OECD/INFE INTERNATIONAL SURVEY OF

# ADULT FINANCIAL LITERACY COMPETENCIES

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# OECD/INFE International Survey of Adult Financial Literacy Competencies

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BETTER POLICIES FOR BETTER LIVES

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# Foreword

Financial education, financial consumer protection and financial inclusion are recognised at the highest policy level as three essential ingredients for the financial empowerment of individuals and the overall stability of the financial system, as highlighted through three sets of high-level principles endorsed by G20 leaders: Innovative Financial Inclusion (2010); Financial Consumer Protection (2011); and National Strategies for Financial Education (2012).

As indicated in the High-level Principles on National Strategies, developed by the OECD International Network on Financial Education (OECD/INFE), assessing the financial literacy competencies of the population is a key component of a successful national strategy. The opportunity to collect data using an internationally relevant instrument through a co-ordinated exercise further increases the value of such an assessment by enabling countries to benchmark themselves, identify common patterns and work together to find solutions for improving financial literacy and wellbeing within their respective populations.

With these benefits in mind, 30 countries and economies, drawn from Africa, Asia, Europe, Australasia, North America and South America, participated in an international survey of financial literacy competencies using the globally recognised OECD/INFE toolkit. This worldwide exercise is a key achievement for the OECD/INFE, which set the development of a method to measure and compare financial literacy as one of its three initial objectives. These first, high-level results provide information about financial literacy that go far beyond knowledge, covering aspects of financial behaviour, attitudes and inclusion. As such, it provides the first opportunity for countries to see how the overall financial literacy of their adult populations compares with others.

This unique analysis is also a first step towards further exploration into relevant areas to support effective financial empowerment policies such as differences in financial literacy by gender, age and social background, as well as financial well-being and consumer protection. In addition, following a call from G20 leaders in the 2016 Hangzhou Action Plan for a G20 report on financial literacy, a further report on financial literacy among G20 economies using the OECD/INFE tool will be prepared for release under the German G20 presidency in 2017.

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## EXECUTIVE SUMMARY

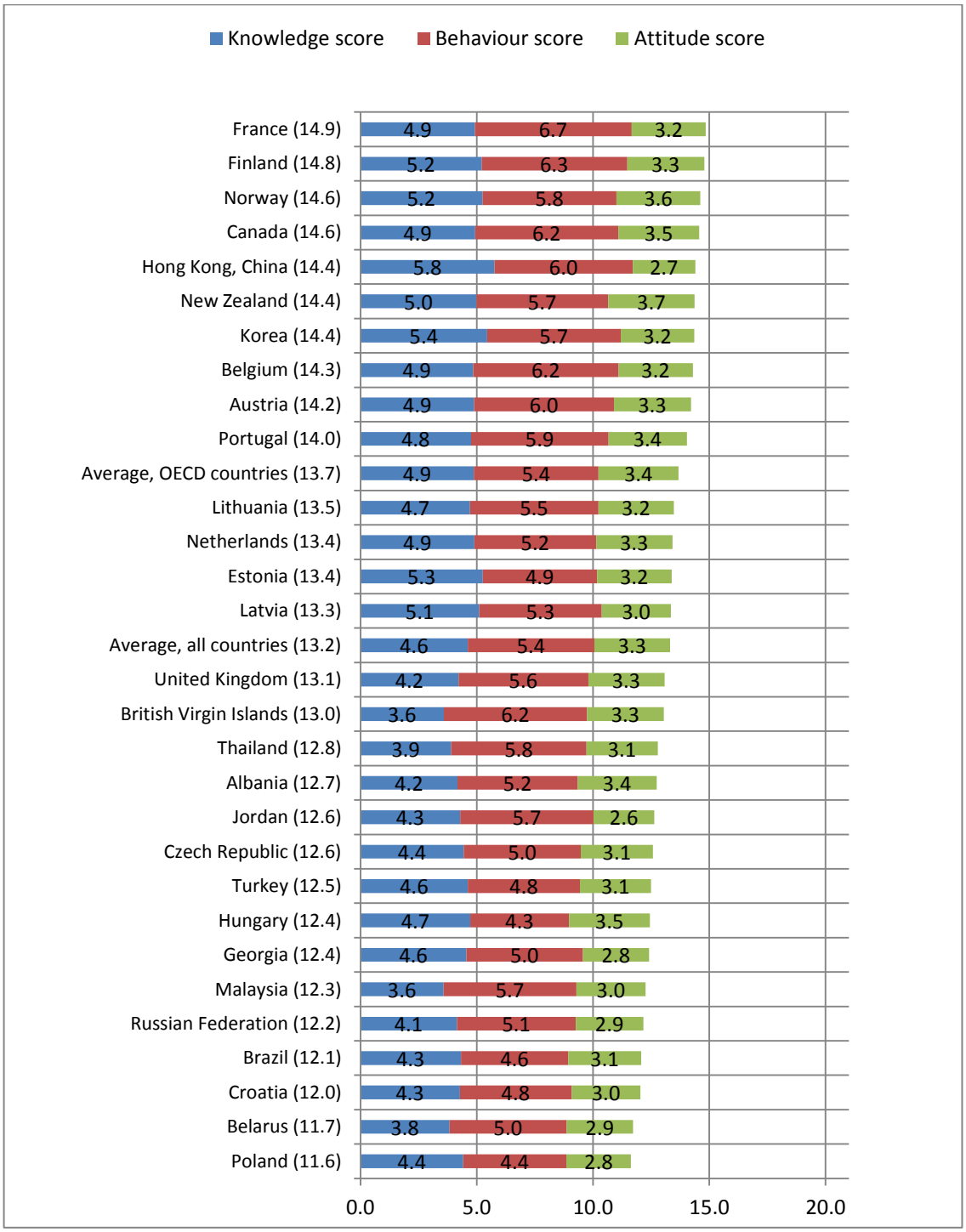
Thirty countries and economies, including 17 OECD countries, participated in this international survey of financial literacy, using the OECD/INFE toolkit to collect cross-comparable data. In total, 51,650 adults aged 18 to 79 were interviewed using the same core questions, in a total of 30 languages. This report provides high-level highlights of the survey's findings focusing on relevant aspects of financial knowledge, behaviour, attitudes and inclusion, and insights into the financial literacy of the population and their needs in terms of education and other forms of support. Future, more in-depth analysis will make it possible to explore specific aspects such as differences in financial literacy by gender, age and social background, as well as financial well-being and consumer protection.

The survey results indicate that:

- **Overall levels of financial literacy**, indicated by combining scores on knowledge, attitudes and behaviour **are relatively low**:
    - The average score across all participating countries is just 13.2 out of a possible 21 (a combination of a maximum of 7 for knowledge, 9 for behaviour and 5 for attitudes), and 13.7 across participating OECD countries, showing significant room for improvement.
    - Financial literacy levels are lower than may be expected for a variety of reasons – in some cases knowledge is an issue, whilst in others behaviours are particularly problematic. Some countries with higher average levels of financial knowledge, such as Latvia and Estonia, for example, have relatively low overall levels of financial literacy due to their financial behaviour scores.
    - Countries such as Poland and Croatia may need to target knowledge alongside behaviour, to ensure that their populations understand the principles of financial literacy and become more active money managers, whilst the British Virgin Islands and Malaysia are among the countries that need to strengthen financial knowledge in their populations to help individuals fully understand the decisions they are making.

Financial knowledge, attitudes and behaviour (average scores)

Stacked points (weighted data): all respondents, sorted by overall score (reported in parenthesis)




Notes: Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

- **Average levels of financial knowledge show room for improvement, whilst there is wide variation between countries:**

    - On average, just **56% of adults across participating countries and economies achieved a score of at least five out of seven** (considered to be the minimum target score), compared with an average of **63% across OECD countries**, indicating that many adults around the world are currently unable to reach the minimum target score on financial knowledge.

    - Fewer than one in two achieved such a score in 11 of the participating countries (South Africa, Malaysia, British Virgin Islands, Belarus, Thailand, Albania, Russian Federation, Croatia, Jordan, United Kingdom and Brazil). However, in stark contrast, over four out of every five (84%) adults in Hong Kong, China achieved the minimum target score.

    - Some **areas of financial knowledge appear to be more problematic**. Only 42% of adults across all participating countries and economies are aware of the additional benefits of **interest compounding** on savings (48% across OECD countries), and only 58% could compute a percentage to calculate a simple interest on savings (65% across the OECD). Only about two in three adults – across OECD and all participating countries and economies – were aware that it is possible to reduce **investment risk** by buying a range of different stocks.

    - In the Russian Federation, Thailand, Malaysia and the British Virgin Islands, no more than half of respondents understood the financial concept of **diversification**; indicating an important topic to be covered during investor education in these countries, but also suggesting a more general lack of information and knowledge about ways in which to spread risk.

    - Most people understand how the **purchasing power of money** changes over time as a result of inflation. However, given the low inflation levels that currently exist in many countries, it is important that people are encouraged to consider longer-term trends when budgeting and planning ahead rather than relying on recent experience.

    - **Low levels of numeracy** may be further reducing the ability of individuals to make sound decisions by applying financial knowledge. Responses to a question asking people to calculate the balance of an account after 2% interest has been added, suggest that a sizeable proportion of the population of many countries finds it difficult to apply. This finding suggests that financial educators should take into account the level of numeracy of their target audience when developing financial education resources.

- **Gender differences in financial knowledge are noteworthy,** with 61% of men achieving the minimum target score compared with only 51% of women across participating countries and economies, (69% of men, compared with 56% of women in OECD countries), although there are variations between countries:

- In 19 of the 30 participating countries and economies, there is a statistically significant difference between the proportion of men and women achieving the minimum target score (70%) on the financial knowledge questions.

- Results of a regression analysis of gender differences in financial knowledge across all respondents indicate that knowledge scores are significantly lower for women than men after controlling for country level differences, age and education.

- **Self-assessed financial knowledge is, surprisingly, relatively realistic:**

  - Respondents to the survey were usually aware of their level of financial knowledge. In most countries, people who rate their financial knowledge as being higher than average do, on average, have higher scores than other people in their country.

  - However, in a few countries, such as Brazil, Poland, South Africa and Thailand, the average score for people who considered themselves to have high or very high levels of financial knowledge is actually no higher than those who thought that they were the same as most people, suggesting a worrying level of over-confidence among this group. Over-confidence can be a concern, as such people may believe they are capable of making decisions without help, for example, and may assume they have found a good deal that other people overlooked, when in fact the deal is fraudulent.

- **Across participating countries and economies, on average just one in two (51%) respondents achieved the minimum target score of at least six out of nine on financial behavior**. **The average across participating OECD countries is only slightly higher, at 54%.**

  - More than four out of five people in France achieved the minimum target score of six out of nine on financial behaviour (85%). This compares favourably to the average across all participating countries and contrasts starkly with Hungary, where one in four achieved such a score.

  - The **weakest areas of financial behaviour** across these measures appear to be related to **budgeting, planning ahead, choosing products and using independent advice**. On average, across participating countries and economies, only 60% of adults reported having a household budget (57% across the OECD); and only about 50% set long-term goals and tried to achieve them (51% across the OECD). Among those who had chosen a financial product in the last two years, only 44% made an attempt to shop around on average across all participating countries and economies (46% across OECD countries), and only 19% used independent information (20% across OECD countries).

- **Financial resilience (or the ability to cope with external shocks, at least in the short-term) should be strengthened in general, and is a particular concern in some countries:**

  - It is **relatively uncommon to have a household budget** in countries such as Hungary (25%), Austria (31%) and Norway (33%), suggesting that most people keep a basic eye on their expenditure without having a clear idea of the most effective way of distributing their income. Budgeting can help households to identify how much money they can afford to save each month, as well as helping people recognise the value of

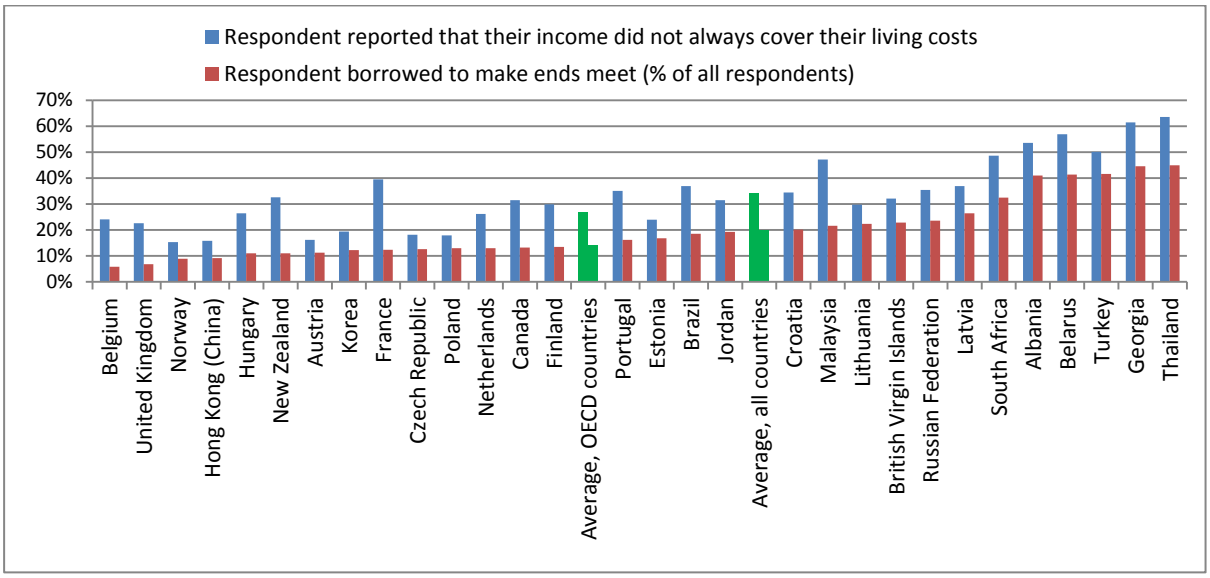
saving to smooth out medium-term expenses such as tax bills, replacement of white-goods or family celebrations.

- Across all participating countries and economies, **two in five respondents had not saved in the last 12 months**: around six in ten respondents (59%) were active savers; (60% were active savers in OECD countries). In Hungary, only 27% of adults are active savers (in contrast, 69% in Austria are active savers and in Norway the percentage is even higher, at 84%).

- In Thailand (64%), Georgia (61%), Belarus (57%), Albania (54%), and Turkey (50%), at least half the population had been unable to make ends meet at least once in the last 12 months. Furthermore, at least **four in ten respondents resorted to borrowing to make ends meet** in Thailand (45%), Georgia (45%), Turkey (42%), Albania (41%) and Belarus (41%). This indicates a high level of financial fragility in these countries, possibly due to low and/or fluctuating incomes. Financial education that is designed to help people budget and save, even in uncertainty, and to manage existing bills and credit commitments can help people avoid similar situations in the future or reduce their impact.

**Making ends meet**

Percentages (weighted data): all respondents, sorted by 'borrowed to make ends meet'




Notes: Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

- **Long-term financial goal setting and planning is not common in many countries**.

  - Only one in three people set financial goals in Poland (32%) and **the percentage is below half in 15 of the participating countries**. Given increasing lifespans and personal responsibility, it is of particular concern that this behaviour is not more common. This may be partly explained by the relatively large proportion of the population who are sometimes unable to make ends meet.

- Analysis of **financial attitudes** also shows that many **people have a tendency towards short-termism:**
  - On average, just 50% of adults across participating countries and economies achieved the minimum target score for financial attitude (that is, one that shows a tendency to favour the longer term), compared with an average of 55% across OECD countries.
  - In Jordan; Hong Kong, China and Poland, fewer than three in ten people indicated an attitude that tends to favour the longer term. In contrast, in Albania, Hungary, Portugal, Canada, Norway and New Zealand, more than six in ten did so.
- **Informed and active product-choosing particularly deserves attention**:
  - There is also **considerable variation in the extent to which people have recently chosen a financial product**. In countries such as Korea, the Russian Federation and Malaysia in particular, people are rather active financial consumers. This may reflect different practices in terms of automatic renewal as well as differences in access across countries.
  - Interestingly, **relatively few people are choosing new financial products with the aid of independent information or advice** – including best buy tables – indicating that more could be done to guide consumers towards unbiased sources of information. The Netherlands is the only country where more consumers chose a financial product with the use of independent information or guidance than through general shopping around and other sources of information (and the actual proportion of people choosing products in this country is relatively low).

**<u>These high-level findings make it possible to draw a first set of policy conclusions</u>**:

- In particular, the overall low level of financial literacy stresses the importance of starting ***financial education early and, ideally, in schools***, also confirming the OECD 2005 Recommendation (OECD, 2005). Indeed, if effective, this would ensure that future generations have the knowledge, skills and attitudes necessary to strengthen their financial well-being and build positive habits from a young age.
- Public authorities should also seek ways to ***strengthen knowledge, skills and behaviours of adults*** through a combination of financial education and other policies.
  - ***Basic financial knowledge*** and the application of knowledge and skills in a financial context should be addressed. Low levels of understanding and skills relating to basic principles, such as compound interest and diversification, indicate that there are many aspects of knowledge that could be improved among the general population.
  - ***Differences in financial knowledge*** by gender should also be more systematically measured, and, where necessary addressed through targeted programmes.

- Positive correlations between financial knowledge and goal setting and between financial knowledge and retirement planning indicate potential benefits from exploring ***how knowledge may reinforce positive behaviours***.

- ***Financial resilience and long-term planning*** could be further promoted through:

  - User-friendly budgeting tools and ways of monitoring income and expenditure which could encourage more adults to create a household budget and use real-time data to make necessary changes before falling into difficulty.

  - People may also need education and guidance to identify realistic alternatives to borrowing when income is insufficient to make ends meet.

  - In countries where people are very focused on the short term, it may be necessary to approach financial education by stressing the short-term benefits before encouraging longer-term financial planning. Such consumers may appreciate learning how to gain better control of their day-to-day spending rather than receiving guidance on how to save for longer-term goals. A financial education programme could start by enabling people to free-up some money for regular small treats through choosing more cost-effective financial products or utility services, for example.

  - Education that applies behavioural insights, such as encouraging people to set goals and commit to them, could also help people to behave in more financially literate ways, including active savings behaviour and longer-term planning (see, for example Yoong, 2011).

- ***Active and smart choice of financial products*** could be enhanced through the promotion of easy to access and free impartial comparative tables of products and potentially through well-designed, appropriately regulated computerised (robo) advice.

- **Regulation and consumer protection framework should be combined with financial education to improve people's financial resilience.** For example, regulation relating to the suitability and use of credit products can help consumers avoid becoming trapped in a cycle of debt through using high-cost credit or being fined for falling behind with payments, and reduce the likelihood that they will choose unsuitable financial products.

# INTRODUCTION

Financial literacy has gained a prominent position in the policy agenda of many countries and the importance of collecting informative, reliable data on the levels of financial literacy across the adult population has been widely recognised (OECD/INFE 2015). Such data provides evidence of the need for financial education, and indicates which groups are most in need. Repeated measures also help to indicate where improvements have been made and what more needs to be done. There is additional benefit in knowing how economies compare on key measures of financial literacy to identify those with successful financial education policies and those facing similar challenges, and to promote common solutions.

This report therefore seeks to go beyond the national level by comparing levels of financial literacy and financial inclusion across countries and identify common patterns that may indicate shared challenges or effective solutions. The report provides the first high-level highlights of the survey. Future work of the OECD International Network on Financial Education (OECD/INFE) will look in more detail at priority topics such as financial well-being, financial inclusion, credit use, savings and investments, and also focus on specific target groups, including women, youth and older consumers, and different socio-economic groups.

## Background

Financial literacy measurement was one of the first three priorities of the OECD/INFE, which agreed to develop a common method to measure financial literacy and track progress. Work on this project started in 2009 under the guidance of the INFE expert subgroup on financial literacy measurement. A core questionnaire and supporting toolkit were subsequently developed, tested and made available via the OECD website. This OECD/INFE financial literacy and financial inclusion measurement toolkit has been widely recognised as an important tool to inform financial education policy, including by G20 Leaders at their summit in St Petersburg in September 2013, where they welcomed and supported its use.

The toolkit incorporates a questionnaire and methodological guidance on whom to interview, and how to prepare interviewers for their task. It also includes additional questions that can be used to enrich national datasets. It is designed to collect comparable information on the financial behaviour, attitudes and knowledge of the adult population that can be used to create scores to indicate their financial literacy level. It covers topics such as keeping track of finances, making-ends-meet, longer-term financial planning and choosing products. Product awareness and holding questions are also included to inform work on financial inclusion as well as several questions intended to capture aspects of financial well-being.[1]

[1] The OECD/INFE has an ongoing workstream on financial well-being and will use these data to inform that work.

The first version of the toolkit was tested in an international pilot study in 2010 across 14 countries: Albania, Armenia, British Virgin Islands, the Czech Republic, Estonia, Germany, Hungary, Ireland, Malaysia, Norway, Peru, Poland, South Africa and the UK.[2] Recent OECD/INFE stocktaking surveys indicate that, since 2010, over 30 countries have used the questionnaire to collect data on financial literacy to inform financial education policies or strategies, and several of these have done so on more than one occasion.

The use of a common instrument designed to be applicable in countries at different stages of economic development and with all population groups makes it possible to compare results across countries and also explore patterns by socio-demographic factors. Data collected during the pilot study in 2010 have since been used to inform OECD/INFE policy and practical tools on a wide range of issues, including financial education for financial inclusion (Atkinson and Messy, 2013) and empowering women (Hung et al, 2012). The data also provided evidence of levels of financial literacy at a regional level in Europe and Asia (OECD, 2016a, Messy and Monticone, 2016). In addition, this comprehensive work on adults was complemented in 2012 with the first international assessment of financial literacy among 15-year-olds within the OECD Programme of International Student Assessment (PISA).

OECD/INFE members agreed that it would be valuable for the Secretariat to arrange a second co-ordinated measure of financial literacy in 2015. A second measure allows the original countries to track changes, whilst giving new countries the opportunity to participate in an international comparison. This is particularly important given the increase in the number of countries (over 60) developing or implementing a National Strategy for Financial Education, and their need for reliable baseline and monitoring data, as well as the growing membership of the OECD/INFE (See OECD/INFE 2015a).

This report therefore includes data from 30 countries and economies - including 17 OECD countries - that agreed to participate in a second co-ordinated measure. Following a call from G20 leaders in the 2016 Hangzhou Action Plan for a G20 report on financial literacy, a separate report will be prepared for release in 2017 under the German G20 presidency.

The analysis undertaken for this report seeks to highlight specific strengths and weaknesses in terms of financial knowledge, behaviour and attitudes, as well as provide a more general indication of the proportion of the population that have at least minimum target levels of each aspect of financial literacy. These minimum target levels seek to identify those who can correctly answer 70% of the basic knowledge questions contained in the questionnaire, those who show evidence of having behaved in at least six financially literate ways out of the nine behaviours measured, and those with an attitude that tends towards a preference for the longer-term.[3]

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[2] Atkinson, A. and Messy, F-A. (2012), "Measuring Financial Literacy: Results of the OECD INFE Pilot Study", OECD Working Papers on Finance, Insurance and Private Pensions, No. 15, OECD Publishing.

[3] The questionnaire focuses on a subset of knowledge, behaviours and attitudes, and this minimum target level recognises that the competencies captured are relatively straightforward and should be seen as an indicator of achieving a minimum level of financial literacy. The G20/OECD INFE Framework on Core Competencies for Adults provides a more comprehensive description of the wide range of competencies considered to be important to adults.

**This report**

This report provides a high-level summary of the financial literacy data from 30 countries and economies (Albania; Austria; Belarus; Belgium; Brazil; British Virgin Islands; Canada; Croatia; Czech Republic; Estonia; Finland; France; Georgia; Hong Kong, China; Hungary; Jordan; Korea; Latvia; Lithuania; Malaysia; the Netherlands; New Zealand; Norway; Poland; Portugal; the Russian Federation; South Africa; Thailand; Turkey and the United Kingdom (UK)).

