaties.php
Singapore	Money Sense Financial Education Steering Committee	• http://www.mas.gov.sg/resource/news_room/press_releases/2005/Financial%20Literacy%20Levels%20in%20Singapore,%20Full%20Report.pdf
UK	Financial Services Authority	• http://www.pfrc.bris.ac.uk/publications/Reports/Fincap_baseline_questionnaire_06.pdf • http://www.pfrc.bris.ac.uk/publications/Reports/Fincap_baseline_results_06.pdf • http://www.pfrc.bris.ac.uk/publications/Reports/Fincap_baseline_BMRB_06.pdf • http://www.pfrc.bris.ac.uk/publications/completed_research/Reports/Fincap_June05.pdf
USA	FINRA	http://www.finrafoundation.org/resources/research/p120478

Surveys of knowledge		
France	Autorite des Marches Financiers	Not available
Italy	Banca d'Italia	• http://www.bancaditalia.it/statistiche/indcamp/bilfait/boll_stat/suppl_07_08.pdf
Japan	Bank of Japan and CCFSI	• http://www.shiruporuto.jp/e/consumer/pdf/sisin02.pdf
Netherlands	De Nederlandsche Bank	• http://www.nber.org/papers/w13565
New Zealand	Retirement Commission	• http://www.consumeraffairs.govt.nz/policylawresearch/Research/financial-knowledge/report/report.pdf
USA	National Council on Economic Education	• http://207.124.141.218/WhatAmericansKnowAboutEconomics_042605-3.pdf
USA	Jump$tart	• http://www.jumpstart.org/fileindex.cfm