The method used and questions included in the report, are primarily chosen to be comparable to the 2010 pilot study (additional information about the creation of the scores and changes to the questionnaires can be found in Annex 2 of this report and in the 2015 toolkit).

The data used in this report are drawn from national surveys undertaken using the OECD/INFE toolkit and submitted to the OECD as part of a co-ordinated measurement exercise (see Annex 3 for more information about the data submitted). The survey has been implemented in a total of 30 languages, including English.[4] Every effort has been taken to ensure that the data are largely comparable, but differences in sampling and data collection methods should be taken into account when considering the results.[5] Whilst some countries have sampled young adults and the very elderly to inform their national initiatives the international analyses presented here only take into account responses from people aged from 18 to 79. Sample sizes range from 1,000 to 10,000.[6]

The report contains descriptive text, tables and figures on:

- **Section I**. Financial knowledge;
- **Section II**. Financial behaviours; and
- **Section III**. Attitudes to longer-term financial planning.

**Section IV** reports an overall score for financial literacy for each country; and **Section V** provides exploratory analysis on selected aspects of financial inclusion. **Section VI** then identifies policy lessons.

**Annex 1** includes data tables for all figures and regressions. **Annex 2** contains a guide to creating financial literacy scores and **Annex 3** provides a table of information about the data received from participating countries.

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4 The original questionnaire is in English. For this exercise it was translated into Afrikaans, Albanian, Arabic, Chinese, Croatian, Czech, Dutch, Estonian, Finnish, Flemish, French, Georgian, German, Hungarian, isiZulu, isiXhosa, Korean, Latvian, Lithuanian, Malaysian, Norwegian, Polish, Portuguese, Russian, Setswana, Thai, tshiVenda, Turkish, and Xitsonga.

5 Some datasets exclude certain questions, either because a previous version of the questionnaire was used, or due to decisions taken at the national level.

6 Countries were asked to collect data from at least 1,000 respondents to facilitate this comparative study. Some countries collected additional data to enable them to look at particular regions or subgroups of the population in more detail.

# I. FINANCIAL KNOWLEDGE

This chapter looks at levels of basic financial knowledge, focusing on responses to seven questions designed to test different aspects of knowledge that are widely considered to be useful to individuals when making financial decisions. The chapter first looks at the responses to individual questions, before reporting on the distribution of financial knowledge scores, and looking at the proportion of the population scoring at least 70% (considered to be the minimum target score).

**Key findings**

Financial knowledge is generally low with large variations in levels of financial knowledge by country:

- On average, just 56% of adults across participating countries and economies achieved a score of at least five out of seven, compared with an average of 63% across OECD countries, indicating that many adults around the world are currently unable to reach the minimum target score on financial knowledge.
  - Fewer than one in two achieved such a score in 11 of the participating countries (South Africa, Malaysia, British Virgin Islands, Belarus, Thailand, Albania, Russian Federation, Croatia, Jordan, United Kington and Brazil).
  - However, in stark contrast, over four out of every five (84%) adults in Hong Kong, China achieved a score of at least five out of seven.
- The results indicate that many people struggle with basic concepts such as compound interest and diversification, indicating the difficulties that people face when making informed product choices.

Financial knowledge is an important component of financial literacy for individuals, to help them compare financial products and services and make appropriate, well-informed financial decisions. A basic knowledge of financial concepts, and the ability to apply numeracy skills in a financial context, ensures that consumers can act autonomously to manage their financial matters and react to news and events that may have implications for their financial well-being. The literature indicates that higher levels of financial knowledge are associated with positive outcomes, such as stock market participation and planning for retirement, as well as a reduction in negative outcomes such as debt accumulation (See Box 4: see also Hastings et al, 2013, for a summary of this literature and Mahdzan and Tabiani, 2013, for details of a study in Malaysia).

The core questionnaire includes eight questions designed to test knowledge; one question is optional, and may be of most interest to countries with low levels of numeracy. The other seven questions are intended to be used in a score of financial knowledge (see Table 1).[7]

[7] In 2010 these eight questions were combined into a score. However, analysis showed that the first question, designed to test ability to divide, was too easy to provide meaningful information in some countries. Therefore, It is now an optional question, and was not used in every country; it is not included in the international score.

**Table 1. Financial knowledge questions**

| Question code | Text<br>Note that words or phrases in < > can be edited to fit the national context. | Possible responses | Purpose | Notes |
|---|---|---|---|---|
| QK2 | Imagine that five <brothers> are given a gift of <$>1,000 in total. If the <brothers> have to share the money equally how much does each one get? | Open response [Correct response $200] | To test ability to undertake basic mental arithmetic in a financial context | This question is relatively easy in most countries and has therefore been made optional in 2015. **It is not included in the 2016 score** |
| QK3 | Now imagine that the <brothers> have to wait for one year to get their share of the $1,000 and inflation stays at <X> percent. In one year's time will they be able to buy. | Multiple choice [correct response depends on inflation used] | To test ability to understand how inflation impacts on purchasing power | This question has been slightly revised since 2010 to reflect the varying levels of inflation in different countries. Correct responses depend on the level of inflation |
| QK4 | You lend $25 to a friend one evening and he gives you $25 back the next day. How much interest has he paid on this loan? | Open response [correct response 'none'/0] | To test understanding of interest without difficult arithmetic | This question can be asked even when interest is forbidden, since it only discusses a situation where interest was *not* paid |
| QK5 | Suppose you put $100 into a <no fee, tax free> savings account with a guaranteed interest rate of 2% per year. You don't make any further payments into this account and you don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made? | Open response [correct response $102] | To test ability to calculate simple interest on savings | This question provides some indication of the respondents' ability to handle percentages, and understanding of savings growth. |
| QK6 | *and how much would be in the account at the end of five years [add if necessary: remembering there are no fees or tax deductions]? Would it be…* | Multiple choice [Correct response More than $110, but only taken into account if QK5 is correct] | To test whether respondent is aware of the additional benefit of compounding | This question builds on QK5. It avoids the need to undertake additional calculation, and only requires that the respondent recognises that compounding means they will get more than 5 times the simple interest. |
| QK7a | An investment with a high return is likely to be high risk/ or *If someone offers you the chance to make a lot of money it is likely that there is also a chance that you will lose a lot of money.* | True/False [Correct response to both versions is *true*] | To test whether respondent understands the typical relationship between risk and return | Alternative wording available to simplify the language where necessary |
| QK7b | High inflation means that the cost of living is increasing rapidly | True/False [Correct response is *true*] | To test understanding of the meaning of the term inflation | |
| QK7c | It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares or *It is less likely that you will lose all of your money if you save it in more than one place.* | True/False [Correct response to both versions is *true*] | To test whether respondent is aware of the benefit of diversification | Alternative wording available to simplify the language where necessary |

**Box 1. Method note on the financial knowledge score**

The core questionnaire contains sufficient financial knowledge questions to provide a good overview of a person's basic knowledge, their general willingness to absorb financial information and ability to apply knowledge to particular problems.

The questions vary in style and content in order to avoid undue biases that could be caused by different ways of processing information across certain groups of people or cultural norms. Some questions require a completely free response whilst others provide a list of possible answers, from which the respondent must choose. The questionnaire also encourages respondents to say if they don't know the answer to something, in order to dissuade them from guessing.

The financial knowledge score counts the number of correct responses across the seven questions reported in Table 2 above. In the case of compound interest (QK6), the response is only considered to be correct if the respondent could also calculate simple interest (i.e. Column 5 of Table 2).[8] The analysis of responses to each of the questions testing financial knowledge shows that the spread of difficulty in the core questionnaire is appropriate for an international study; differentiating between higher and lower levels of knowledge across individuals and economies.

Tests of the reliability of this approach indicate that respondents' performance on the three true/false questions (QK7; see Table 1) is a little different from their performance on the other questions, reflecting the increased chance of guessing the correct answer. Despite this, the Alpha statistic for the knowledge score as a whole is 0.626; only slightly below the target of 0.7.

As with most tests, the questions used to indicate financial knowledge levels only cover a subset of basic financial knowledge requirements that may be of use to a consumer; it should not be assumed that the seven principles covered by financial education are sufficient to equip individuals with all the knowledge that they need.[9] In particular, some important aspects of financial knowledge are very specific to a country, such as understanding value added tax, or knowing about the retirement provision provided by the state, and would not be appropriate to test in an international context.

The percentage of correct responses to the financial knowledge questions varies notably by country (Table 2).

### Knowledge of different concepts and terms

The majority of people (63% across all participating countries and economies; 66% across OECD countries) knew what would happen to the purchasing power of money if inflation stayed at the same rate for one year (QK3). However, in South Africa (where 25% gave a correct answer) and the UK (38%), this was not well understood and no more than one in two gave a correct response in Malaysia (47%) and Albania (50%).

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8 As it would be unreasonable to ask a respondent to calculate compound interest, the question relies on multiple choice options centred on the value of five times the simple interest that they were asked to calculate in the previous question. It is assumed that if they could not calculate simple interest, they would not be able to answer the compound interest question correctly.

9 See OECD/INFE (2015), OECD/INFE Core competencies framework on financial literacy for youth and OECD (2016b), G20/OECD INFE Core competencies framework on financial literacy for adults.

Most people appear to understand the concept of interest and correctly identified that none had been paid in the question posed (QK4), (on average, 85% gave a correct response across all participating countries and economies; 89% across OECD countries).[10] However at least one in five respondents failed to answer this correctly in South Africa (70% correct), Jordan (72% correct), Belarus (73% correct), British Virgin Islands (75% correct), Poland (77% correct), Brazil (78% correct) and Lithuania (79% correct).

Across all participating countries and economies, the calculation of simple interest on savings (QK5) posed a problem for over half of participants (on average, 58% gave a correct response across all participating countries; 65% in OECD countries). Fewer than half the population were able to do this calculation in the British Virgin Islands (23% gave a correct response), Belarus (28%), Malaysia (35%), South Africa (42%), Jordan (43%), Albania (48%) and the Russian Federation (48%), whilst in Estonia; Hong Kong, China; Finland and Norway around four in five (80%) gave a correct response.

Just three in ten, on average, were also able to give a correct response to the question on compounding across all participating countries and economies and only 37% on average across OECD countries. With the exception of respondents in Hong Kong, China (52%); the Netherlands (56%); and Norway (58%), only a minority were able to *also* correctly identify that the value of interest following five years of compounding would be more than five times the simple interest (QK5 and QK6 correct), showing a worrying lack of competency in this important aspect of financial literacy. Furthermore, this cannot simply be explained by a lack of numeracy – for example, in Hong Kong, China, 79% were able to calculate the simple interest but only 58% of *all* respondents gave a correct response to the compounding question (QK6) and a similar pattern can be seen across the majority of participating countries and economies.

**Box 2. Compound interest on savings**

The question on compound interest highlights an interesting situation. In a minority of countries, the proportion recognising that interest paid on a savings account could also earn interest was even lower than might be expected. Communication with experts indicates that in some cases, compound interest is not automatically added to savings. This suggests that such knowledge may be (at least partially) related to experience, but at the same time, if more people become aware of the potential benefit of earning compound interest they may be more likely to demand such products.[11] In economies where compound interest is not automatically paid on savings, it may be valuable to further explore consumers' understanding of compounding, particularly as it is relevant for other types of financial products, including credit.

This serves as a useful reminder that data highlighting differences across countries can uncover a range of challenges at the national level. Policy makers may need to consider various possible causes of such differences before developing targeted solutions: it is possible that these solutions will combine elements of financial education, financial consumer protection and financial inclusion.

[10] As the receipt and payment of interest is haram in Shariah law, the question was designed to ensure that people recognised that no interest has been paid.

[11] The OECD intends to explore this issue further as part of a new OECD/INFE Project on Financial Education in the Commonwealth of Independent States.

Whilst the concept of compounding is not well understood, most people understand the basic relationship between risk and return (QK7a): 81% of respondents across all countries and economies and 83% of those in participating OECD countries. Hong Kong, China scores the highest with 96% of respondents giving a correct response. The definition of inflation (QK7b) is also relatively well known in most countries (78% across all countries and economies; 81% within OECD countries), although in Brazil (58%) and Finland (58%) only a small majority gave a correct response.

The concept of diversification (QK7c) appears to be more challenging, with only 64% of respondents on average giving a correct response across all participating countries and 65% in OECD countries. People appeared to have particular difficulty grasping this concept in the Russian Federation (41%), Thailand (42%), Malaysia (48%) and the British Virgin Islands (50%), where no more than half of respondents gave a correct response.[12]

**Table 2. Financial knowledge**

Percentage correct responses (weighted data): all respondents

| | Column 1 | Column 2 | Column 3 | Column 4 | Column 5 | Column 6 | Column 7 | Column 8 |
|---|---|---|---|---|---|---|---|---|
| | **Time value of money** | **Interest paid on loan** | **Calculation of interest plus principal** | **Compounding over 5 years actual response** | **Combined simple interest and compounding** | **Risk and return*** | **Definition of inflation** | **Diversification *** |
| Question number | **QK3** | **QK4** | **QK5** | **QK6** | **QK5&6** | **QK7a** | **QK7b** | **QK7c** |
| Albania | 50% | 88% | 48% | 28% | 16% | 77% | 75% | 65% |
| Austria | 66% | 86% | 68% | 44% | 36% | 86% | 85% | 62% |
| Belarus | 79% | 73% | 28% | 7% | 2% | 66% | 67% | 68% |
| Belgium | 73% | 91% | 63% | 50% | 39% | 83% | 80% | 56% |
| Brazil | 65% | 78% | 50% | 30% | 18% | 84% | 58% | 77% |
| British Virgin Islands | 54% | 75% | 23% | 32% | 10% | 67% | 78% | 50% |
| Canada | 57% | 93% | 58% | 56% | 39% | 86% | 92% | 68% |
| Croatia | 54% | 80% | 62% | 33% | 22% | 69% | 74% | 66% |
| Czech Republic | 68% | 83% | 58% | 34% | 22% | 71% | 73% | 69% |
| Estonia | 83% | 89% | 79% | 43% | 38% | 85% | 88% | 65% |
| Finland | 83% | 98% | 79% | 58% | 47% | 89% | 58% | 66% |
| France | 59% | 94% | 57% | 54% | 34% | 87% | 87% | 75% |
| Georgia | 61% | 94% | 51% | 46% | 22% | 80% | 85% | 63% |
| Hong Kong, China | 83% | 95% | 79% | 58% | 52% | 96% | 97% | 74% |
| Hungary | 67% | 91% | 53% | 33% | 24% | 84% | 89% | 65% |
| Jordan | 52% | 72% | 43% | 22% | 17% | 87% | 77% | 80% |
| Korea | 75% | 94% | 68% | 58% | 46% | 89% | 88% | 84% |
| Latvia | 75% | 89% | 72% | 48% | 44% | 82% | 86% | 64% |
| Lithuania | 75% | 79% | 68% | 41% | 31% | 75% | 67% | 75% |
| Malaysia | 47% | 66% | 35% | 33% | 15% | 73% | 75% | 48% |
| The Netherlands | 65% | 92% | 76% | 61% | 56% | 73% | 74% | 53% |
| New Zealand | 51% | 92% | 64% | 60% | 46% | 88% | 91% | 68% |

[12] These results indicate a lack of confidence among respondents in answering the questions.

| | Column 1 | Column 2 | Column 3 | Column 4 | Column 5 | Column 6 | Column 7 | Column 8 |
|---|---|---|---|---|---|---|---|---|
| | **Time value of money** | **Interest paid on loan** | **Calculation of interest plus principal** | **Compounding over 5 years actual response** | **Combined simple interest and compounding** | **Risk and return*** | **Definition of inflation** | **Diversification *** |
| Question number | **QK3** | **QK4** | **QK5** | **QK6** | **QK5&6** | **QK7a** | **QK7b** | **QK7c** |
| Norway | 76% | 91% | 80% | 65% | 58% | 86% | 74% | 59% |
| Poland | 80% | 77% | 61% | 30% | 21% | 77% | 69% | 56% |
| Portugal | 55% | 87% | 61% | 41% | 30% | 82% | 87% | 73% |
| Russian Federation | 65% | 88% | 48% | 46% | 27% | 78% | 67% | 41% |
| South Africa | 25% | 70% | 42% | 36% | 13% | 76% | 86% | 55% |
| Thailand | 52% | 83% | 53% | 20% | 12% | 86% | 63% | 42% |
| Turkey | 55% | 84% | 54% | 32% | 19% | 90% | 84% | 74% |
| United Kingdom | 38% | 83% | 57% | 52% | 36% | 74% | 80% | 52% |
| **Average, all countries** | **63%** | **85%** | **58%** | **42%** | **30%** | **81%** | **78%** | **64%** |
| **Average, OECD countries** | **66%** | **89%** | **65%** | **48%** | **37%** | **83%** | **81%** | **65%** |

Notes: Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

*Two of the concepts tested in the financial knowledge section of the questionnaire have two forms of wording in order to be applicable to the maximum number of countries. Eleven countries have used the alternative wording in at least one of these questions; four of these used both forms of the question. Knowledge scores take the results of the primary question rather than those of the alternative wording when both are asked. The version with alternative wording is reported for Belarus, the Czech Republic, Georgia and South Africa (Risk and Return) and Albania, Belarus, Czech Republic, Georgia, Lithuania, New Zealand and South Africa (Diversification).

### The distribution of financial knowledge scores by country

Figure 1 shows the distribution of basic financial knowledge scores in different countries (ranging from 0 to 7). These confirm that the questions provided a good level of discrimination in terms of levels of knowledge in most countries, although, Hong Kong, China (36% scoring seven out of seven); Korea (32%), the Netherlands (29%) and Norway (32%) have relatively large proportions getting full marks, indicating that harder questions could be used to further differentiate across levels of knowledge in these countries. New Zealand has a distribution that exhibits high and low levels of basic knowledge, suggesting that a broader range of questions may be appropriate at the national level to further discriminate levels of financial knowledge across the population. In contrast, countries such as Albania, Belarus, South Africa and Thailand have a distribution which indicates that respondents found it hard to answer all the questions.

The relatively high percentage of respondents scoring zero in the British Virgin Islands (14%) and the cluster of low scores in Malaysia reflects either a refusal by some respondents to respond to some questions or that they did not know the answer; relatively few gave wrong answers.[13] Whilst these 'missing' data could be dropped for analysis and reporting, they indicate an important lack of confidence or willingness to think about such issues, which could be of concern to policy makers.

[13] The score gives 1 point to each correct answer. 'Don't know' therefore scores 0.

**Figure 1. Distributions of financial knowledge scores**

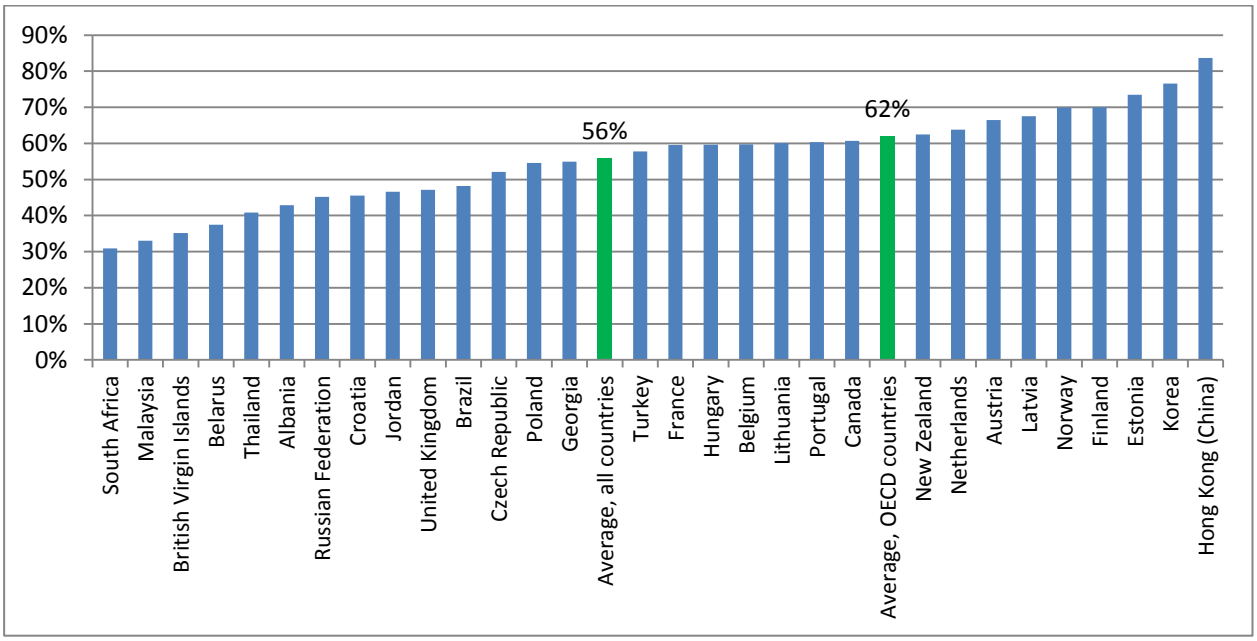
Note: Distribution of scores from 0-7 based on questions in Table 1.

## Minimum target scores on financial knowledge

The distributions above provide an interesting overview of the proportion of adults who could answer one or more of the knowledge questions. Figure 2 below focuses on the proportion of the population who achieved a minimum target score of at least five out of seven on the knowledge questions (i.e. answering at least 70% of the questions correctly, which corresponds with the last three bars to the right of the histograms above). This shows that at least three in ten members of the population could answer 70% of the basic financial knowledge questions correctly in every participating country and economy; rising to over eight in ten in Hong Kong, China (Figure 2). However, Figure 2 also illustrates that across all the participating countries, 44% of adults, on average, did not have sufficient financial knowledge to achieve the minimum target score.

**Figure 2. Minimum target score (5 or more) on financial knowledge**

Percentages (weighted data): all respondents




Notes: Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

**Box 3. The financial literacy of 15-year-old students (2012 data)**

The OECD Programme of International Student Assessment (PISA) has been assessing the financial literacy of 15-year-olds every three years since 2012. Some of the countries that participated in the 2012 assessment have also provided data for this report, making it possible to say something about levels of financial literacy among students and adults in those countries. However, direct comparisons of the two results are not possible as the PISA assessment is a very different type of measure from the questionnaire in the OECD/INFE toolkit.

**Snapshot of performance in financial literacy**

| |
|---|
| Countries/economies with mean score/share of top performers **above** the OECD average-13<br>Countries/economies with share of lowest performers **below** the OECD average-13 |
| Countries/economies with mean score/share of top performers/share of lowest performers not statistically different from the OECD average-13 |
| Countries/economies with mean score/share of top performers **below** the OECD average-13<br>Countries/economies with a share of lowest performers **above** the OECD average-13 |

Countries/economies in which the performance difference between boys and girls is statistically significant are marked in **bold**

| | **Performance in financial literacy** | | | | Relative performance in financial literacy, compared with students around the world with similar performance in mathematics and reading |
|---|---|---|---|---|---|
| | Mean score in PISA 2012 | Share of lowest performers (Level 1 or below) | Share of top performers in financial literacy (Level 5 or above) | Gender difference (Boys - Girls) | |
| | Mean score | % | % | Score dif. | Score dif. |
| OECD average-13 | 500 | 15.3 | 9.7 | 1 | 2 |
| Shanghai-China | 603 | 1.6 | 42.6 | -1 | 0 |
| Flemish Community (Belgium) | 541 | 8.7 | 19.7 | 11 | 9 |
| Estonia | 529 | 5.3 | 11.3 | -3 | 5 |
| Australia | 526 | 10.4 | 15.9 | -3 | 18 |
| New Zealand | 520 | 16.1 | 19.3 | 3 | 12 |
| Czech Republic | 513 | 10.1 | 9.9 | 6 | 19 |
| Poland | 510 | 9.8 | 7.2 | 3 | 2 |
| Latvia | 501 | 9.7 | 4.6 | -11 | 1 |
| United States | 492 | 17.8 | 9.4 | 1 | 1 |
| Russian Federation | 486 | 16.7 | 4.3 | 1 | 14 |
| France | 486 | 19.4 | 8.1 | -6 | -24 |
| Slovenia | 485 | 17.6 | 5.8 | -8 | -8 |
| Spain | 484 | 16.5 | 3.8 | 6 | 4 |
| Croatia | 480 | 16.5 | 3.8 | 5 | 2 |
| Israel | 476 | 23.0 | 8.5 | -6 | -5 |
| Slovak Republic | 470 | 22.8 | 5.7 | -3 | 2 |
| Italy | 466 | 21.7 | 2.1 | **8** | -14 |
| Colombia | 379 | 56.5 | 0.7 | 0 | -5 |

*Countries and economies are ranked in descending order of the mean score in financial literacy in PISA 2012.*

Source: OECD, PISA 2012 Database, Tables VI.2.1, VI.2.2, VI.2.3 and VI.3.1.

The 2015 updated questionnaire also includes a self-assessment of how the respondent feels their financial knowledge compares with that of other adults (QK1, see Figure 3).[14] There is a very strong tendency for respondents to say that they are about average in all countries (3 on the scale). Interestingly, only in Finland (39%), British Virgin Islands (19%), Austria (14%) and Latvia (11%) did at least one in ten of the population rate themselves as having very high levels of financial knowledge compared with other adults in their country. Conversely, in Belarus (15%), Turkey (14%), South Africa (14%), Poland (12%), Malaysia (13%), Albania (11%) and the Czech Republic (10%) at least one in ten of the population rated their own levels of knowledge as very low.

**Box 4. Financial knowledge, goal setting and retirement planning**

The revised OECD/INFE toolkit includes questions on whether people have set goals and whether they have made plans for their retirement.

Regression analysis controlling for gender, country, age and education indicates that the financial knowledge score is a significant predictor of respondents responding Yes to the question *'Some people set themselves financial goals, such as paying university fees, buying a car or becoming debt free. Do you (personally or with a partner) have any financial goals'?* The regression also indicates that compared to 40- to 49-year-olds, 50- to 79- year-olds and 18- to 19-year-olds are significantly less likely to have such plans, holding financial knowledge constant. 30- to 39-year-olds are significantly more likely to have such plans in place. Gender is not a significant predictor of this outcome, but those with higher education are significantly more likely to set a goal than others.

A second regression analysis controlling for gender, country, age and education indicates that the financial knowledge score is also a significant predictor of respondents having confidence in their retirement. The question (QF8) asks – *whether or not you are already retired – Overall, on a scale of 1 to 5 where 1 is very confident and 5 is not at all confident, how confident are you that you have done a good job of making financial plans for your retirement?* and the analysis aims to predict those who answered that they were confident or very confident. In contrast with financial goal setting, the regression indicates that 18- to 29-year-olds are significantly less likely to be confident in their plans than 40- to 49-year-olds, whilst 50- to 79-year-olds are more confident, holding financial knowledge constant. This indicates that young people recognise they may not be doing enough to plan for their old age, whatever their level of financial knowledge. Gender is also a significant predictor of this outcome, with men being more confident than women, other things held constant, and higher education is also a significant predictor of high levels of confidence in retirement plans.

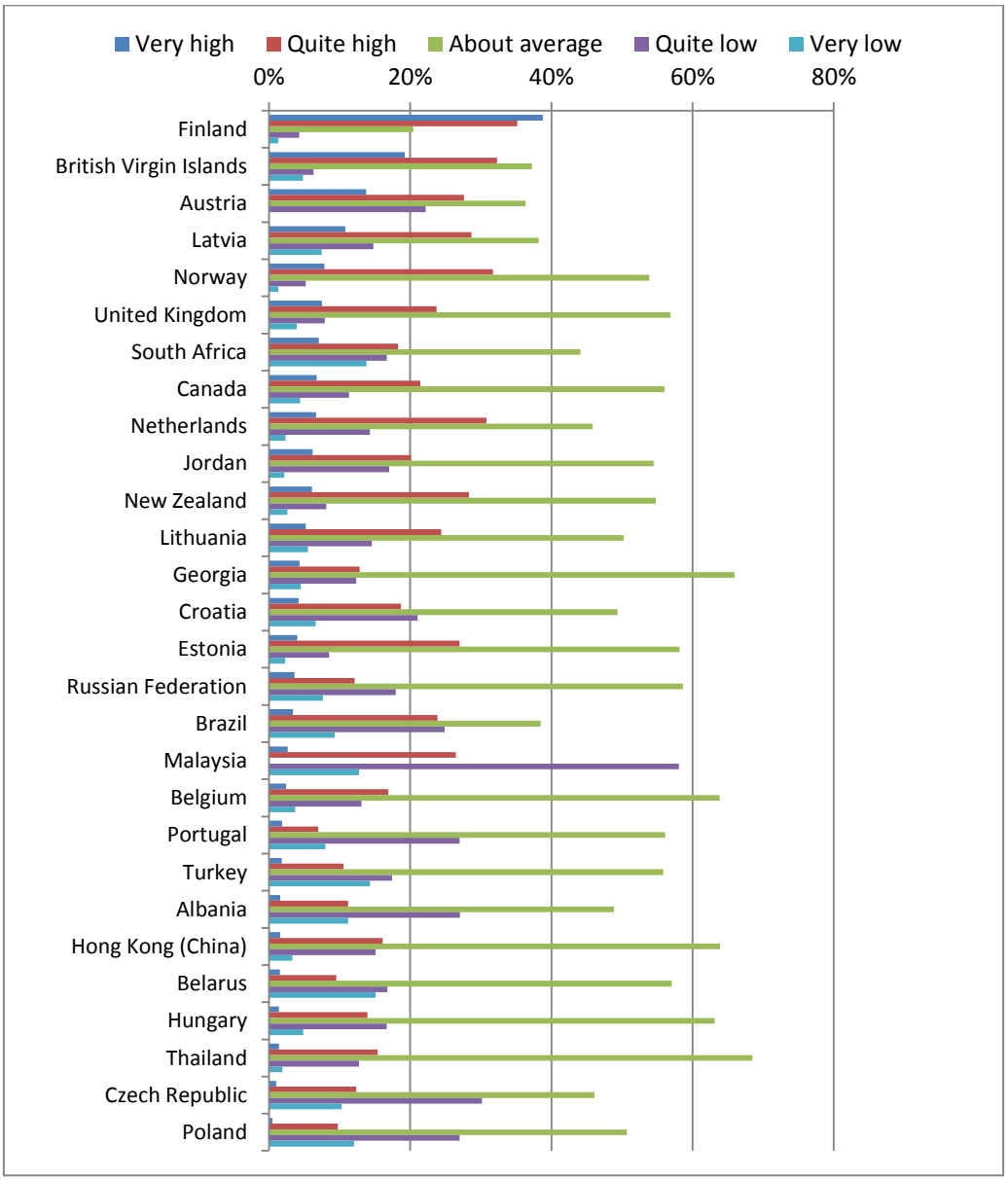
Note: Regression outputs are reproduced in Annex 1. The goal setting question (QF5 in the questionnaire) was asked in Albania; Belarus; British Virgin Islands; Czech Republic; Estonia; Georgia; Hong Kong, China; Hungary; Jordan; Latvia; Lithuania; Malaysia; the Netherlands; Norway; Poland; the Russian Federation; Thailand; Turkey and the UK. The retirement question was asked in all countries except Austria, Finland, France and Korea.

Cases with missing values are excluded.

[14] The question is 'Could you tell me how you would rate your overall knowledge about financial matters compared with other adults in <country name>?' with possible responses: very high, quite high, about average, quite low, very low. The wording was chosen so that it would be possible to test against national data. The question was not asked in France or Korea.

**Figure 3. Self-reported financial knowledge**

Percentages (weighted data): missing responses excluded, sorted by 'very high'




Notes: Percentage responding don't know or refusing to respond to the self-assessed knowledge question (QK1) are excluded from this Figure. This question was not asked in France or Korea. Data tables in Annex 1. In Austria, no one put themselves at the bottom of the scale, even though the option was given. Malaysia had no middle option.

Table 3 shows that people who rate their financial knowledge as being higher than average financial knowledge in their country, do, typically, have higher scores than other people in their country; i.e. there is a positive correlation between self-assessed knowledge and our financial knowledge score.

Table 3 is particularly interesting in that it shows people in most countries have a good idea of how their knowledge compares with that of other people in their country, even if they would have a very different position on a global scale. This can be highlighted by looking at the average knowledge scores for people in two different economies. In Estonia, for example, people who judged their knowledge to be lower than average across the country, nevertheless have higher levels of basic financial knowledge (4.4) than those considering themselves to be high scorers in countries such as the British Virgin Islands (4.1), South Africa (3.9) and Thailand (3.9).

**Table 3. Financial knowledge score by self-assessed knowledge**

Average financial knowledge score by self-assessed knowledge (weighted data): missing responses to self-assessed knowledge excluded

| | High/very high | Average | Low/very low |
|---|---|---|---|
| Albania | 4.7 | 4.4 | 3.7 |
| Austria | 5.2 | 4.9 | 4.1 |
| Belarus | 4.4 | 4.0 | 3.4 |
| Belgium | 5.4 | 4.9 | 4.4 |
| Brazil | 4.5 | 4.6 | 3.9 |
| British Virgin Islands | 4.1 | 4.0 | 3.8 |
| Canada | 5.6 | 4.8 | 4.1 |
| Croatia | 5.0 | 4.5 | 3.5 |
| Czech Republic | 4.7 | 4.6 | 4.3 |
| Estonia | 5.7 | 5.2 | 4.4 |
| Finland | 5.3 | 5.1 | 4.8 |
| Georgia | 5.1 | 4.5 | 4.2 |
| Hong Kong, China | 6.1 | 5.9 | 4.8 |
| Hungary | 5.4 | 4.8 | 4.1 |
| Jordan | 4.9 | 4.3 | 3.5 |
| Latvia | 5.4 | 5.0 | 4.8 |
| Lithuania | 5.2 | 4.6 | 4.2 |
| Malaysia | 4.4 | Not asked | 3.5 |
| Netherlands | 5.7 | 4.7 | 4.7 |
| New Zealand | 5.5 | 4.8 | 4.4 |
| Norway | 5.8 | 5.2 | 4.0 |
| Poland | 4.7 | 4.7 | 4.0 |
| Portugal | 5.5 | 5.1 | 4.2 |
| Russian Federation | 4.5 | 4.4 | 3.7 |
| South Africa | 3.9 | 4.0 | 3.2 |
| Thailand | 3.9 | 4.0 | 3.4 |
| Turkey | 5.1 | 5.0 | 3.9 |
| United Kingdom | 4.7 | 4.1 | 3.5 |

Notes: Percentage responding don't know or refusing to respond to the self-assessed knowledge question (QK1) are excluded from this Table. This question was not asked in France or Korea. Data tables in Annex 1. In Austria, nobody put themselves at the bottom of the scale, even though the option was given. Malaysia had no middle option.

In a few countries, such as Brazil, Poland, South Africa and Thailand, the average score for people who considered themselves to have high or very high levels of financial knowledge is actually no higher than those who thought that they were the same as most people. This suggests that at least some of those who rated themselves highly were over confident, a problem that can lead to vulnerability to fraud and excessive self-reliance.[15] However, even in these countries, people with lower than average levels of knowledge typically recognised this fact in themselves.

This analysis was undertaken after combining those who saw themselves as having high or very high levels of knowledge; and also combining those who saw themselves with low or very low levels.[16] Statistical tests confirm that whilst there is no significant correlation between self-assessed knowledge and knowledge scores in the British Virgin Islands, in almost all other cases there is a correlation between measured knowledge and higher knowledge scores that is significant at the 0.01 level (the exception being Finland, where the correlation is weaker - significant at the 0.05% level).

**Noticeable gender differences in financial knowledge**

There are notable gender differences in the level of financial knowledge in some countries, and on average across all participating countries, 61% of men achieve the minimum target score compared with only 51% of women (across OECD countries the proportions vary even more, with 69% of men and 56% of women achieving at least five out of seven). Figure 4 shows that, in 19 of the 30 participating countries and economies, there is a statistically significant difference between the proportion of men and women achieving the minimum target score on the financial knowledge questions.

Additional regression analyses (see Annex 1) indicate that across the whole dataset, men typically score more than women on financial knowledge, even after controlling for country, age and education.[17] These analyses will be developed in more detail in future work of the OECD/INFE.

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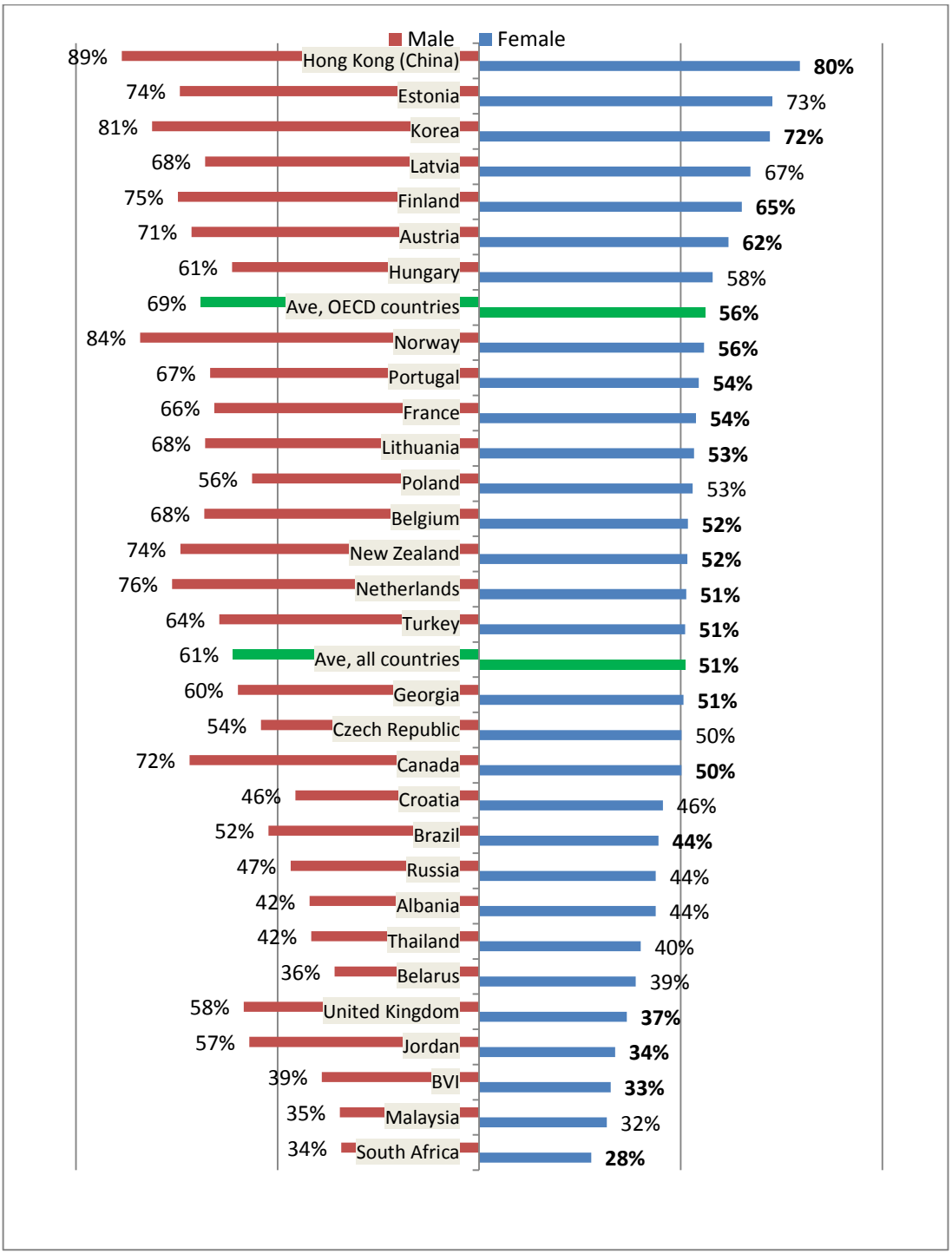
15 Countries interested in exploring this issue may find it useful to analyse the potential relationship with self-assessed financial knowledge and behaviour when choosing products.

16 Separate analysis indicated that the people assessing themselves as having very high levels of knowledge were over-estimating their abilities, but the small numbers in most countries mean that such comparisons would need to be read with caution.

17 The same regression indicates that knowledge scores are significantly lower among adults aged 18 to 39 and among adults aged 60 to 70 than among the reference group (aged 40 to 49), other things held constant, and significantly lower among all education levels than the reference group of 'higher education'.

**Figure 4. Minimum target score (5 or more) on financial knowledge by gender**

Percentages (weighted data): all respondents




Notes: Gender differences significant at 0.05 indicated in **bold** (the lower of the two values is highlighted); BVI refers to the British Virgin Islands. Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

## II. FINANCIAL BEHAVIOUR

This chapter looks at levels of financial behaviour. It draws on a number of questions to explore the extent to which people are behaving in financially literate ways, before looking at the distribution of financial behaviour scores, and the proportion of the population scoring at least six out of nine on this measure (considered to be the minimum target score).

**Key findings**

- Just one in two (51%) respondents across participating countries and economies achieved a score, on average, of at least six out of nine compared with an average of 54% across OECD countries. More than four out of five people in France achieved the minimum target score of six out of nine on financial behaviour (85%). This compares favourably to the average across all participating countries and contrasts starkly with Hungary, where one in four achieved such a score.
- In particular, the results show that for many people, budgeting is not a priority, despite its clear advantages in terms of financial control and planning; across all participating countries and economies, on average, only three in five households have a budget (60%); compared with 57% of households in participating OECD countries.
- Only one in two participants, on average, have longer-term financial goals that they strive to meet (51% across all participating countries and economies and 50% across OECD countries).
- Relatively few people are making regular, informed financial product choices, and only 12% of respondents on average, across all participating countries and economies, did so with the support of independent information and advice.

Consumers' actions and behaviour are what ultimately shape their financial situation and well-being, in both the short and longer-term. Some types of behaviour, such as putting off bill payment, failing to plan future expenditures or choosing financial products without shopping around, may impact negatively on an individual's financial situation and well-being. It is therefore essential to assess financial behaviour in a survey of financial literacy.

The OECD/INFE core questionnaire does this by incorporating a variety of questions to find out about behaviours such as budgeting, thinking before making a purchase, paying bills on time, and saving and borrowing to make ends meet. There is considerable variation in behaviours within and across countries.

### Budgeting

Budgeting is widely accepted as being a valuable tool for money management and a component of financial literacy (as identified in the G20/OECD INFE Core Competencies Framework on Financial Literacy for Adults).

The core questionnaire includes two questions designed to provide a comprehensive view of the extent to which people are actively managing their budget. The first question asks who is responsible for day-to-day decisions about money to ascertain whether the respondent takes some responsibility, and the second question then asks whether the household has a budget,[18] to find out whether the respondent is managing with or without one (Table 6).

Across all participating countries and economies, only three in five households, on average, have a budget (60%); compared with 57% of households in participating OECD countries. Over half of respondents, on average, therefore had some level of responsibility for a household budget (54% in all participating countries and economies; 52% in OECD countries).

In Latvia (81%), Malaysia (81%), and France (76%), it is very common for people to both take responsibility and report that the household has a budget, whilst in some other countries fewer than a third indicate that they do so (Austria, 29%; Hungary, 24%). Analysis of the separate components (Columns 1 and 2) indicates that most people take at least some responsibility for financial decisions,[19] but that it is relatively uncommon to have a household budget in some countries such as Hungary (25%), Austria (31%) and Norway (33%).

**Table 4. Household financial decision making and budgeting**

Percentages (weighted data): all respondents, data sorted by Column 3

| | Column 1 | Column 2 | Column 3 |
|---|---|---|---|
| | **Who is responsible for making day-to-day decisions in your household (QF1)** | **And does your household have a budget? (QF2) [Yes]** | **Respondent is BOTH responsible for financial decisions AND in a household with a budget (derived variable)** |
| | **% making decisions by themselves or with someone else** | **% responding yes** | **% making decisions and reporting that the household has a budget** |
| Hungary | 94% | 25% | 24% |
| Austria | 95% | 31% | 29% |
| Norway | 97% | 33% | 32% |
| Brazil | 80% | 43% | 36% |
| Czech Republic | 90% | 40% | 39% |
| Netherlands | 94% | 40% | 39% |
| Estonia | 91% | 43% | 41% |
| South Africa | 67% | 60% | 43% |
| Belgium | 89% | 47% | 43% |
| British Virgin Islands | 86% | 49% | 45% |
| Russian Federation | 93% | 50% | 47% |
| Jordan | 66% | 64% | 48% |
| United Kingdom | 96% | 53% | 51% |
| New Zealand | 85% | 59% | 52% |
| Hong Kong, China | 85% | 61% | 55% |
| Georgia | 88% | 64% | 57% |
| Canada | 92% | 63% | 58% |

[18] The questionnaire defines a household budget as follows 'A household budget is used to decide what share of your household income will be used for spending, saving or paying bills' (QF1). In Belarus, the Survey agency considered all single people to be responsible for their budget; the results therefore reflect this.

[19] When most people give the same response, such a question adds little value to a score by itself.

| | Column 1 | Column 2 | Column 3 |
|---|---|---|---|
| | **Who is responsible for making day-to-day decisions in your household (QF1)** | **And does your household have a budget? (QF2) [Yes]** | **Respondent is BOTH responsible for financial decisions AND in a household with a budget (derived variable)** |
| | **% making decisions by themselves or with someone else** | **% responding yes** | **% making decisions and reporting that the household has a budget** |
| Albania | 83% | 71% | 60% |
| Finland | 95% | 63% | 61% |
| Lithuania | 95% | 65% | 62% |
| Poland | 94% | 66% | 63% |
| Croatia | 88% | 70% | 63% |
| Belarus | 86% | 77% | 65% |
| Korea | 84% | 77% | 66% |
| Turkey | 86% | 78% | 68% |
| Portugal | 93% | 72% | 68% |
| Thailand | 88% | 77% | 70% |
| France | 90% | 85% | 76% |
| Malaysia | 92% | 86% | 80% |
| Latvia | 88% | 90% | 81% |
| **Average, all countries** | **88%** | **60%** | **54%** |
| **Average, OECD countries** | **91%** | **57%** | **52%** |

Notes: Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

## Supporting financial resilience

There are some behaviours that people may need to repeat in order to make themselves resilient to financial shocks. These include active saving, making considered purchases and paying bills on time, as well as keeping watch on personal financial affairs. Taking steps to avoid borrowing to make ends meet is also important for financial resilience.

### *Active saving*

Core competencies of financial literacy typically stress the importance of rainy day saving as well as saving for longer-term goals. The questionnaire therefore seeks to capture a measure of the behaviour underlying this, described here as active saving.

Across all participating countries and economies, 59% were active savers; similarly, 60% were active savers in OECD countries (Figure 5). In some participating economies, the lack of active saving is a concern, although there are large variations in the proportion of respondents who reported saving in some way in the last 12 months.

In Thailand, the vast majority of adults were saving in some way (86%); similarly in Norway (84%) and France (83%) many people were active savers. In contrast, in Hungary (27%), fewer than three in ten adults were exhibiting this behaviour.

**Box 5. Identifying people who are actively saving**

Financial literacy includes a number of behaviours that can promote financial well-being. One of these is saving. Active savers exhibit a behavior that can help them to smooth income and expenditure flows, thus supporting their budgeting behavior. People who build savings are also likely to be more resilient to financial shocks and better able to meet financial goals. The indicator of active saving used in this report therefore seeks to identify such recent behaviour. It is based on a question that allows multiple responses and looks back over a 12 month time period in order to identify recent behavior even when the respondent saves irregularly. This time period is used to take into account intermittent behaviour related to income or expenditure fluctuations such as seasonal work or annual holidays.

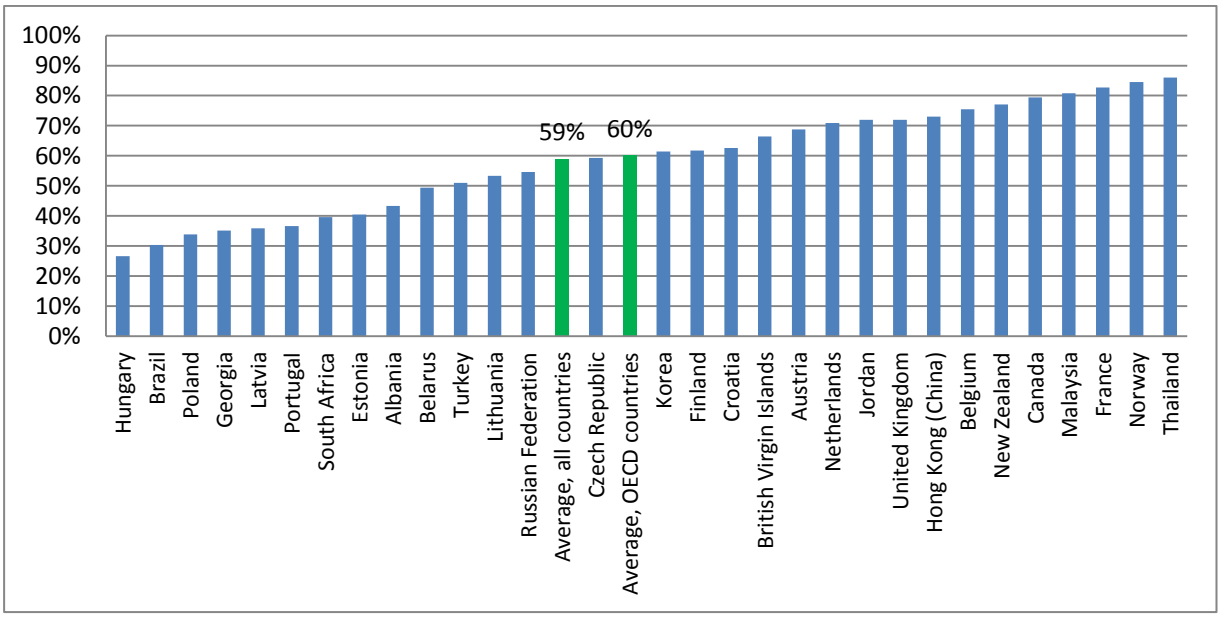
The indicator only takes into account the responses that are considered to be actions. Saving in a current account is not considered to be active, because there is no behaviour or process involved, and those with access to a bank account have additional methods more suited to saving (see Annex 2 for more information about how the responses are used).

There are questions within the core questionnaire that may indicate whether or not a person has savings, including questions on product holding and a question on covering living expenses following a loss of income. These are not used as behaviour indicators, as they do not necessarily indicate a *current* behaviour; an individual may hold an old savings account without using it to save, and a household may be able to cover living costs very easily through a second source of income.

Alternative approaches look at the stock of saving, but it could be argued that this is an outcome of financially literate behaviour rather than an indicator of the behaviour itself. It also depends on many factors, including the amount of time an individual has been saving, the amount of disposable income available to save, the extent to which savings have earned interest and the extent to which they are being spent.

**Figure 5. Active savers**

Percentages (weighted data): all respondents




Notes: Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

Brazil only asked this question to people with an income but the percentage reported is for all participants. This will slightly reduce the overall scores for Brazil (41% of those with an income were active savers; 30% of all respondents).

### *Making a considered purchase and paying bills on time*

Most people agreed or completely agreed that they carefully consider purchases; on average across all participating countries and economies four out of five people (80%) did so; and across OECD countries the proportion is almost identical (79%). The lowest percentages of people considering their purchases are observed in Poland (55%), Croatia (62%) and the UK (69%) (Table 5). Timely bill payment was also standard for people in most countries (79% on average across all countries and economies),[20] reaching 95% in France, which may reflect the fact that most people only have debit cards and only a few have access to credit cards. However, in South Africa, only one in two respondents agreed that they pay their bills on time (48%).

### *Keeping watch of financial affairs and striving to achieve long-term goals*

People typically reported that they are keeping a close watch on their financial affairs (72% on average across all participating countries and economies, ranging from 50% in Poland and Turkey to 89% in France). Such behaviour may help them better manage their finances day- to-day or spot errors or fraudulent activity on their accounts, whilst also potentially monitoring progress towards longer-term goals.

**Table 5. Agrees with financial behaviour statements**

Percentages (weighted data): all respondents, sorted by Column 1

| | Column 1 | Column 2 | Column 3 | Column 4 |
|---|---|---|---|---|
| | **Agrees: Before I buy something I carefully consider whether I can afford it** | **Agrees: I pay my bills on time** | **Agrees: I keep a close personal watch on my financial affairs** | **Agrees: I set long term financial goals and strive to achieve them** |
| Question number | QF10_1 | QF10_4 | QF10_6 | QF10_7 |
| Poland | 55% | 67% | 50% | 32% |
| Croatia | 62% | 61% | 63% | 45% |
| United Kingdom | 69% | 84% | 75% | 45% |
| Russian Federation | 72% | 70% | 65% | 46% |
| Brazil | 73% | 65% | 60% | 46% |
| New Zealand | 74% | 90% | 82% | 55% |
| Hungary | 75% | 77% | 56% | 43% |
| Korea | 75% | 78% | 52% | 53% |
| Canada | 76% | 87% | 78% | 58% |
| Czech Republic | 76% | 81% | 75% | 39% |

[20] However, timely bill payments were not universal in any of the countries, indicating that some respondents could be at risk of over indebtedness.

| | Column 1 | Column 2 | Column 3 | Column 4 |
|---|---|---|---|---|
| | **Agrees: Before I buy something I carefully consider whether I can afford it** | **Agrees: I pay my bills on time** | **Agrees: I keep a close personal watch on my financial affairs** | **Agrees: I set long term financial goals and strive to achieve them** |
| Estonia | 76% | 87% | 76% | 40% |
| Malaysia | 76% | 55% | 63% | 59% |
| Austria | 79% | 88% | 87% | 65% |
| Latvia | 79% | 78% | 73% | 44% |
| South Africa | 80% | 48% | 65% | 49% |
| Turkey | 80% | 66% | 50% | 44% |
| Netherlands | 80% | 86% | 74% | 39% |
| Belarus | 81% | 84% | 72% | 53% |
| Thailand | 84% | 67% | 70% | 62% |
| Lithuania | 84% | 71% | 66% | 51% |
| Finland | 85% | 94% | 85% | 75% |
| Norway | 85% | 91% | 76% | 44% |
| British Virgin Islands | 87% | 86% | 84% | 72% |
| Jordan | 87% | 68% | 69% | 61% |
| Belgium | 88% | 93% | 88% | 62% |
| Hong Kong, China | 90% | 89% | 82% | 58% |
| Georgia | 91% | 89% | 75% | 41% |
| Portugal | 93% | 81% | 79% | 52% |
| France | 93% | 95% | 89% | 61% |
| Albania | 95% | 81% | 75% | 41% |
| **Average, all countries** | **80%** | **79%** | **72%** | **51%** |
| **Average, OECD countries** | **79%** | **84%** | **73%** | **50%** |

Notes: Respondents who agreed: i.e. put themselves at 1 or 2 on the scale. Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

### *Avoiding borrowing to make ends meet*

On average, a third (34%) of respondents across participating countries and economies had been unable to make ends meet at some point in the previous 12 months; compared with 27% across OECD countries (Figure 10). In Thailand (64%), Georgia (61%), Belarus (57%), Albania (54%), and Turkey (50%) at least half the population had faced a shortfall. However, only a minority of respondents borrowed to make ends meet in the previous 12 months (20% of respondents across responding countries and economies). Despite this, at least four in ten respondents resorted to borrowing to make ends meet in Thailand (45%), Georgia (45%), Turkey (42%), Albania (41%) and Belarus (41%) - indicating that many people in these countries do not have rainy-day-savings to cover such events, or that they had already used their savings to meet a previous shortfall or emergency.

**Box 6. Identifying people who have borrowed to make ends meet**

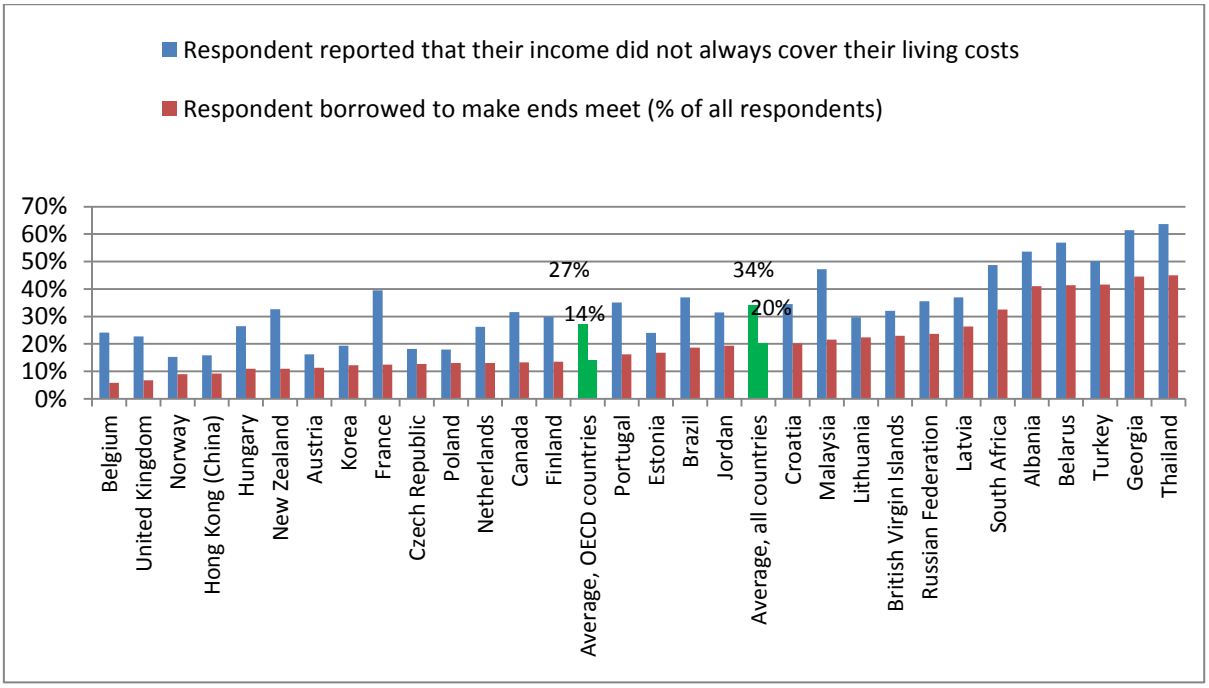
The OECD/INFE questionnaire includes a question asking whether the respondent has experienced a situation when their income does not quite cover their living costs. Those who have experienced such a situation in the previous 12 months are asked about the strategies they used to meet the shortfall (see Table 8). The indicator created from these questions gives a score of 1 to respondents who have either a) not faced a shortfall in income (indicating good financial literacy skills in terms of budgeting and financial management) or b) fallen behind but did not resort to borrowing to pay their bills (indicating that they had already put plans in place to deal with such a situation). Those who borrowed to make ends meet score 0 on this measure.[21]

**Table 6. Questions on making ends meet**

| Question number | Question wording | Responses | Notes |
|---|---|---|---|
| QF11 | Sometimes people find that their income does not quite cover their living costs. In the last 12 months, has this happened to you, personally? | Responses yes/no | |
| QF12 | What did you do to make ends meet the last time this happened? | Multiple responses allowed | This question was used to identify respondents who were borrowing or failing to meet existing commitments in order to make ends meet. |

**Figure 6. Making ends meet**

Percentages (weighted data): all respondents, sorted by 'borrowed to make ends meet'




Notes: Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight. Derived responses from QF11 and QF12.

[21] Those who did not answer this question therefore score 1 on this measure by default. In countries with high levels of refusals this should be taken into account when creating a behaviour score.

**Planning for long-term goals should be strengthened**

Relatively few people reported that they have long-term financial goals and strive to achieve them, which suggests a tendency to focus on the short term (Table 5, Column 4). Only one in three people said that they strive to achieve long term goals in Poland (32%) and the percentage is below half in 15 of the participating countries, and only 50% across the 17 OECD countries. Nevertheless, this behaviour was reported by almost three quarters of people in the British Virgin Islands (72%), and around two-thirds of respondents in Austria (65%).

**Box 7. Method note on the financial behaviour score**

The financial behaviour score counts positive behaviours exhibited from among those described above.[22] It takes a maximum value of 9 and a minimum of 0.

An exploratory principal component analysis across the whole dataset suggests that, in some countries in particular, not borrowing to make ends meet would have less weight than the other variables (See Annex 1 for results). However, in other countries, this variable has a relatively high loading in a single factor solution. There are several plausible explanations for this. The extent to which people do or do not borrow to make ends meet may be related to access to credit, for example, as well as preferred behaviours. It is also possible that the question was considered to be more sensitive in some countries than others. Countries may wish to explore this in more detail with their own national data or through additional qualitative studies.

Given the dangers of an over-reliance on credit as means of smoothing income or expenditure, it has been decided to leave this component in the financial behaviour score, and to give it full weight.

**Shopping around for financial products is infrequent; and the use of independent advice even less common**

Responses show that fewer than half of respondents in every country had made an attempt to shop around for a recent financial product (Annex Table 21; column 1). In Portugal this behaviour was most common, with 45% of respondents having done so, whilst in Belarus and the Czech Republic just 14% indicated that this was the case.

Moreover, on average, only about one in ten across all participating economies appear to use independent information when choosing a product (Annex Table 21; column 3). The question about sources of information used indicates that many people used information such as brochures picked up in a branch, product specific information found on the internet, employer's advice or general newspaper articles to inform their decision (column 2), while only a – very small – minority sought independent guidance (column 3) indicating a willingness to seek some information before committing to a financial product. Combining the percentages in columns 2 and 3, shows that in Thailand (71%), Austria (74%), France (79%), the British Virgin Islands (83%), Portugal (86%) and Korea (89%) over seven in ten respondents had sought information or independent guidance when choosing a product. Almost a quarter of all respondents in Belgium (24%), Column 3, sought impartial

[22] In the case of the question on making ends meet, the score counts those people who have *not* resorted to borrowing to make ends meet.

guidance from sources such as independent advice, best-buy comparisons or the professional press.[23]

**Box 8. Measuring the extent to which people are shopping around for financial products**

The indicator for shopping around for a product combines two questions (Table 7). These questions are only asked of people who have made a recent product choice. Where they have chosen more than one product, it is asked of the most recent. This is to ensure that the respondent can remember the process by asking them to recall the last time they made a product choice.

**Table 7. Questions on choosing products**

| Question number | Question wording | Responses | Notes |
|---|---|---|---|
| Qprod2 | Which of the following statements best describes how you made your choice? | a) I considered several options from different companies before making my decision<br>b) I considered the various options from one company<br>c) I didn't consider any other options at all<br>d) I looked around but there were no other options to consider | This question asks about the extent to which the respondent looked at the alternative products available. A derived variable is created that indicates whether respondents made an attempt to shop around: Responses a and d are given a value of 1. Other responses, including no product choice is given the value 0. |
| Qprod3 | And which sources of information do you feel most influenced your decision {about which one to take out}? | Various examples are given and countries have also included their own under: Product-specific information, best-buy guidance, general advice, media coverage, adverts, other | This question captures information about the extent to which the respondent made use of different types of information or guidance. Multiple responses are possible: responses are coded 1 if they used some form of product-specific or general information and 2 if they used independent, professional sources of information. [See annex 2 for further details] |

As the questionnaire instructs the interviewer to ask about the most recent product chosen in the last two years, the variable also partly reflects financial inclusion, or the extent to which people are looking for new or replacement financial products. Furthermore, the approach that a respondent takes will, to some extent, vary according to the product that they chose. For these reasons, it is anticipated that this indicator is more informative in aggregate, showing comparisons across populations or by key subsets, than on an individual level.

It should be noted that the way in which people choose products may change depending on the product to be chosen. The questionnaire includes a question asking which product was bought most recently. This is designed to facilitate national level analyses to understand how behaviour changes depending on the product being bought. This cannot be undertaken at the international level due to the wide range of different product types.

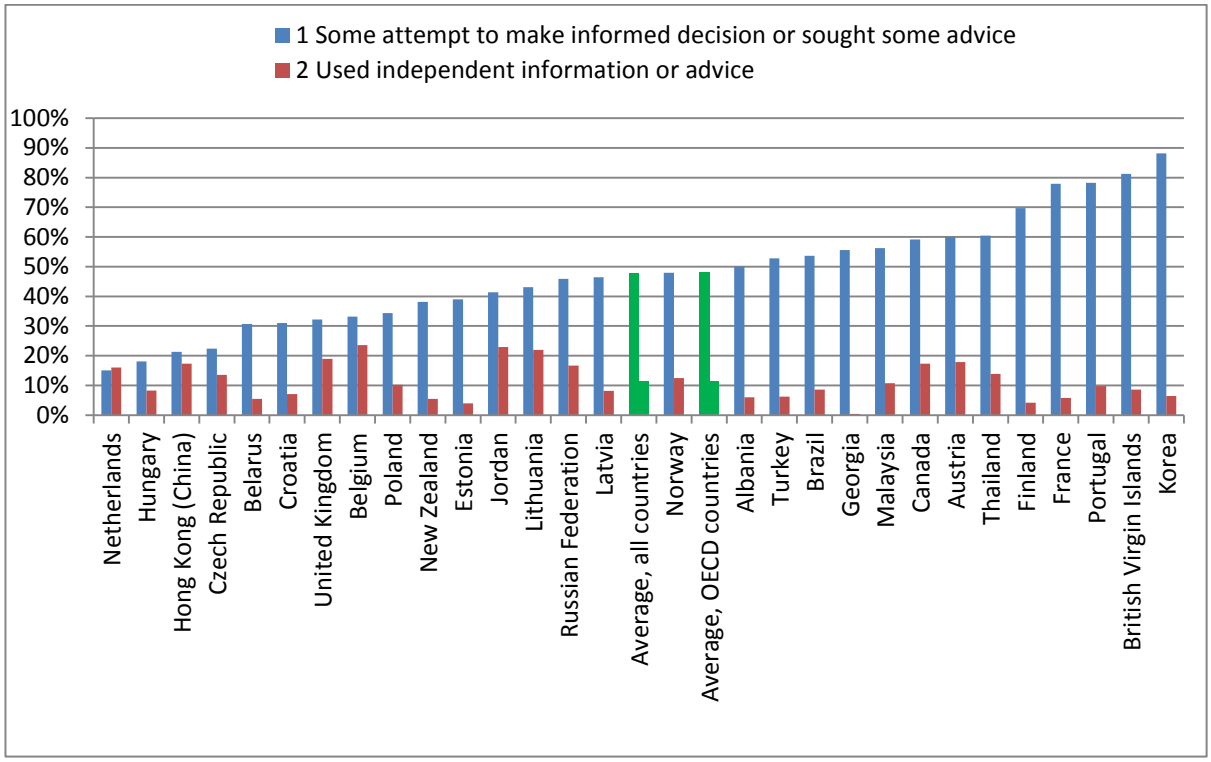
[23] In some countries, consumers have relatively little access to best buy guides or other sources of independent information and advice. Changing behaviour in this case may simply require providing better options for people choosing financial products.

Given that not all respondents have recently chosen any products, it is important to look at the use of advice by those who are active consumers (see Column 6 of Annex Table 17). In the Netherlands, for example, 43% of respondents who had chosen a product had used such information or guidance. This indicates that there are two distinct components to this aspect of financial literacy: the first is the behaviour of choosing and reviewing products on a regular basis and the second is making the choice in a safe and informed way.[24]

The information from these two questions was combined into an overall measure of informed decision making, which takes a value of 2 if the respondent used an independent source of information and 1 if they used some other form of information and/or shopped around (Figure 7). The results indicate that more could be done to provide – or encourage the use of - independent advice and information in all countries (fewer than one in four people achieved a score of 2 on this measure in any country); although it should also be taken into account that some countries do not have a wide range of choice of financial products, and some products are more straightforward than others to choose.

**Figure 7. Choosing financial products**

Percentages (weighted data): all respondents, sorted by 'used independent information or advice'




Notes: Derived scores from responses to Qprod2 and Qprod3– see Annex 1. Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

[24] The 2015 toolkit also includes an optional question on the extent to which people may have experienced financial fraud. This question is not intended to go into a financial literacy score but can provide valuable information to countries that have asked it, particularly when combined with information about the sources of information used.

Note that a minor change has been made to the calculation of this component of financial behaviour from the approach used in Atkinson and Messy (2012). The final variable has been slightly refined from earlier versions to better reflect the benefit of using independent information and advice. Independent information and advice now contributes two points to the behaviour score, whether or not the respondent also shopped around themselves.

**The distribution of financial behaviour scores by country**

The distributions of the resulting scores show that relatively few people exhibited all of the behaviours being assessed, but that most people were behaving in at least some financially literate ways (Figure 8). There are no countries with distributions showing a strong negative skew, indicating that there would be little benefit in asking about behaviours that are harder to maintain or less common. Nevertheless, the shapes of the distributions of scores vary quite noticeably. In countries such as Brazil and Croatia, the distribution is relatively flat, indicating that the extent to which individuals are behaving in a financially literate way varies widely. Elsewhere, as in the British Virgin Islands and France, the high peak shows it is relatively common for adults to be exhibiting several positive behaviours.

**Minimum target scores on financial behaviour**

Figure 9 focuses on financial behaviour scores of six to nine (six being the minimum target score).The figure reports the percentage of adults in each country achieving a score of six or more, reflecting the proportion of respondents exhibiting at least two thirds of the behaviours. Interestingly, only just above 50% of adults on average across all participating economies reach the minimum target score on financial behaviour. The average across participating OECD countries is only slightly higher, at 54%. France has by far the highest number of achievers on this measure, which may reflect the fact that few people use credit cards, but also indicating that the majority of people in France are acting in other ways that are likely to benefit their financial well-being now and in the future.

**Figure 8. Distribution of financial behaviour scores**

Percentages (weighted data): all respondents

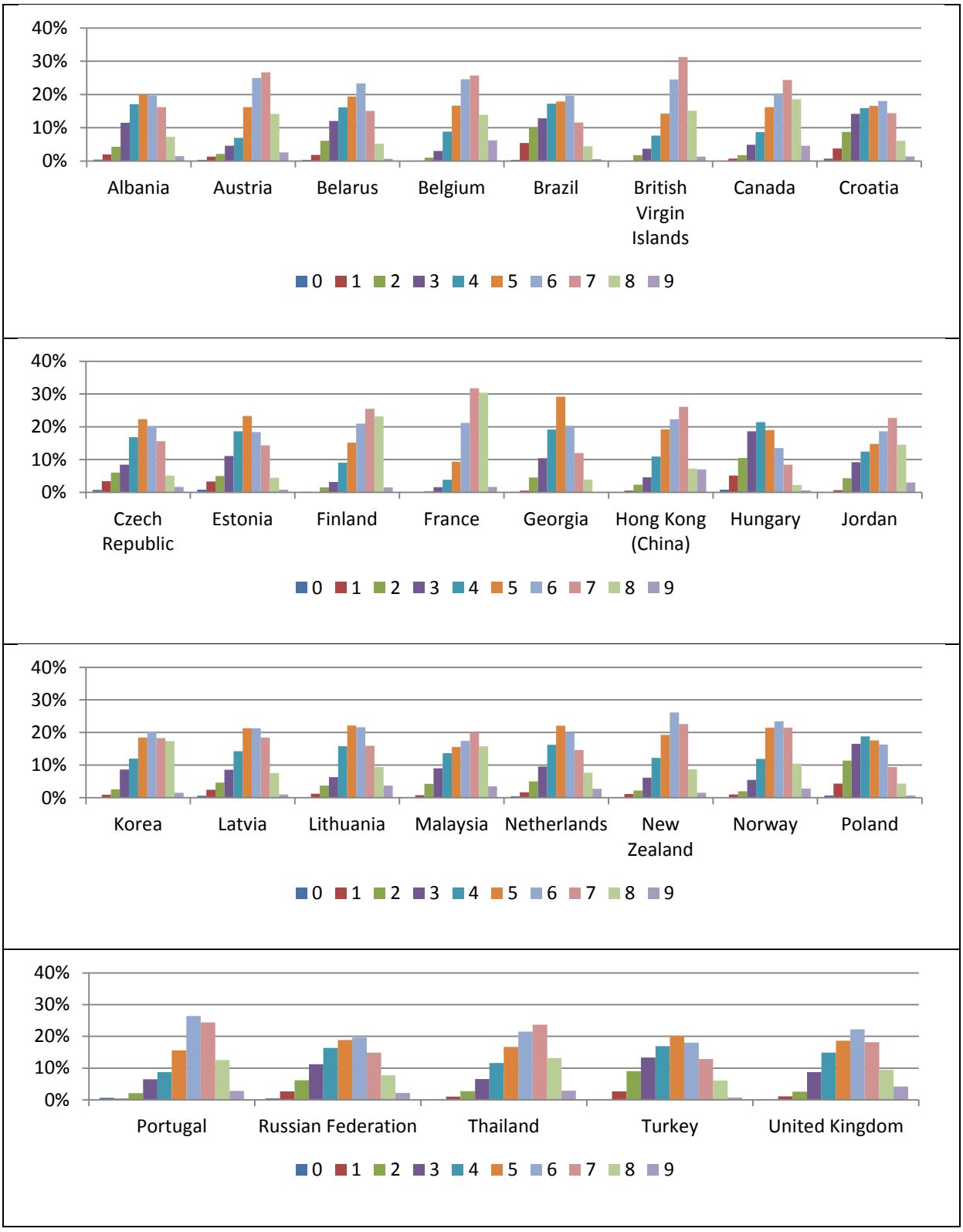
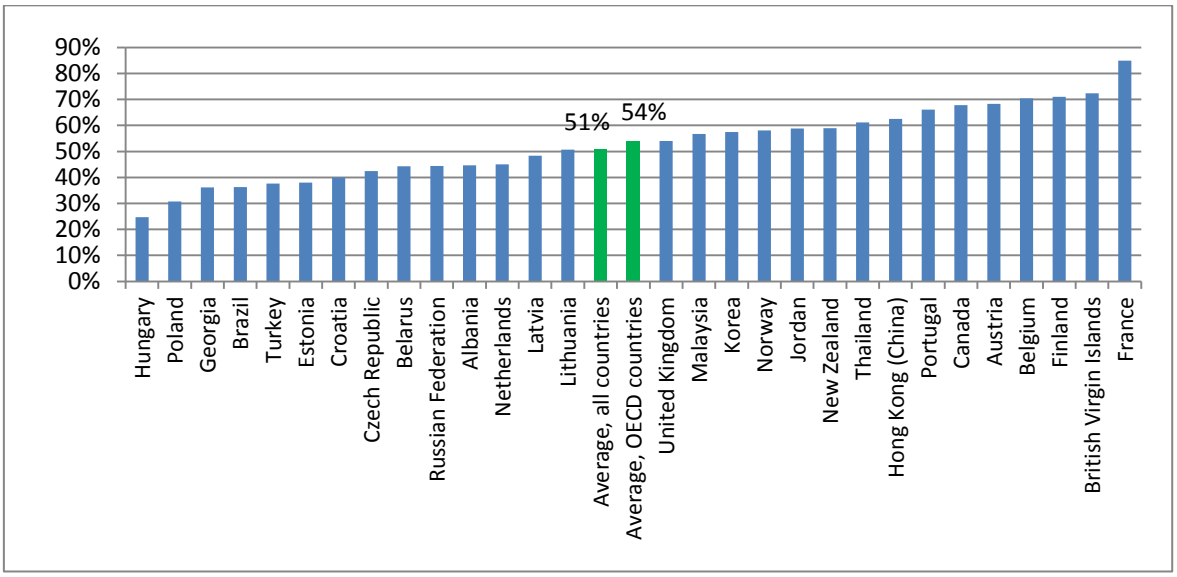


**Figure 9. Minimum target score (6 or more) on financial behaviour**

Percentages (weighted data): all respondents




Notes: Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

## Limited gender differences in financial behaviour

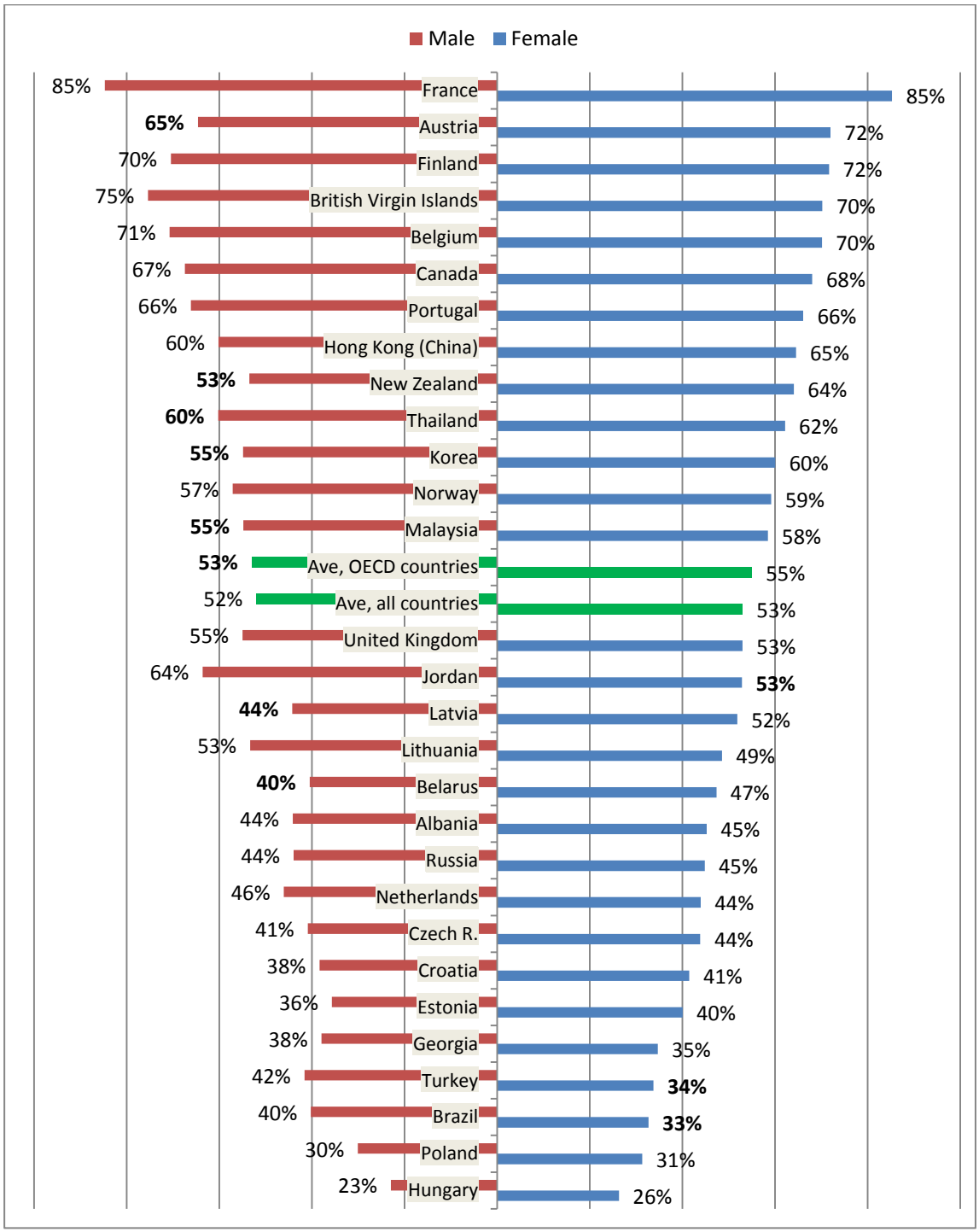
Similar proportions of men and women achieved minimum target scores for behaviour in most of the participating economies, and there is no significant difference between the average percentage of men and women achieving this score across all participating countries and economies (Figure 10). Furthermore, there is no single pattern among those with statistically significant differences – in some countries a higher proportion of men than women achieved the minimum target scores for financial behaviour (Jordan and Turkey), and in others (Austria, Korea and New Zealand), the reverse is true.

Additional regression analyses (see Annex 1), confirm that across the whole dataset, men and women did not score significantly differently on financial behaviour after controlling for country, age and education.[25]

[25] Behaviour scores are significantly lower among adults aged 18 to 29 and among adults aged 60 to 79 than among the reference group (aged 40 to 49), and significantly lower among all education levels than the reference group of 'higher education'.

**Figure 10. Minimum target score (6 or more) on financial behaviour by gender**

Percentages (weighted data): all respondents




Notes: Differences significant at 0.05 in **bold (the lower of the two values is highlighted).** Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

## III. FINANCIAL ATTITUDES

This chapter focuses on financial attitudes. It draws on three questions designed to capture attitudes towards the long-term. It reports differences in responses to each question, and the proportion of the population with an attitude that tends towards the long term.

**Key findings**

- On average, just 50% of adults across participating countries and economies achieved the minimum target score for financial attitude (i.e. one that shows a tendency to favour the longer term), compared with an average of 55% across OECD countries.
- In Jordan; Hong Kong, China and Poland, fewer than three in ten people indicated an attitude that tends towards the longer term. In contrast, in Albania, Hungary, Portugal, Canada, Norway and New Zealand, more than six in ten did so.
- Women in Norway particularly stand out for having longer-term attitudes than either their male counterparts in Norway or men and women in other countries.

The OECD/INFE definition of financial literacy recognises that even if an individual has sufficient knowledge and ability to act in a particular way, their attitude will influence their decision of whether or not to act: 'A combination of awareness, knowledge, skill, ***attitude*** and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing.'

The financial literacy survey therefore includes three attitude statements to gauge respondents' attitudes towards money and planning for the future[26] (Table 9). The questions ask people to use a scale to indicate whether they agree or disagree with particular statements.

Each of the statements focuses on preferences for the short term through 'living for today' and spending money. These kinds of preferences are likely to hinder behaviours that could lead to improved financial resilience and well-being. This report is therefore interested in the extent to which people show more financially literate attitudes: that is, the extent to which people *disagree* with the statements.

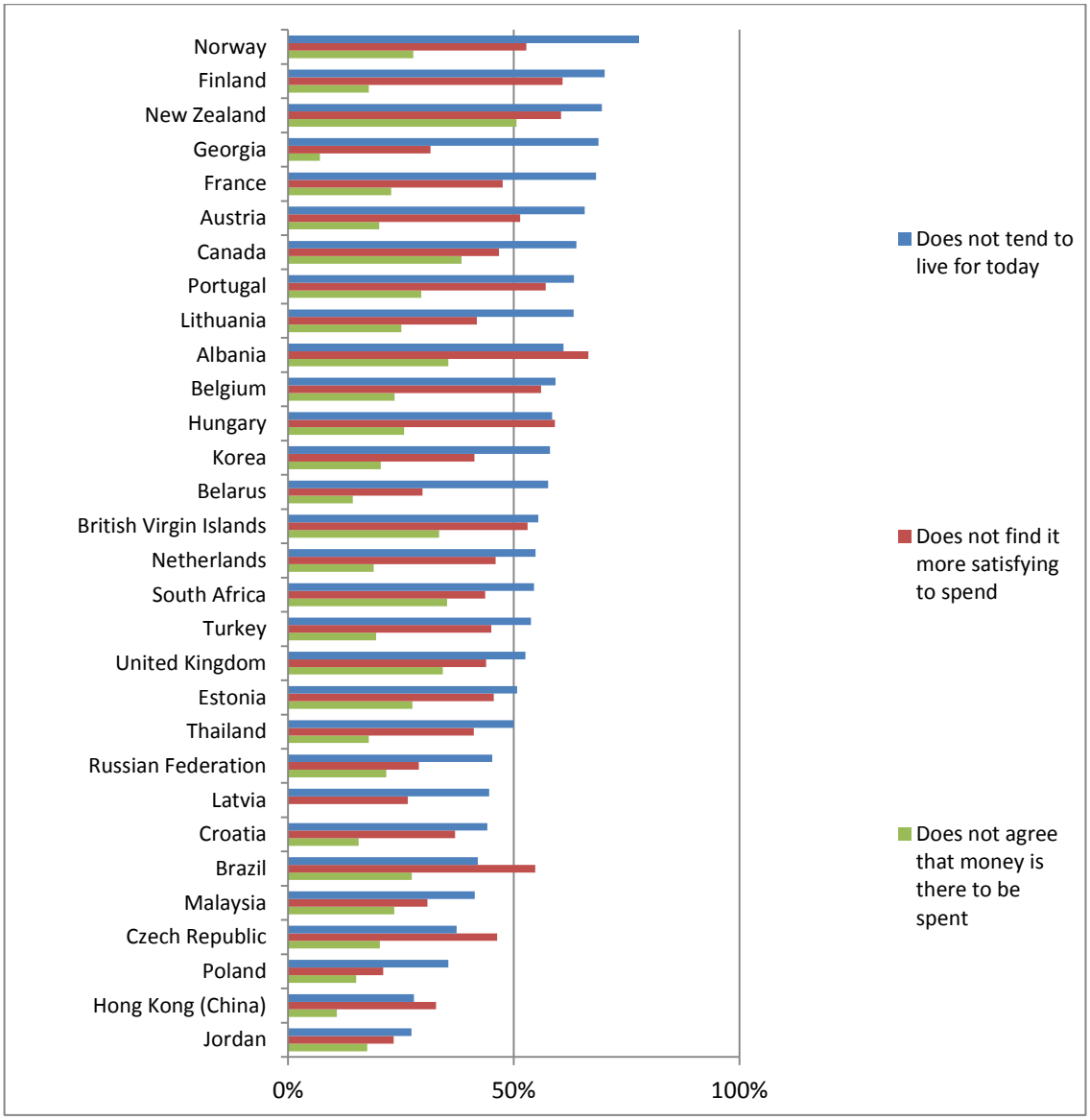
[26] Latvia did not ask the third question [their score is based on the remaining two].

**Table 8. Financial attitude questions**

| Question code | Text | Possible responses | Notes |
|---|---|---|---|
| QF10_b | I tend to live for today and let tomorrow take care of itself | 5 point scale: 1=Completely agree; 5=completely disagree | These questions are intended to indicate whether the respondent focuses exclusively on the short term (agrees) or has a preference for longer-term security (disagrees) |
| QF10_c | I find it more satisfying to spend money than to save it for the long term | | |
| QF10_h | Money is there to be spent | | |

**Figure 11. Does not agree with short-term attitude statement**

Percentages (weighted data): all respondents, sorted by 'does not tend to live for today'




Notes: Percentage putting themselves at 4 or 5 on the scale (disagreeing or strongly disagreeing with statements). Latvia did not ask all questions. Responses to QF10_b, QF10_c and QF10_h

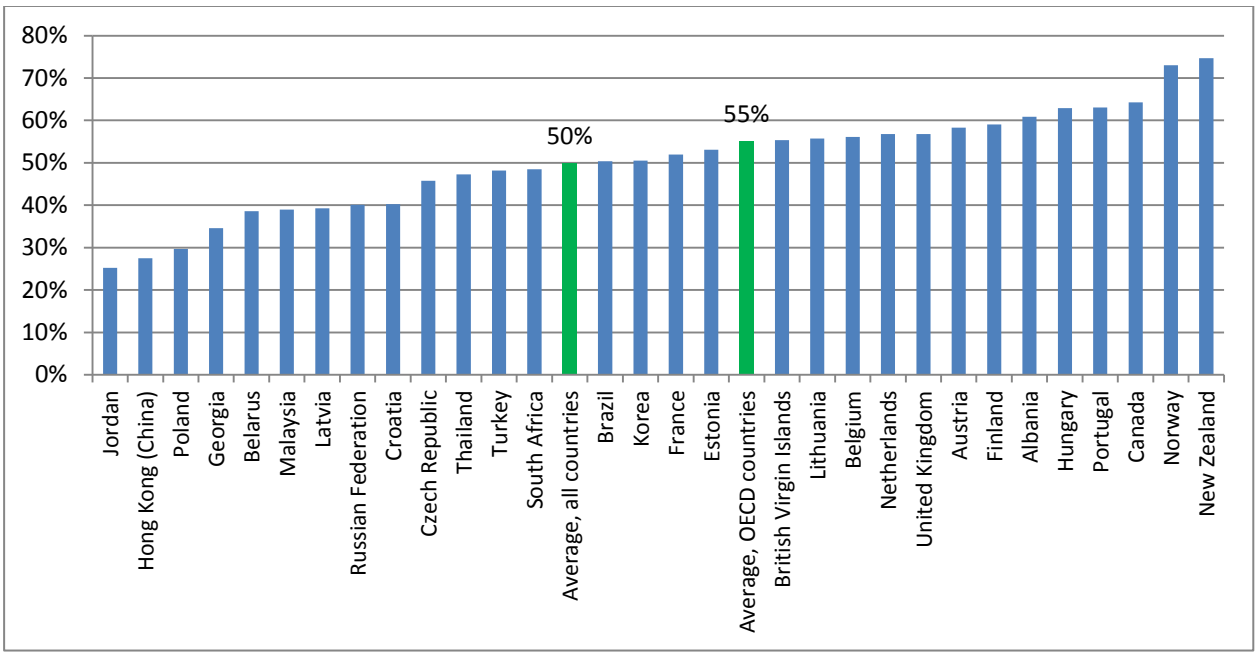
Figure 11 shows the proportion of the population in each participating country that had an attitude that is consistent with higher levels of financial literacy; that is they put themselves at 4 or 5 on the five point scale of the attitude statement (considered to be the minimum target score). It shows that in almost all countries, people's attitudes around living for today were more financially literate than their attitudes towards money and spending. However, in Albania; Brazil; the Czech Republic; Finland; Hong Kong, China and Hungary, financial literacy was strongest in terms of attitudes to spending and saving.

Figure 12 shows the percentage of respondents with an average attitude score that is more than three (three is the mid-point, so anything above this reflects a tendency to disagree with the statements as they were phrased; i.e. to have a preference for the longer-term).

The graph shows that in economies such as Jordan; Hong Kong, China and Poland, fewer than three in ten people indicated an attitude that tends towards the longer term. In contrast, in Albania, Hungary, Portugal, Canada, Norway and New Zealand, more than six in 10 do so.

**Figure 12. Minimum target score (more than 3) on financial attitudes**

Percentages (weighted data): all respondents




Notes: Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

**Box 9. Method note on the development of a financial attitude score**

Principal component analysis of the three questions discussed above confirms that they can all be considered to be components of a specific indicator of attitude (Table 10). We can consider this as a preference for the longer-term.

**Table 9. Principal Components Analysis of Attitude variables**

Weighted data, all respondents (missing values recoded to midpoint)

| | Component 1 (Factor loadings) |
|---|---|
| **I tend to live for today and let tomorrow take care of itself** | .761 |
| **I find it more satisfying to spend money than to save it for the long term** | .812 |
| **Money is there to be spent** | .673 |

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy 0.612; Bartlett's Test of Sphericity Significant 0.000

It is possible to create scores using this principal component analysis. However the 'factor loadings' reported above, which indicate the relative importance of each variable in creating a combined score, will change depending on the dataset being analysed, which makes it difficult to compare scores across time or in other countries. The approach used to create a score in this report therefore takes the average of the three responses, as a simple approximation which assumes each question is equally relevant. The Cronbach's Alpha test of reliability for this approach gives a value of 0.612.

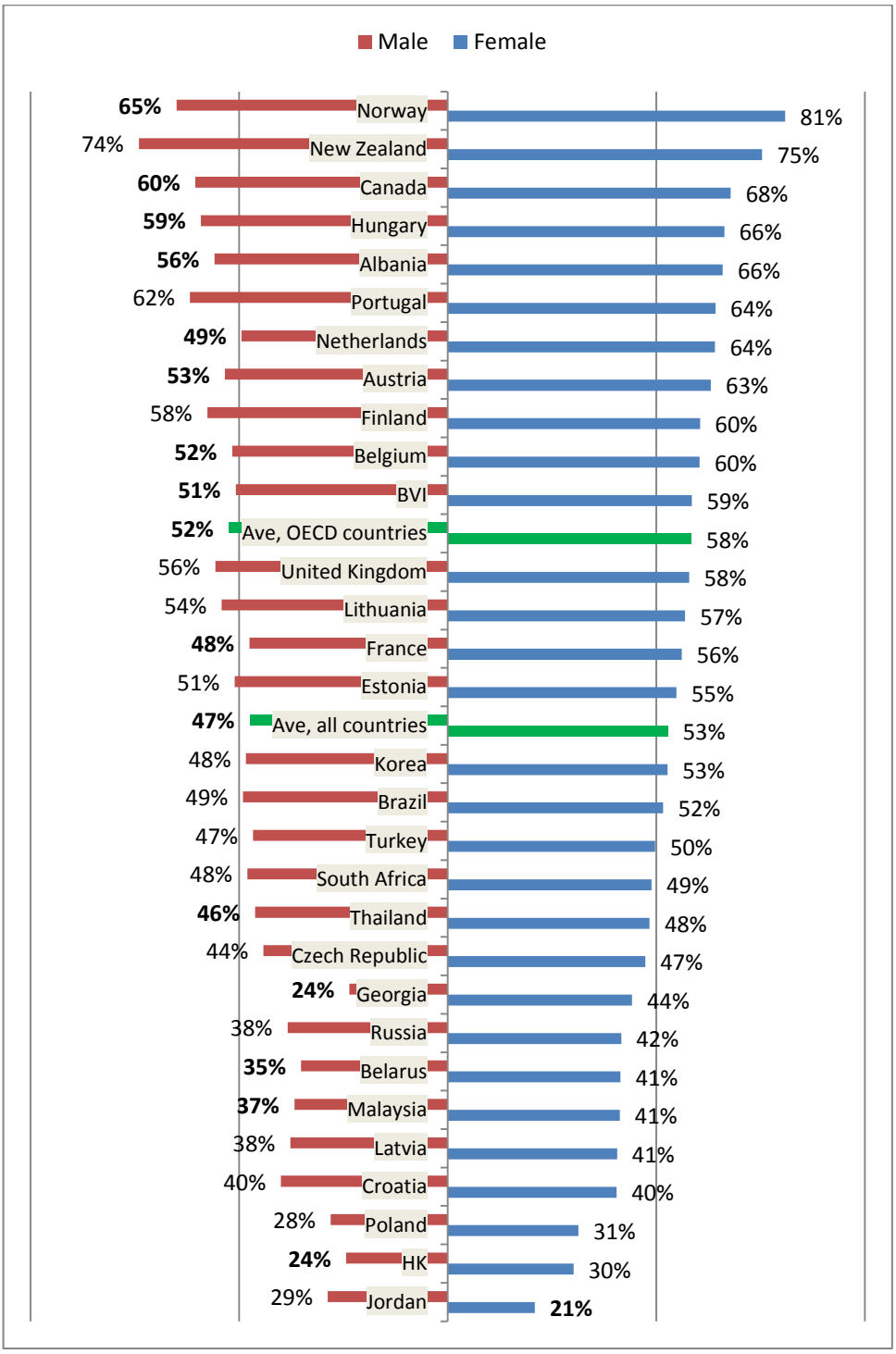
## Gender differences in financial attitudes scores

Figure 13 shows that there are some noticeable differences in financial attitudes between men and women on average across all participating countries and economies, with 53% of women showing positive attitudes towards the longer term compared with just 47% of men.

Men are significantly less likely to have a positive attitude towards the longer term than women in Albania; Austria; Belgium; Belarus; the British Virgin Islands (BVI on the Figure below); Canada; France; Georgia; Hong Kong, China; Hungary; Malaysia; the Netherlands; Norway and Thailand. In Jordan, women are significantly less likely than men to have such an attitude. Women in Norway particularly stand out for having longer-term attitudes than either their male counterparts in Norway or men and women in other countries.

**Figure 13. Minimum target score (more than 3) on financial attitudes by gender**

Percentages (weighted data): all respondents




Notes: Differences significant at 0.05 in **bold (the lower of the two values is highlighted)** BVI refers to the British Virgin Islands, HK refers to Hong Kong, China. Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

## IV. OVERALL LEVELS OF FINANCIAL LITERACY

This chapter creates an indicator of overall levels of financial literacy, by combining the three scores discussed in previous chapters.

**Key findings**

- The average score across all participating countries is just 13.2 out of a possible 21 (a combination of a maximum of 7 for knowledge, 9 for behaviour and 5 for attitudes), and 13.7 for OECD countries only, showing significant room for improvement.
- Some countries with relatively high levels of basic financial knowledge, such as Latvia and Estonia, do not have high overall levels of financial literacy on such a measure due to their financial behaviour scores.
- Countries such as Poland and Croatia may need to target knowledge alongside behaviour, to ensure that their populations understand the principles and become more active money managers, whilst the British Virgin Islands and Malaysia are among countries that need to strengthen financial knowledge in their populations to help individuals fully understand the decisions they are making.

Financial literacy is considered to be a complex phenomenon, made up of a combination of knowledge, attitudes and behaviours, as presented in Figure 14.

This chapter provides an indication of overall financial literacy as measured through a sum of the three components discussed in this report.[27] The resulting score is therefore driven primarily by financial behaviour, which adds up to 9 points of the 21 points possible. This reflects the general understanding that financial well-being results primarily from positive behaviours and that financial education therefore needs to ultimately change behaviour.

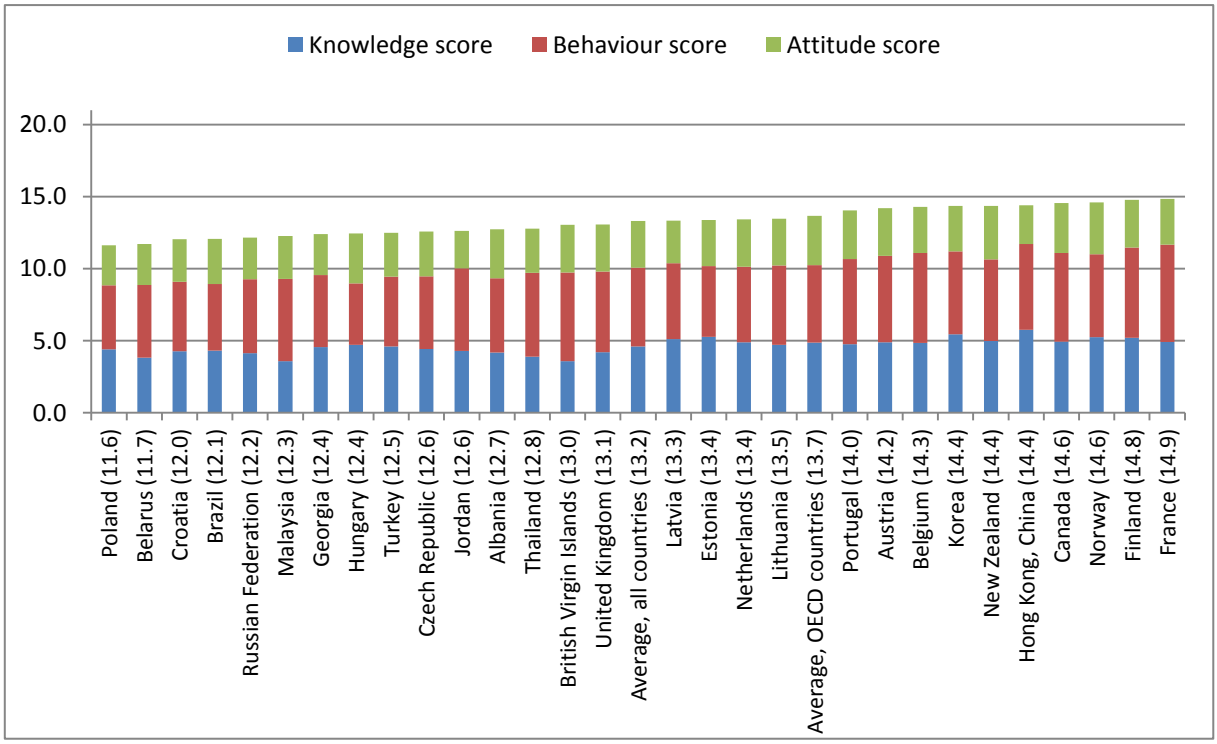
Overall levels of financial literacy are slightly higher in OECD countries (13.7) than in all participating countries and economies (13.2), on average (Figure 14). They are highest in France, due to the extent to which individuals are exhibiting positive financial behaviours. Hong Kong, China is the only non-OECD economy with overall levels of financial literacy above the OECD average. This is driven by relatively high levels of basic financial knowledge.

[27] The basis for combining the three components of financial literacy is based on the definition of financial literacy, not on the statistical properties of such a combination. As countries have some relative strengths and weaknesses in terms of the three components we would not expect them to be strongly correlated.

Figure 14 shows that some countries, such as Latvia and Estonia, need to primarily seek ways of changing behaviour in order to improve overall levels of financial literacy. Other countries, such as Poland and Croatia, need to target knowledge alongside behaviour, to ensure that their populations understand the principles and become more active money managers. The British Virgin Islands and Malaysia are among the countries that need to strengthen financial knowledge (and confidence in that knowledge) in their populations to help individuals fully understand the decisions they are making.

**Figure 14. Financial knowledge, attitudes and behaviour**

Stacked points (weighted data): all respondents, sorted by overall score out of 21 (reported in parenthesis)




Notes: Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight.

## V. FINANCIAL INCLUSION

Financial inclusion refers to access and use of a range of appropriate financial products and services. This section looks at four indicators capturing the extent to which people are using financial products, and three additional indicators created to further explore the issue of financial exclusion.

**Key findings**

- On average across all participating countries and economies, about nine in ten adults are aware of at least five financial products and about three in four hold a payment product (nine in ten and more than eight in ten on average across OECD countries).
- In some countries, practically every adult holds several types of financial product, whilst elsewhere it is still relatively uncommon for adults to manage their financial lives with the help of a payment product or insurance.
- In all participating countries, the majority of people are aware of at least five different types of product. However, there is a large difference in the extent to which people have actively chosen a financial product in the last two years across countries. In countries such as Korea, the Russian Federation and Malaysia in particular, people are active financial consumers.

It is globally recognised that financial literacy and financial inclusion[28], along with a robust consumer protection framework, are vital to the empowerment of individuals and the overall stability of the financial system. It is therefore valuable for policy makers to have information about the levels of financial inclusion of consumers alongside a measure of their financial literacy.

The core questionnaire includes several questions that may provide additional insights into the extent to which people are financially included and active financial consumers. This section focuses on seven initial measures created from these questions, designed to go beyond simple measures of access and provide a more nuanced view of financial inclusion.[29]

[28] Financial inclusion refers to the process of promoting affordable, timely and adequate access to a wide range of regulated financial products and services and broadening their use by all segments of society through the implementation of tailored existing and innovative approaches, including financial awareness and education with a view to promoting financial well-being as well as economic and social inclusion (Atkinson and Messy, 2013).

[29] The OECD/INFE will continue to develop such measures in the future and further explore the relationship between financial literacy and inclusion.

**Product holding**

A set of four indicators identify respondents that currently hold a) some form of saving or retirement product; b) a payment product, current account or mobile money (excluding credit cards, which are counted as a credit product); c) some form of insurance; and d) some credit product or mortgage. Finally, three exploratory measures look at whether consumers are at least aware of the financial products available nationally, whether they are making financial product choices, and whether they have turned to family or friends to help them to save money or make ends meet.

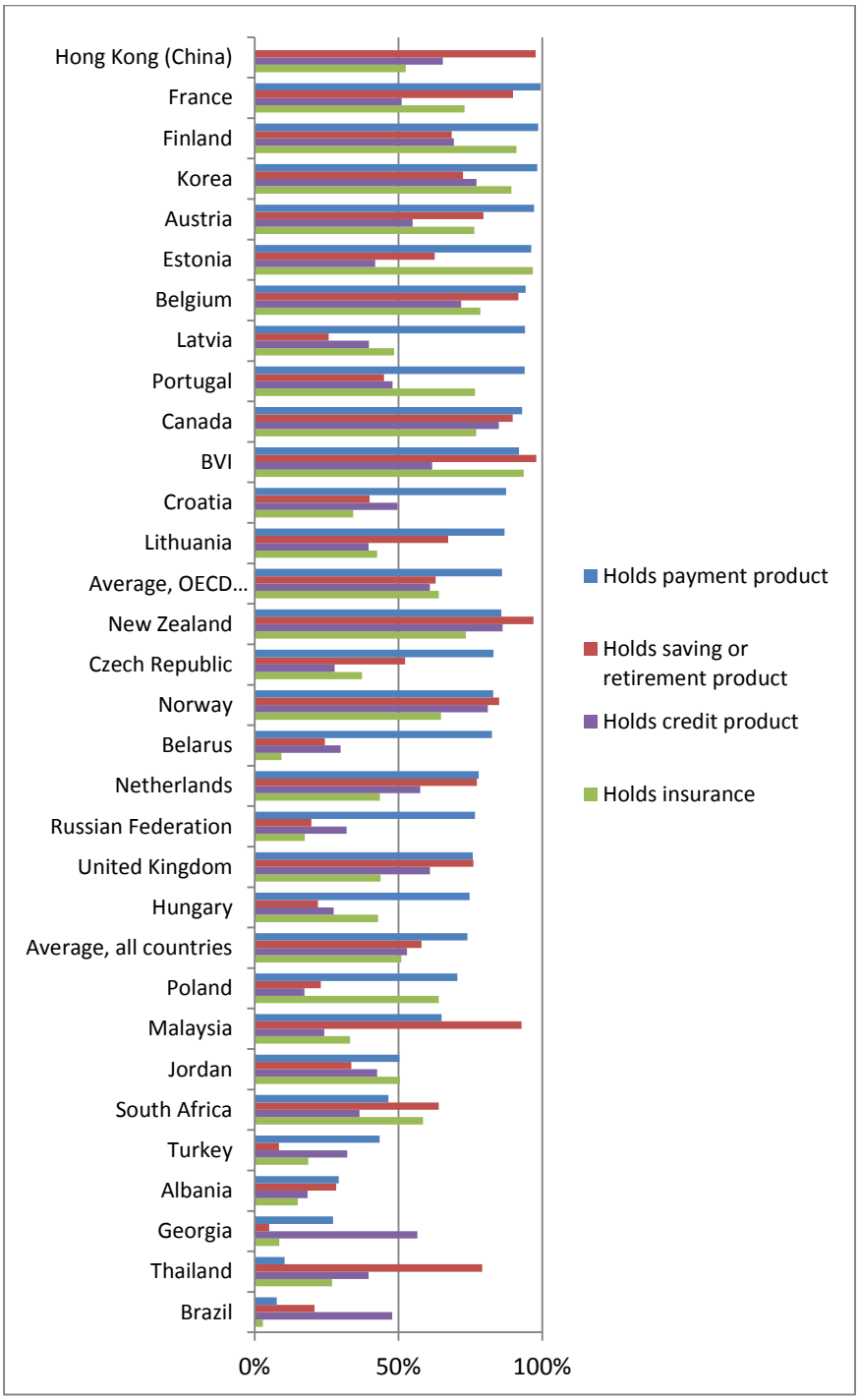
Figure 15 indicates that payment products are commonly held across the majority of participating economies[30] and are typically the most common form of financial product held. However, in some countries, (notably Brazil, Malaysia, South Africa and Thailand) savings products are more widespread than payment products. It is possible that these are being used to provide basic banking facilities.

Insurance use varies widely across countries. The core questionnaire asks a single question about holding insurance (although some countries have added additional questions to explore the types of insurance held), and so this measure is capturing the extent to which people have any insurance including, for example, car insurance, travel insurance or property insurance (note however that 'life insurance' is counted as a savings product). In Estonia (97%) and the British Virgin Islands (94%), insurance use is almost universal, whilst in Brazil (3%), Belarus (9%) and Georgia (9%) fewer than one in ten respondents claimed to hold any form of insurance. Some of the differences may reflect differences in the extent to which certain insurance policies are mandated as well as supply-side factors.

[30] Note that this categorisation separates out savings accounts and payment accounts, and is therefore not comparable to measures of 'banked' and 'unbanked' consumers.

**Figure 15. Product holding**

Percentages (weighted data): all respondents, sorted by percentage holding a payment product




Notes: Using the basic categories in the questionnaire, product holding (Qprod1_b) has been coded as follows: Savings product=pension or retirement product, investment account, savings account, stocks and shares, bonds; Payment product=current/checking account, mobile/cell phone payment account, prepaid debit card; Insurance=Insurance; Credit product=mortgage, secured or unsecured bank loan, credit card, microfinance loan. Country specific responses have also been counted where relevant; and may include informal products. Hong Kong, China did not ask about payment products.

**Product awareness**

Figure 16 shows that in all participating countries, the majority of people are aware of at least five different types of product. Awareness is an important starting point for increasing inclusion, but there may be various barriers on both the demand- and supply-side preventing people from using appropriate products even when they know they exist. It is also important to keep in mind that people may be aware of the existence of a product without understanding its purpose or potential value.

**Product choice**

There is a large difference in the extent to which people have actively chosen a financial product in the last two years across countries. Financial inclusion stands to benefit consumers most if they continue to monitor their products, and consider making changes when new products or services are available or when pricing structures change. Conversely, consumers that take financial products but then fail to monitor them may, for example, hold insurance that does not meet their needs, have credit products charging unnecessarily high levels of interest or transaction accounts that retain more costly and inconvenient payment facilities such as cheques. Furthermore, the lack of demand-side activity in a financial market is likely to reduce the extent to which providers innovate and modernise their products and services.

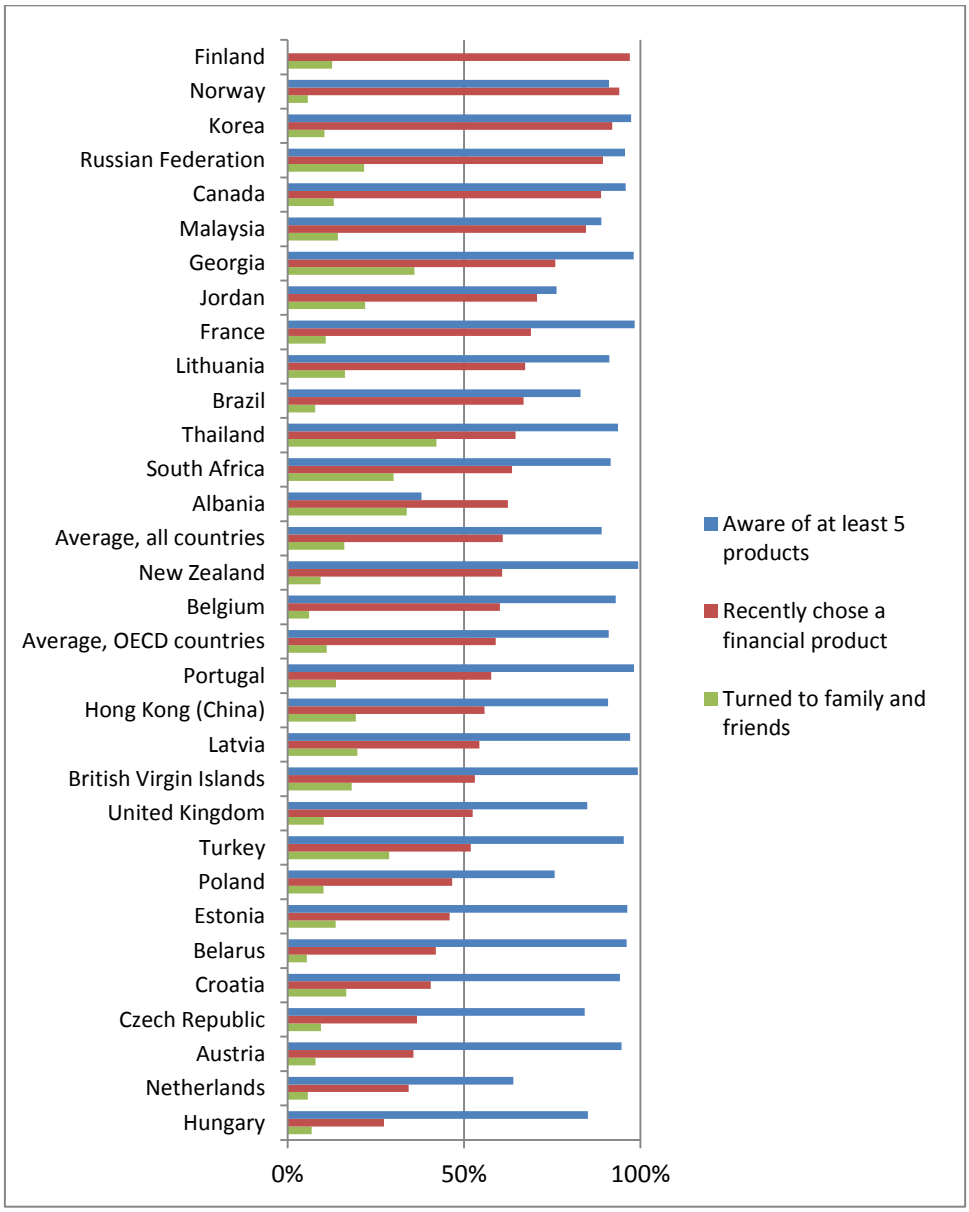
In countries such as Korea, the Russian Federation and Malaysia in particular, people have been active financial consumers in the last two years. Conversely, in other economies, including several in Europe, fewer than half of respondents had made a product choice in the last two years.

**Seeking alternatives to formal financial services**

The final indicator seeks to identify people who potentially lack access to formal financial service providers by drawing on two questions that provide information about turning to family or friends for financial support. The first is the active savings question, which includes the option 'giving money to family to save on your behalf' and the second is the making ends meet question, which includes the option 'borrow from family or friends' (see Section II for more information about these questions). The results show wide variation: in Thailand, for example 42% of respondents reported relying on family or friends in one of these ways in the last 12 months, compared with only 6% in the Netherlands, Belgium and Norway. The results reflect several factors, including the extent to which people are actively saving in any way and the extent to which they are making ends meet, but also suggest that there may be scope for designing low-cost simple products to meet the needs of consumers and take some of the burden away from family and friends in some countries.

**Figure 16. Indicators of financial inclusion**

Percentages (weighted data): all respondents, sorted by 'recently chose a financial product'




Notes: Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight. Responses on products drawn from Qprod1_a (Aware of financial products) and Qprod1_c (Recently chose a financial product). Turned to family and friends uses responses from QF3 and QF13.

## VI. SELECTED POLICY CONCLUSIONS

In the current economic environment of low interest rates and low growth, where increasing numbers of people resort to consumer credit to make everyday purchases, find it hard to make their savings grow and face difficulties in planning ahead for their longer-term financial needs, it is important that everybody has the knowledge, skills, and attitudes to improve their financial outcomes and well-being.

These first highlights from the OECD/INFE international survey reflect the significant variations in these competencies across countries and economies, but also illustrate the overall low levels of financial literacy of the population and make it possible to identify common patterns and clear policy lessons, as discussed below.

The results particularly point to financial education tools – in combination with behavioural insights and digital technologies – which could be further harnessed to improve financial knowledge and support healthy financial behavioural changes.

**Start financial education early and ideally in school**

- Low levels of financial literacy (and in particular knowledge) in the adult population underline the importance of building such competencies early in life and ideally in schools further confirming the OECD Recommendation (OECD, 2005). Financial education in school can make sure that the next generation acquire relevant financial knowledge and the confidence to apply numeracy skills in a financial context, even when many of the adults around them are unable to achieve the minimum target score of 5 out of 7 for financial knowledge.

- Schools can also assist children and young people in developing the skills and attitudes that will help them to achieve financial well-being, and encourage positive habits and behaviours such as making spending plans, saving and planning ahead.

**Strengthen basic financial knowledge across the population, taking into account gender differences**

- Whilst adults in Hong Kong, China are mostly confident and capable when answering basic financial knowledge questions, the same cannot be said for the populations elsewhere. Financial knowledge is an essential – though not sufficient – component of financial literacy. It enables people to know and understand matters such as the ways in which external factors may influence their financial situation or how changes in the financial products they hold will affect them.

- A deeper look at the results indicate that, at least in some countries, the areas of basic knowledge to be addressed in priority are **simple interest and interest compounding**, as

well as **risk diversification**, which are particularly important for consumers choosing and using savings and credit products.

- The findings also indicate the importance of taking into account the **unusual low-interest rate/ low inflation (and even deflation) environment** that consumers in many countries are currently experiencing. It appears that this may be affecting the extent to which they understand the impact of inflation on purchasing power or recognise the importance of being able to calculate interest.

- **Applied numeracy** is an important aspect of this type of knowledge, and one that cannot be fully replaced by digital tools. It is essential that people have a strong foundation in basic calculations such as simple percentages, and rules of thumb that they can apply confidently to help them with financial decisions requiring higher-order mathematics skills such as compound interest.

- In over half of the participating countries and economies, **women had lower levels of financial knowledge** than men. Policy makers need to be aware of these differences and ensure that they are monitored and targeted through gender sensitive policies.[31]

- Positive correlations between financial knowledge and goal setting and between financial knowledge and retirement planning (even after controlling for gender, country, age and education) indicate potential benefits from exploring how knowledge may reinforce positive behaviours.

**Encourage positive financial behaviours to improve financial resilience and reap long-term rewards**

- Across the 30 participating countries and economies, just 51% of the population achieved the minimum target score on financial behaviour (exhibiting six of the nine behaviours that were captured in the survey).

Policy makers have various ways to improve financial behaviour:

- It may be possible to help **to simplify people's lives so that they behave in financially literate** ways, whilst potentially also helping them to find time to focus on other important decisions. The data presented here, for example, suggest that:

    - User-friendly budgeting tools and ways of monitoring income and expenditure could encourage more adults to create a household budget and use real-time data to make necessary changes before falling into difficulty. Similarly, automatic bill payments, and the possibility to pay tax bills or larger expenses in instalments may help some people to manage their outgoings better.

    - Calculators, simulators, reminders and commitment devices could help people focusing on their longer-term priorities and support them in planning ahead.

[31] See the OECD/INFE policy guidance on addressing women's and girls' needs for financial awareness and education (2013), endorsed by G20 leaders in 2013.

- Easier access to information, including tools to compare products and the availability of impartial advice (potentially including well designed and properly regulated robo advice), could help consumers to make smarter financial product choices.

- Financial education initiatives can be designed to take into account the **overall characteristics of the participants and target them specifically**. For example, the data show that active saving and longer-term planning are currently far from being universal behaviours, despite their clear advantages, whilst borrowing to make ends meet is worryingly common in some countries.

  - Financial education that starts with the basics of budgeting could help households to maximise their opportunities and maybe even free up money to save for longer-term needs.

  - Education that applies behavioural insights, such as encouraging people to set goals and commit to them, or that reduce the burden of planning, like calculators, could increase various behaviours, including active savings and longer-term planning.

  - People may also need education and guidance to identify realistic alternatives to borrowing when income is insufficient to make ends meet.

- **Financial inclusion** is important for financial literacy, facilitating a range of ways in which consumers can plan and manage their finances, from saving to insuring against future shocks though the use of appropriate financial products highlighting the importance of ensuring access to financial products alongside financial literacy.

- **Financial regulation and consumer protection frameworks** can also further help people to become more resilient, for example by helping them to avoid becoming trapped in a cycle of debt through using high-cost credit or being fined for falling behind with payments, and by reducing the likelihood that they will choose unsuitable financial products that further weaken their financial situation. Regulated, independent advice services are also essential to guide people through the rapidly evolving financial landscape and meet their long-term goals.

**Keep an eye on people's attitudes**

- Whilst it may be difficult to change people's attitudes in the short run, it is good to know what they are so that they can be taken into account when designing initiatives. Initiatives that aim to show people how to save for the long-term may have little impact on people with short-term attitudes, unless they are first helped to meet their immediate needs. Leveraging on community pressure, or using technology to reach people or send them reminders to save, can also become promising ways of helping people focus on the long term.

**Measure financial literacy using a broad instrument**

- This study illustrates very clearly that a rich survey instrument is useful to have a broad picture of the population financial literacy and of the interconnection between different

aspects of knowledge, skills and attitudes. While the results of this report present an international overview, data collected through the OECD/INFE survey can be further exploited to obtain more refined descriptions at the national level.

- For instance, detailed data show that some populations may be relatively financially knowledgeable, and yet behave in ways that are unlikely to improve their financial well-being; or that short-term attitudes may also be undermining other aspects of financial literacy in some countries. In order to create a comprehensive policy response, it is essential to have a full picture of the extent of the problem in each country – and to be able to further analyse this by key target groups.

**Disseminate the results widely, and consider allowing access to the data**

- The results of this study and national level analyses of these rich data provide information of relevance to a wide range of stakeholders, including policy makers, programme designers, teachers and resource developers. It is therefore valuable to disseminate them through numerous channels, and consider translation into local languages in order to maximise their usefulness.

- Complex and detailed datasets, such as the ones created using the OECD/INFE toolkit, provide the opportunity to explore a wide range of research questions, which in turn can help policy makers to better understand their populations. There would be considerable value in making such data available to academics and researchers in order to fully exploit this potential value-added.

**Repeat the measure over time**

- A national measure provides an interesting window into the behaviours and attitudes of the population at a point in time, and when repeated over time can identify trends, emerging issues and improvements. All of these are useful in shaping and refining a national strategy for financial education, and for targeting specific financial education programmes.

- It is also beneficial to repeat an international measure (perhaps after 4 or 5 years) in order to identify progress in financial education policy worldwide and to explore the extent to which different policy approaches are improving financial literacy and financial well-being.

## REFERENCES


Atkinson, A. and F. Messy (2012), “Measuring Financial Literacy: Results of the OECD INFE Pilot Study”, OECD Working Papers on Finance, Insurance and Private Pensions, No. 15, OECD Publishing, Paris.

Atkinson, A. and F-A. Messy (2013), "Promoting Financial Inclusion through Financial Education: OECD/INFE Evidence, Policies and Practice", *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 34, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/5k3xz6m88smp-en

Hastings, J. S., B. C. Madrian and W. L. Skimmyhorn (2013). Financial literacy, financial education and economic outcomes. Annual Review of Economics, *5*, 347–373. http://doi.org/10.1146/annurev-economics-082312-125807

Kempson, E. (2009), "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, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/5kmddpz7m9zq-en

Mahdzan, N.S. and S.Tabiani (2013) The impact of financial literacy on individual saving, and exploratory study in the Malaysian contest. Transformations in Business and Economics Vol 12. No 1 (28) pp41-55

Messy, F. and C. Monticone (2016a), "Financial Education Policies in Asia and the Pacific", *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 40, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/5jm5b32v5vvc-en

OECD (2005), Recommendation on Principles and Good Practices for Financial Education and Awareness, OECD Publishing, Paris. http://www.oecd.org/daf/fin/financial-education/35108560.pdf

OECD (2016a), "Financial Education in Europe", OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/9789264254855-en

OECD (2016b), “G20/OECD INFE Core Competencies framework on Financial Literacy for Adults” http://www.oecd.org/finance/Core-Competencies-Framework-Adults.pdf

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. OECD Publishing, Paris.

OECD/INFE (2015a) Policy Handbook on National Strategies for Financial Education: http://www.oecd.org/g20/topics/employment-and-social-policy/National-Strategies-Financial-Education-Policy-Handbook.pdf

OECD (2014), PISA 2012 Results: Students and Money: Financial Literacy Skills for the 21st Century (Volume VI), PISA, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264208094-en

OECD/INFE (2015b) Toolkit for Measuring Financial Literacy and Financial Inclusion http://www.oecd.org/daf/fin/financial-education/2015_OECD_INFE_Toolkit_Measuring_Financial_Literacy.pdf

OECD/INFE (2015c) Core Competencies Framework on Financial Literacy for Youth http://www.oecd.org/finance/Core-Competencies-Framework-Youth.pdf

Yoong, J. (2011), "Can Behavioural Economics be used to make Financial Education more Effective?", in *Improving Financial Education Efficiency: OECD-Bank of Italy Symposium on Financial Literacy*, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/9789264108219-6-en

# ANNEX 1: DATA TABLES

**Table 10. Number of respondents per country**

Count (unweighted data): excluding respondents out of target age-range

| Country | Total sample size for analysis in this report – adults aged 18-79 (unweighted) |
|---|---|
| Albania | 1000 |
| Austria | 1886 |
| Belarus | 1200 |
| Belgium | 1933 |
| Brazil | 1974 |
| British Virgin Islands | 1134 |
| Canada | 1002 |
| Croatia | 1049 |
| Czech Republic | 1000 |
| Estonia | 1125 |
| Finland | 1440 |
| France | 1506 |
| Georgia | 1078 |
| Hong Kong, China | 1000 |
| Hungary | 1000 |
| Jordan | 1130 |
| Korea | 2424 |
| Latvia | 1019 |
| Lithuania | 1012 |
| Malaysia | 2889 |
| Netherlands | 1018 |
| New Zealand | 1336 |
| Norway | 1031 |
| Poland | 1000 |
| Portugal | 1006 |
| Russian Federation | 1642 |
| South Africa | 2813 |
| Thailand | 10000 |
| Turkey | 3003 |
| United Kingdom | 1000 |
| **Total** | **51,650** |

**Table 11. Distribution of financial knowledge scores**

Percentages (weighted data): all respondents

| Country | Score=0 | 1 | 2 | 3 | 4 | 5 | 6 | Score=7 |
|---|---|---|---|---|---|---|---|---|
| Albania | 1% | 2% | 9% | 19% | 27% | 27% | 13% | 3% |
| Austria | 2% | 3% | 6% | 8% | 14% | 26% | 21% | 19% |
| Belarus | 3% | 5% | 11% | 17% | 26% | 27% | 10% | 1% |
| Belgium | 1% | 2% | 5% | 13% | 19% | 21% | 21% | 18% |
| Brazil | 0% | 3% | 11% | 16% | 22% | 25% | 16% | 8% |
| British Virgin Islands | 14% | 2% | 7% | 18% | 25% | 24% | 7% | 4% |
| Canada | 0% | 1% | 5% | 12% | 21% | 22% | 18% | 20% |
| Croatia | 1% | 5% | 9% | 20% | 20% | 18% | 18% | 10% |
| Czech Republic | 2% | 4% | 9% | 13% | 20% | 20% | 21% | 11% |
| Estonia | 1% | 2% | 4% | 7% | 13% | 21% | 28% | 25% |
| Finland | 0% | 1% | 5% | 9% | 14% | 20% | 26% | 24% |
| France | 0% | 1% | 4% | 13% | 23% | 22% | 20% | 18% |
| Georgia | 1% | 3% | 6% | 14% | 22% | 25% | 20% | 9% |
| Hong Kong, China | 0% | 1% | 2% | 6% | 8% | 17% | 31% | 36% |
| Hungary | 1% | 2% | 7% | 11% | 19% | 25% | 20% | 15% |
| Jordan | 1% | 5% | 8% | 17% | 23% | 22% | 15% | 9% |
| Korea | 1% | 1% | 3% | 7% | 12% | 22% | 23% | 32% |
| Latvia | 0% | 1% | 3% | 11% | 16% | 23% | 23% | 21% |
| Lithuania | 2% | 3% | 6% | 10% | 19% | 24% | 22% | 14% |
| Malaysia | 8% | 8% | 12% | 17% | 21% | 17% | 11% | 5% |
| Netherlands | 5% | 5% | 6% | 8% | 13% | 15% | 19% | 29% |
| New Zealand | 0% | 2% | 5% | 13% | 17% | 18% | 22% | 23% |
| Norway | 1% | 2% | 6% | 9% | 12% | 15% | 23% | 32% |
| Poland | 2% | 6% | 9% | 11% | 17% | 21% | 25% | 9% |
| Portugal | 1% | 2% | 6% | 14% | 18% | 23% | 28% | 10% |
| Russian Federation | 2% | 6% | 11% | 17% | 19% | 20% | 16% | 10% |
| South Africa | 3% | 4% | 13% | 24% | 25% | 21% | 8% | 1% |
| Thailand | 3% | 5% | 11% | 18% | 22% | 26% | 12% | 3% |
| Turkey | 1% | 2% | 5% | 13% | 21% | 30% | 21% | 8% |
| United Kingdom | 3% | 6% | 10% | 17% | 17% | 17% | 19% | 11% |

**Table 12. Minimum target scores (5 or more) on financial knowledge**

Percentages (weighted data): all respondents

| Country | Percentage scoring 5, 6 or 7 |
|---|---|
| Albania | 43% |
| Austria | 66% |
| Belarus | 38% |
| Belgium | 60% |
| Brazil | 48% |
| British Virgin Islands | 35% |
| Canada | 61% |
| Croatia | 46% |
| Czech Republic | 52% |
| Estonia | 73% |
| Finland | 70% |
| France | 59% |
| Georgia | 55% |
| Hong Kong, China | 84% |
| Hungary | 60% |
| Jordan | 47% |
| Korea | 77% |
| Latvia | 68% |
| Lithuania | 60% |
| Malaysia | 33% |
| Netherlands | 64% |
| New Zealand | 63% |
| Norway | 70% |
| Poland | 55% |
| Portugal | 60% |
| Russian Federation | 45% |
| South Africa | 31% |
| Thailand | 41% |
| Turkey | 58% |
| United Kingdom | 47% |
| Average, all countries | 56% |
| Average, OECD countries | 62% |

Notes: Average, all countries and Average, OECD countries report the mean of the country %. Each country is therefore given equal weight.

**Table 13. Financial knowledge and goal setting**

Logistic regression on goal setting, controlling for financial knowledge, age, country, education and gender, weighted data, missing responses excluded

| | | | | | | | 95% C.I. for EXP(B) | |
|---|---|---|---|---|---|---|---|---|
| | B | S.E. | Wald | df | Sig. | Exp(B) | Lower | Upper |
| **Knowledge score** | .138 | .008 | 289.660 | 1 | .000 | 1.148 | 1.130 | 1.167 |
| **18-19** | -.340 | .069 | 24.196 | 1 | .000 | .712 | .622 | .815 |
| **20-29** | .099 | .042 | 5.480 | 1 | .019 | 1.104 | 1.016 | 1.199 |
| **30-39** | .170 | .042 | 16.659 | 1 | .000 | 1.186 | 1.093 | 1.287 |
| **50-59** | -.316 | .042 | 55.535 | 1 | .000 | .729 | .671 | .792 |
| **60-69** | -.766 | .046 | 271.910 | 1 | .000 | .465 | .424 | .509 |
| **70-79** | -1.190 | .059 | 405.992 | 1 | .000 | .304 | .271 | .341 |
| **Albania** | -.080 | .097 | .681 | 1 | .409 | .923 | .764 | 1.116 |
| **Belarus** | .426 | .092 | 21.258 | 1 | .000 | 1.531 | 1.277 | 1.834 |
| **British Virgin Islands** | 1.048 | .103 | 103.114 | 1 | .000 | 2.853 | 2.331 | 3.493 |
| **Czech Republic** | -.120 | .097 | 1.505 | 1 | .220 | .887 | .733 | 1.074 |
| **Estonia** | -.082 | .093 | .789 | 1 | .374 | .921 | .768 | 1.105 |
| **Georgia** | .280 | .094 | 8.856 | 1 | .003 | 1.323 | 1.100 | 1.591 |
| **Hong Kong, China** | -.074 | .096 | .596 | 1 | .440 | .929 | .769 | 1.121 |
| **Hungary** | .010 | .097 | .011 | 1 | .918 | 1.010 | .836 | 1.220 |
| **Jordan** | .655 | .102 | 41.309 | 1 | .000 | 1.925 | 1.576 | 2.350 |
| **Latvia** | 1.032 | .101 | 103.936 | 1 | .000 | 2.805 | 2.301 | 3.421 |
| **Lithuania** | .204 | .096 | 4.540 | 1 | .033 | 1.227 | 1.017 | 1.481 |
| **Malaysia** | 1.069 | .083 | 166.501 | 1 | .000 | 2.912 | 2.476 | 3.425 |
| **The Netherlands** | -.485 | .095 | 25.827 | 1 | .000 | .616 | .511 | .742 |
| **Norway** | .395 | .097 | 16.744 | 1 | .000 | 1.485 | 1.229 | 1.794 |
| **Poland** | -.384 | .099 | 15.107 | 1 | .000 | .681 | .561 | .827 |
| **Russian Federation** | .506 | .088 | 33.251 | 1 | .000 | 1.659 | 1.397 | 1.970 |
| **Thailand** | 2.006 | .078 | 668.506 | 1 | .000 | 7.430 | 6.382 | 8.650 |
| **Turkey** | .314 | .081 | 14.866 | 1 | .000 | 1.369 | 1.167 | 1.606 |
| **Technical/vocational beyond secondary** | -.164 | .047 | 11.882 | 1 | .001 | .849 | .774 | .932 |
| **Complete secondary** | -.384 | .039 | 97.661 | 1 | .000 | .681 | .632 | .735 |
| **Some secondary** | -.577 | .050 | 131.599 | 1 | .000 | .562 | .509 | .620 |
| **Complete primary** | -.690 | .049 | 199.540 | 1 | .000 | .501 | .456 | .552 |
| **Some primary** | -.859 | .068 | 157.158 | 1 | .000 | .424 | .371 | .485 |
| **No formal education** | -1.200 | .129 | 86.766 | 1 | .000 | .301 | .234 | .388 |
| **Male** | -.034 | .026 | 1.762 | 1 | .184 | .966 | .918 | 1.017 |
| **Constant** | -.082 | .087 | .889 | 1 | .346 | .921 | | |

Notes: Comparison variables are age= 40 to 49; Country=UK, gender= Female. Cox * Snell R Square 0.156

**Table 14. Financial knowledge and retirement planning**

Logistic regression on retirement planning, controlling for financial knowledge, age, country, education and gender, weighted data, missing responses excluded

| | | | | | | | 95% C.I. for EXP(B) | |
|---|---|---|---|---|---|---|---|---|
| | B | S.E. | Wald | df | Sig. | Exp(B) | Lower | Upper |
| **Knowledge score** | .063 | .007 | 75.610 | 1 | .000 | 1.065 | 1.050 | 1.080 |
| **18-19** | -.694 | .069 | 102.069 | 1 | .000 | .499 | .436 | .571 |
| **20-29** | -.395 | .037 | 113.359 | 1 | .000 | .673 | .626 | .724 |
| **30-39** | -.098 | .035 | 7.804 | 1 | .005 | .906 | .846 | .971 |
| **50-59** | .288 | .037 | 60.934 | 1 | .000 | 1.333 | 1.240 | 1.433 |
| **60-69** | .652 | .040 | 267.923 | 1 | .000 | 1.920 | 1.775 | 2.076 |
| **70-79** | .762 | .049 | 241.246 | 1 | .000 | 2.143 | 1.946 | 2.359 |
| **Albania** | 2.382 | .091 | 682.341 | 1 | .000 | 10.831 | 9.058 | 12.951 |
| **Belarus** | 3.034 | .081 | 1413.902 | 1 | 0.000 | 20.772 | 17.734 | 24.331 |
| **Belgium** | 3.925 | .075 | 2764.362 | 1 | 0.000 | 50.659 | 43.763 | 58.641 |
| **Brazil** | 2.999 | .075 | 1595.795 | 1 | 0.000 | 20.059 | 17.314 | 23.238 |
| **British Virgin Islands** | 2.521 | .089 | 807.436 | 1 | .000 | 12.441 | 10.456 | 14.804 |
| **Canada** | 2.529 | .086 | 871.017 | 1 | .000 | 12.544 | 10.605 | 14.839 |
| **Croatia** | 2.494 | .094 | 703.288 | 1 | .000 | 12.111 | 10.072 | 14.562 |
| **Czech Republic** | 2.341 | .091 | 657.753 | 1 | .000 | 10.390 | 8.688 | 12.425 |
| **Estonia** | .329 | .133 | 6.113 | 1 | .013 | 1.390 | 1.071 | 1.804 |
| **Georgia** | 1.521 | .097 | 245.136 | 1 | .000 | 4.576 | 3.783 | 5.536 |
| **Hong Kong, China** | 2.522 | .087 | 847.940 | 1 | .000 | 12.457 | 10.512 | 14.762 |
| **Hungary** | 1.929 | .097 | 399.397 | 1 | .000 | 6.882 | 5.696 | 8.316 |
| **Jordan** | 2.829 | .085 | 1113.353 | 1 | .000 | 16.930 | 14.338 | 19.990 |
| **Latvia** | 1.034 | .112 | 85.932 | 1 | .000 | 2.811 | 2.259 | 3.498 |
| **Lithuania** | 1.981 | .092 | 464.571 | 1 | .000 | 7.251 | 6.056 | 8.682 |
| **Malaysia** | .743 | .097 | 58.314 | 1 | .000 | 2.103 | 1.737 | 2.544 |
| **Netherlands** | 2.215 | .087 | 641.405 | 1 | .000 | 9.157 | 7.715 | 10.869 |
| **New Zealand** | 2.781 | .078 | 1260.576 | 1 | .000 | 16.129 | 13.834 | 18.805 |
| **Norway** | 2.101 | .089 | 556.181 | 1 | .000 | 8.171 | 6.862 | 9.729 |
| **Poland** | 2.139 | .094 | 515.790 | 1 | .000 | 8.490 | 7.059 | 10.211 |
| **Portugal** | -.138 | .191 | .521 | 1 | .470 | .871 | .599 | 1.267 |
| **Russian Federation** | 1.831 | .084 | 476.640 | 1 | .000 | 6.239 | 5.294 | 7.354 |
| **South Africa** | 1.812 | .079 | 528.614 | 1 | .000 | 6.122 | 5.246 | 7.145 |
| **Thailand** | 2.979 | .061 | 2405.139 | 1 | 0.000 | 19.675 | 17.466 | 22.163 |
| **Turkey** | 2.900 | .069 | 1745.017 | 1 | 0.000 | 18.174 | 15.862 | 20.823 |
| **Technical/vocational beyond secondary** | -.279 | .041 | 45.922 | 1 | .000 | .756 | .698 | .820 |
| **Complete secondary** | -.433 | .033 | 168.446 | 1 | .000 | .649 | .608 | .693 |
| **Some secondary** | -.705 | .042 | 284.313 | 1 | .000 | .494 | .455 | .536 |
| **Complete primary** | -.930 | .043 | 463.705 | 1 | .000 | .395 | .363 | .430 |
| **Some primary** | -1.020 | .052 | 383.032 | 1 | .000 | .360 | .325 | .399 |
| **No formal education** | -.867 | .096 | 82.111 | 1 | .000 | .420 | .348 | .507 |
| **Male** | .106 | .022 | 22.339 | 1 | .000 | 1.112 | 1.064 | 1.161 |
| **Constant** | -3.285 | .075 | 1923.779 | 1 | 0.000 | .037 | | |

Notes: Comparison variables are age= 40 to 49; Country=UK, gender= Female.

**Table 15. Self-reported financial knowledge**

Percentages (weighted data): missing responses excluded

| Country | Self-reported level of knowledge (QK1) | | | | | |
|---|---|---|---|---|---|---|
| | Very high | Quite high | About average | Quite low | Very low | Unweighted count |
| Albania | 2% | 11% | 49% | 27% | 11% | 988 |
| Austria | 14% | 28% | 36% | 22% | | 1873 |
| Belarus | 2% | 10% | 57% | 17% | 15% | 1152 |
| Belgium | 2% | 17% | 64% | 13% | 4% | 1913 |
| Brazil | 3% | 24% | 38% | 25% | 9% | 1943 |
| British Virgin Islands | 19% | 32% | 37% | 6% | 5% | 950 |
| Canada | 7% | 21% | 56% | 11% | 4% | 994 |
| Croatia | 4% | 19% | 49% | 21% | 7% | 1025 |
| Czech Republic | 1% | 12% | 46% | 30% | 10% | 963 |
| Estonia | 4% | 27% | 58% | 9% | 2% | 1089 |
| Finland | 39% | 35% | 20% | 4% | 1% | 1428 |
| Georgia | 4% | 13% | 66% | 12% | 5% | 1029 |
| Hong Kong, China | 2% | 16% | 64% | 15% | 3% | 999 |
| Hungary | 1% | 14% | 63% | 17% | 5% | 990 |
| Jordan | 6% | 20% | 54% | 17% | 2% | 1114 |
| Latvia | 11% | 29% | 38% | 15% | 7% | 979 |
| Lithuania | 5% | 24% | 50% | 15% | 6% | 995 |
| Malaysia | 3% | 26% | | 58% | 13% | 2427 |
| Netherlands | 7% | 31% | 46% | 14% | 2% | 975 |
| New Zealand | 6% | 28% | 55% | 8% | 3% | 1328 |
| Norway | 8% | 32% | 54% | 5% | 1% | 984 |
| Poland | 1% | 10% | 51% | 27% | 12% | 963 |
| Portugal | 2% | 7% | 56% | 27% | 8% | 973 |
| Russian Federation | 4% | 12% | 59% | 18% | 8% | 1521 |
| South Africa | 7% | 18% | 44% | 17% | 14% | 2697 |
| Thailand | 1% | 15% | 68% | 13% | 2% | 10000 |
| Turkey | 2% | 11% | 56% | 17% | 14% | 2939 |
| United Kingdom | 8% | 24% | 57% | 8% | 4% | 982 |

Note: May not sum to 100% as don’t know and refused are not reported.

**Table 16. Financial knowledge scores**

OLS Regression on financial knowledge scores, controlling for age, country, education and gender; weighted data, missing responses excluded listwise

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| **(Constant)** | 4.680 | .054 | | 86.960 | 0.000 |
| **18-19** | -.355 | .037 | -.042 | -9.534 | .000 |
| **20-29** | -.213 | .022 | -.050 | -9.600 | .000 |
| **30-39** | -.097 | .022 | -.023 | -4.456 | .000 |
| **50-59** | -.034 | .023 | -.007 | -1.455 | .146 |
| **60-69** | -.148 | .025 | -.028 | -5.805 | .000 |
| **70-79** | -.367 | .031 | -.054 | -11.701 | .000 |
| **Albania** | .116 | .070 | .009 | 1.641 | .101 |
| **Austria** | .715 | .062 | .079 | 11.597 | .000 |
| **Belarus** | -.406 | .067 | -.036 | -6.061 | .000 |
| **Belgium** | .926 | .062 | .104 | 14.963 | .000 |
| **Brazil** | .453 | .062 | .051 | 7.288 | .000 |
| **British Virgin Islands** | -.217 | .071 | -.017 | -3.067 | .002 |
| **Canada** | .569 | .070 | .046 | 8.130 | .000 |
| **Croatia** | .601 | .071 | .050 | 8.430 | .000 |
| **Czech Republic** | .400 | .071 | .032 | 5.663 | .000 |
| **Estonia** | 1.018 | .068 | .087 | 14.980 | .000 |
| **Finland** | .978 | .065 | .094 | 15.123 | .000 |
| **France** | .677 | .064 | .067 | 10.597 | .000 |
| **Georgia** | .227 | .069 | .019 | 3.307 | .001 |
| **Hong Kong, China** | 1.604 | .070 | .130 | 22.919 | .000 |
| **Hungary** | .684 | .070 | .055 | 9.723 | .000 |
| **Jordan** | -.132 | .069 | -.011 | -1.915 | .055 |
| **Korea** | 1.176 | .059 | .145 | 19.888 | .000 |
| **Latvia** | .873 | .070 | .071 | 12.544 | .000 |
| **Lithuania** | .524 | .070 | .043 | 7.492 | .000 |
| **Malaysia** | -.470 | .058 | -.063 | -8.072 | .000 |
| **Netherlands** | .550 | .070 | .045 | 7.902 | .000 |
| **New Zealand** | .670 | .066 | .062 | 10.225 | .000 |
| **Norway** | .962 | .069 | .079 | 13.858 | .000 |
| **Poland** | .361 | .070 | .029 | 5.127 | .000 |
| **Portugal** | .778 | .071 | .063 | 11.026 | .000 |
| **Russian Federation** | -.076 | .063 | -.008 | -1.197 | .231 |
| **South Africa** | -.257 | .059 | -.034 | -4.363 | .000 |
| **Thailand** | .002 | .053 | .001 | .043 | .966 |
| **Turkey** | .608 | .058 | .084 | 10.394 | .000 |
| **Technical/vocational beyond secondary** | -.527 | .025 | -.106 | -20.885 | .000 |
| **Complete secondary** | -.582 | .021 | -.155 | -28.320 | .000 |
| **Some secondary** | -.874 | .025 | -.182 | -34.741 | .000 |
| **Complete primary** | -1.022 | .027 | -.204 | -37.814 | 0.000 |
| **Some primary** | -1.270 | .034 | -.186 | -37.088 | .000 |
| **No formal education** | -1.666 | .061 | -.119 | -27.447 | .000 |
| **Male** | .317 | .014 | .093 | 23.027 | .000 |

Notes: Comparison variables are age= 40 to 49; Country=UK, gender= Female. Adjusted R square 0.17

**Table 17. Minimum target score (5 or more) on financial knowledge by gender**

Percentages (weighted data); all respondents

| Country | Percentage scoring 5, 6, or 7 | |
|---|---|---|
| | Female | Male |
| Albania | 44% | 42% |
| Austria | 62% | 71% |
| Belarus | 39% | 36% |
| Belgium | 52% | 68% |
| Brazil | 44% | 52% |
| British Virgin Islands | 33% | 39% |
| Canada | 50% | 72% |
| Croatia | 46% | 46% |
| Czech Republic | 50% | 54% |
| Estonia | 73% | 74% |
| Finland | 65% | 75% |
| France | 54% | 66% |
| Georgia | 51% | 60% |
| Hong Kong, China | 80% | 89% |
| Hungary | 58% | 61% |
| Jordan | 34% | 57% |
| Korea | 72% | 81% |
| Latvia | 67% | 68% |
| Lithuania | 53% | 68% |
| Malaysia | 32% | 35% |
| Netherlands | 51% | 76% |
| New Zealand | 52% | 74% |
| Norway | 56% | 84% |
| Poland | 53% | 56% |
| Portugal | 54% | 67% |
| Russian Federation | 44% | 47% |
| South Africa | 28% | 34% |
| Thailand | 40% | 42% |
| Turkey | 51% | 64% |
| United Kingdom | 37% | 58% |
| **Average, all countries** | **51%** | **61%** |
| **Average, OECD countries** | **56%** | **69%** |

Notes: Average, all countries and Average, OECD countries report the mean of the country %. Each country is therefore given equal weight.

**Table 18. Active savers**

Percentage (weighted data): all respondents

| Country | Percentage reporting that they had saved in the last 12 months (QF3) |
|---|---|
| Albania | 43% |
| Austria | 69% |
| Belarus | 49% |
| Belgium | 75% |
| Brazil | 30% |
| British Virgin Islands | 66% |
| Canada | 79% |
| Croatia | 63% |
| Czech Republic | 59% |
| Estonia | 40% |
| Finland | 62% |
| France | 83% |
| Georgia | 35% |
| Hong Kong, China | 73% |
| Hungary | 27% |
| Jordan | 72% |
| Korea | 61% |
| Latvia | 36% |
| Lithuania | 53% |
| Malaysia | 81% |
| Netherlands | 71% |
| New Zealand | 77% |
| Norway | 84% |
| Poland | 34% |
| Portugal | 37% |
| Russian Federation | 55% |
| South Africa | 40% |
| Thailand | 86% |
| Turkey | 51% |
| United Kingdom | 72% |
| **Average, all countries** | **59%** |
| **Average, OECD countries** | **60%** |

Notes: Average, all countries and Average, OECD countries report the mean of the country %. Each country is therefore given equal weight. Does not include 'building up money in bank account' as this is not considered to be an action.

**Table 19. Principal components analysis: financial behaviour**

Weighted data: all respondents

| KMO and Bartlett's Test | | | Single component solution | Rotated component | | |
|---|---|---|---|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .689 | | | | |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 26479.130 | | | | |
| | df | 28 | 1 | 1 | 2 | 3 |
| | Sig. | 0.000 | | | | |
| Budget responsibility and has budget | | | .317 | .165 | .497 | -.328 |
| Active saver | | | .335 | .035 | .722 | .213 |
| Considered purchase | | | .589 | .694 | -.066 | -.226 |
| Timely bill payment | | | .632 | .676 | -.026 | .263 |
| Keeping watch on financial affairs | | | .724 | .753 | .079 | .046 |
| Long term financial goals | | | .643 | .542 | .367 | .029 |
| Choosing products | | | .214 | -.032 | .639 | -.081 |
| Borrowing to make ends meet | | | .161 | .090 | -.004 | .889 |

**Table 20. Making ends meet**

Percentages (weighted data): all respondents

| Country | Respondent reported that their income did not always cover their living costs (QF11) | Respondent borrowed to make ends meet (% of all respondents; QF12) |
|---|---|---|
| Albania | 54% | 41% |
| Austria | 16% | 11% |
| Belarus | 57% | 41% |
| Belgium | 24% | 6% |
| Brazil | 37% | 19% |
| British Virgin Islands | 32% | 23% |
| Canada | 32% | 13% |
| Croatia | 35% | 20% |
| Czech Republic | 18% | 13% |
| Estonia | 24% | 17% |
| Finland | 30% | 14% |
| France | 40% | 12% |
| Georgia | 61% | 45% |
| Hong Kong, China | 16% | 9% |
| Hungary | 26% | 11% |
| Jordan | 32% | 19% |
| Korea | 19% | 12% |
| Latvia | 37% | 26% |
| Lithuania | 30% | 22% |
| Malaysia | 47% | 22% |
| Netherlands | 26% | 13% |
| New Zealand | 33% | 11% |
| Norway | 15% | 9% |
| Poland | 18% | 13% |
| Portugal | 35% | 16% |
| Russian Federation | 36% | 24% |
| South Africa | 49% | 33% |
| Thailand | 64% | 45% |
| Turkey | 50% | 42% |
| United Kingdom | 23% | 7% |
| **Average, all countries** | **34%** | **20%** |
| **Average, OECD countries** | **27%** | **14%** |

Notes: Average, all countries and Average, OECD countries report the mean of the country %. Each country is therefore given equal weight.

**Table 21. Choosing financial products**

Percentages (weighted data): all respondents, sorted by Column 3

| Country | Percentage giving positive responses to questions on choosing financial products (all respondents) | | | Percentage giving positive responses to questions on choosing financial products (Respondents who had made a choice) | | |
|---|---|---|---|---|---|---|
| | Column 1 | Column 2 | Column 3 | Column 4 | Column 5 | Column 6 |
| | Made an attempt to shop around (Qprod2) | Sources of information (Qprod3) | | Percentage of those who chose a product who made an attempt to shop around | Sources of information (Percentage of those who chose a product) | |
| | Considered several options or looked around for options to consider but found none | *Some information* [not adverts; not independent] | *Independent information* | Considered several options or looked around for options to consider but found none | *Some information* [not adverts; not independent] | *Independent information* |
| Georgia | 44% | 45% | 0% | 58% | 59% | 0% |
| Finland | 29% | 65% | 4% | 30% | 67% | 4% |
| Estonia | 24% | 38% | 4% | 50% | 79% | 8% |
| New Zealand | 28% | 28% | 5% | 46% | 47% | 9% |
| Belarus | 14% | 28% | 6% | 33% | 67% | 13% |
| France | 32% | 73% | 6% | 35% | 76% | 7% |
| Albania | 22% | 49% | 6% | 35% | 78% | 10% |
| Turkey | 35% | 48% | 6% | 56% | 82% | 11% |
| Korea | 41% | 83% | 6% | 42% | 84% | 6% |
| Croatia | 27% | 29% | 7% | 67% | 72% | 17% |
| Latvia | 33% | 43% | 8% | 59% | 76% | 15% |
| Hungary | 16% | 17% | 8% | 57% | 63% | 30% |
| British Virgin Islands | 42% | 74% | 9% | 43% | 75% | 10% |
| Brazil | 28% | 47% | 9% | 42% | 59% | 10% |
| Portugal | 45% | 76% | 10% | 50% | 77% | 14% |
| Poland | 23% | 32% | 10% | 47% | 63% | 21% |
| Malaysia | 30% | 49% | 11% | 35% | 55% | 12% |
| Norway | 23% | 47% | 12% | 25% | 50% | 13% |
| Czech Republic | 14% | 22% | 14% | 38% | 60% | 37% |
| Thailand | 36% | 57% | 14% | 44% | 67% | 19% |
| Netherlands | 21% | 13% | 16% | 55% | 34% | 43% |
| Russian Federation | 35% | 41% | 17% | 37% | 45% | 17% |
| Canada | 38% | 52% | 17% | 43% | 58% | 19% |
| Hong Kong, China | 23% | 21% | 17% | 41% | 38% | 31% |
| Austria | 34% | 56% | 18% | 39% | 55% | 25% |
| United Kingdom | 36% | 27% | 19% | 65% | 46% | 35% |
| Lithuania | 33% | 41% | 22% | 50% | 60% | 33% |
| Jordan | 22% | 39% | 23% | 31% | 45% | 28% |
| Belgium | 26% | 33% | 24% | 43% | 55% | 39% |
| **Average, all countries** | **29%** | **44%** | **12%** | 44% | 62% | 19% |
| **Average, OECD countries** | **29%** | **45%** | **11%** | 46% | 63% | 20% |

Notes: Derived variables from responses to Qprod2 and Qprod3– see Table 9 and Annex 1. Note that South Africa did not ask these questions. Average, all countries and Average, OECD countries report the mean of the country/economy percentages. Each country/economy is therefore given equal weight. Columns 4, 5 and 6 are calculated on all those who had made any product choice in the last 2 years, using Qprod_c where this is recorded, or a suitable proxy.

**Table 22. Choosing financial products score**

Percentages (weighted data): all respondents, sorted by 'used independent information or advice'

| Country | Percentage with a score of 1 or 2 on derived variable | |
|---|---|---|
| | 1 Some attempt to make informed decision or sought some advice | 2 Used independent information or advice |
| Albania | 50% | 6% |
| Austria | 60% | 18% |
| Belarus | 31% | 6% |
| Belgium | 33% | 24% |
| Brazil | 54% | 9% |
| British Virgin Islands | 81% | 9% |
| Canada | 59% | 17% |
| Croatia | 31% | 7% |
| Czech Republic | 22% | 14% |
| Estonia | 39% | 4% |
| Finland | 72% | 4% |
| France | 78% | 6% |
| Georgia | 56% | 0% |
| Hong Kong, China | 21% | 17% |
| Hungary | 18% | 8% |
| Jordan | 41% | 23% |
| Korea | 88% | 6% |
| Latvia | 46% | 8% |
| Lithuania | 43% | 22% |
| Malaysia | 56% | 11% |
| Netherlands | 15% | 16% |
| New Zealand | 38% | 5% |
| Norway | 48% | 12% |
| Poland | 34% | 10% |
| Portugal | 78% | 10% |
| Russian Federation | 46% | 17% |
| Thailand | 60% | 14% |
| Turkey | 53% | 6% |
| United Kingdom | 32% | 19% |
| **Average, all countries** | **48%** | **12%** |
| **Average, OECD countries** | **48%** | **11%** |

Notes: Average, all countries and Average, OECD countries report the mean of the country %. Each country is therefore given equal weight.

**Table 23. Distribution of financial behaviour scores**

Percentages (weighted data): all respondents

| Country | Score=0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Score=9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Albania | 0% | 2% | 4% | 12% | 17% | 20% | 20% | 16% | 7% | 2% |
| Austria | 0% | 1% | 2% | 5% | 7% | 16% | 25% | 27% | 14% | 3% |
| Belarus | 0% | 2% | 6% | 12% | 16% | 19% | 23% | 15% | 5% | 1% |
| Belgium | | 0% | 1% | 3% | 9% | 17% | 25% | 26% | 14% | 6% |
| Brazil | 0% | 5% | 10% | 13% | 17% | 18% | 20% | 12% | 4% | 1% |
| British Virgin Islands | 0% | 0% | 2% | 4% | 8% | 14% | 25% | 31% | 15% | 1% |
| Canada | | 1% | 2% | 5% | 9% | 16% | 20% | 24% | 19% | 5% |
| Croatia | 1% | 4% | 9% | 14% | 16% | 17% | 18% | 14% | 6% | 1% |
| Czech Republic | 1% | 3% | 6% | 8% | 17% | 22% | 20% | 16% | 5% | 2% |
| Estonia | 1% | 3% | 5% | 11% | 19% | 23% | 18% | 14% | 4% | 1% |
| Finland | 0% | 0% | 1% | 3% | 9% | 15% | 21% | 25% | 23% | 1% |
| France | | | 0% | 2% | 4% | 9% | 21% | 32% | 30% | 2% |
| Georgia | 0% | 0% | 4% | 10% | 19% | 29% | 20% | 12% | 4% | |
| Hong Kong, China | | 0% | 2% | 5% | 11% | 19% | 22% | 26% | 7% | 7% |
| Hungary | 1% | 5% | 10% | 19% | 21% | 19% | 13% | 8% | 2% | 1% |
| Jordan | | 1% | 4% | 9% | 12% | 15% | 19% | 23% | 15% | 3% |
| Korea | | 1% | 3% | 9% | 12% | 18% | 20% | 18% | 17% | 2% |
| Latvia | 1% | 2% | 5% | 9% | 14% | 21% | 21% | 18% | 8% | 1% |
| Lithuania | 0% | 1% | 4% | 6% | 16% | 22% | 22% | 16% | 9% | 4% |
| Malaysia | 0% | 1% | 4% | 9% | 14% | 16% | 17% | 20% | 16% | 3% |
| Netherlands | 0% | 2% | 5% | 10% | 16% | 22% | 20% | 15% | 8% | 3% |
| New Zealand | 0% | 1% | 2% | 6% | 12% | 19% | 26% | 23% | 9% | 1% |
| Norway | 0% | 1% | 2% | 5% | 12% | 21% | 23% | 21% | 10% | 3% |
| Poland | 1% | 4% | 11% | 17% | 19% | 18% | 16% | 9% | 4% | 1% |
| Portugal | 1% | 0% | 2% | 6% | 9% | 16% | 26% | 24% | 13% | 3% |
| Russian Federation | 0% | 3% | 6% | 11% | 16% | 19% | 20% | 15% | 8% | 2% |
| Thailand | 0% | 1% | 3% | 7% | 12% | 17% | 21% | 24% | 13% | 3% |
| Turkey | 0% | 3% | 9% | 13% | 17% | 20% | 18% | 13% | 6% | 1% |
| United Kingdom | 0% | 1% | 3% | 9% | 15% | 19% | 22% | 18% | 9% | 4% |

**Table 24. Minimum target score (6 or more) on financial behaviour**

Percentages (weighted data): all respondents

| Country | Percentage achieving minimum target scores | | |
|---|---|---|---|
| | All | Female | Male |
| Albania | 45% | 45% | 44% |
| Austria | 68% | 72% | 65% |
| Belarus | 44% | 47% | 40% |
| Belgium | 70% | 70% | 71% |
| Brazil | 36% | 33% | 40% |
| British Virgin Islands | 72% | 70% | 75% |
| Canada | 68% | 68% | 67% |
| Croatia | 40% | 41% | 38% |
| Czech Republic | 42% | 44% | 41% |
| Estonia | 38% | 40% | 36% |
| Finland | 71% | 72% | 70% |
| France | 85% | 85% | 85% |
| Georgia | 36% | 35% | 38% |
| Hong Kong, China | 63% | 65% | 60% |
| Hungary | 25% | 26% | 23% |
| Jordan | 59% | 53% | 64% |
| Korea | 57% | 60% | 55% |
| Latvia | 48% | 52% | 44% |
| Lithuania | 51% | 49% | 53% |
| Malaysia | 57% | 58% | 55% |
| Netherlands | 45% | 44% | 46% |
| New Zealand | 59% | 64% | 53% |
| Norway | 58% | 59% | 57% |
| Poland | 31% | 31% | 30% |
| Portugal | 66% | 66% | 66% |
| Russian Federation | 44% | 45% | 44% |
| South Africa | | | No score |
| Thailand | 61% | 62% | 60% |
| Turkey | 38% | 34% | 42% |
| United Kingdom | 54% | 53% | 55% |
| **Average, all countries** | **51%** | **53%** | **52%** |
| **Average, OECD countries** | **53%** | **55%** | **53%** |

Notes: Average, all countries and Average, OECD countries report the mean of the country %. Each country is therefore given equal weight.

**Table 25. Financial behaviour scores**

OLS Regression on financial behaviour scores, controlling for age, country, education and gender; weighted data, missing responses excluded

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| **(Constant)** | .314 | .010 | | 30.923 | .000 |
| **18-19** | -.173 | .011 | -.070 | -15.523 | .000 |
| **20-29** | -.071 | .007 | -.057 | -10.766 | .000 |
| **30-39** | -.002 | .007 | -.002 | -.336 | .737 |
| **50-59** | -.006 | .007 | -.005 | -.891 | .373 |
| **60-69** | -.019 | .008 | -.012 | -2.477 | .013 |
| **70-79** | -.074 | .009 | -.037 | -7.881 | .000 |
| **Albania** | .293 | .017 | .081 | 17.558 | .000 |
| **Austria** | .487 | .014 | .183 | 35.817 | .000 |
| **Belarus** | .240 | .016 | .073 | 15.336 | .000 |
| **Belgium** | .576 | .013 | .221 | 43.755 | 0.000 |
| **Brazil** | .248 | .013 | .096 | 18.860 | .000 |
| **British Virgin Islands** | .496 | .017 | .136 | 29.434 | .000 |
| **Canada** | .450 | .017 | .124 | 26.742 | .000 |
| **Croatia** | .308 | .017 | .087 | 18.280 | .000 |
| **Czech Republic** | .284 | .017 | .079 | 17.106 | .000 |
| **Estonia** | .182 | .016 | .053 | 11.426 | .000 |
| **Finland** | .526 | .015 | .173 | 36.099 | .000 |
| **France** | .658 | .014 | .222 | 45.984 | 0.000 |
| **Georgia** | .149 | .016 | .043 | 9.156 | .000 |
| **Hong Kong, China** | .446 | .017 | .123 | 26.844 | .000 |
| **Hungary** | .097 | .017 | .027 | 5.822 | .000 |
| **Jordan** | .380 | .016 | .111 | 23.625 | .000 |
| **Korea** | .377 | .012 | .159 | 30.654 | .000 |
| **Latvia** | .281 | .017 | .078 | 16.930 | .000 |
| **Lithuania** | .309 | .017 | .086 | 18.475 | .000 |
| **Malaysia** | .423 | .012 | .195 | 36.605 | .000 |
| **Netherlands** | .233 | .017 | .065 | 13.994 | .000 |
| **New Zealand** | .381 | .015 | .121 | 25.422 | .000 |
| **Norway** | .373 | .017 | .105 | 22.603 | .000 |
| **Poland** | .158 | .017 | .044 | 9.512 | .000 |
| **Portugal** | .525 | .017 | .146 | 31.638 | .000 |
| **Russian Federation** | .263 | .014 | .092 | 18.866 | .000 |
| **Thailand** | .490 | .009 | .389 | 53.911 | 0.000 |
| **Turkey** | .235 | .012 | .111 | 20.159 | .000 |
| **Technical/vocational education beyond secondary school level** | -.057 | .008 | -.039 | -7.566 | .000 |
| **Complete secondary** | -.122 | .006 | -.111 | -19.842 | .000 |
| **Some secondary** | -.187 | .007 | -.133 | -25.163 | .000 |
| **Complete primary** | -.191 | .008 | -.130 | -23.691 | .000 |
| **Some primary** | -.244 | .010 | -.122 | -23.907 | .000 |
| **No formal education** | -.256 | .018 | -.063 | -14.148 | .000 |
| **Male** | -.011 | .004 | -.011 | -2.769 | .006 |

Notes: Comparison variables are age= 40 to 49; Country=UK, gender= Female

**Table 26. Financial knowledge, attitudes and behaviour**

Means (weighted data): all respondents

| Country | Mean knowledge score | Mean behaviour score | Mean attitude score | Mean overall score |
|---|---|---|---|---|
| Albania | 4.2 | 5.2 | 3.4 | 12.7 |
| Austria | 4.9 | 6.0 | 3.3 | 14.2 |
| Belarus | 3.8 | 5.0 | 2.9 | 11.7 |
| Belgium | 4.9 | 6.2 | 3.2 | 14.3 |
| Brazil | 4.3 | 4.6 | 3.1 | 12.1 |
| British Virgin Islands | 3.6 | 6.2 | 3.3 | 13.0 |
| Canada | 4.9 | 6.2 | 3.5 | 14.6 |
| Croatia | 4.3 | 4.8 | 3.0 | 12.0 |
| Czech Republic | 4.4 | 5.0 | 3.1 | 12.6 |
| Estonia | 5.3 | 4.9 | 3.2 | 13.4 |
| Finland | 5.2 | 6.3 | 3.3 | 14.8 |
| France | 4.9 | 6.7 | 3.2 | 14.9 |
| Georgia | 4.6 | 5.0 | 2.8 | 12.4 |
| Hong Kong, China | 5.8 | 6.0 | 2.7 | 14.4 |
| Hungary | 4.7 | 4.3 | 3.5 | 12.4 |
| Jordan | 4.3 | 5.7 | 2.6 | 12.6 |
| Korea | 5.4 | 5.7 | 3.2 | 14.4 |
| Latvia | 5.1 | 5.3 | 3.0 | 13.3 |
| Lithuania | 4.7 | 5.5 | 3.2 | 13.5 |
| Malaysia | 3.6 | 5.7 | 3.0 | 12.3 |
| Netherlands | 4.9 | 5.2 | 3.3 | 13.4 |
| New Zealand | 5.0 | 5.7 | 3.7 | 14.4 |
| Norway | 5.2 | 5.8 | 3.6 | 14.6 |
| Poland | 4.4 | 4.4 | 2.8 | 11.6 |
| Portugal | 4.8 | 5.9 | 3.4 | 14.0 |
| Russian Federation | 4.1 | 5.1 | 2.9 | 12.2 |
| South Africa | 3.7 | No data | 2.9 | |
| Thailand | 3.9 | 5.8 | 3.1 | 12.8 |
| Turkey | 4.6 | 4.8 | 3.1 | 12.5 |
| United Kingdom | 4.2 | 5.6 | 3.3 | 13.1 |

**Table 27. Financial product holding**

Percentages (weighted data): all respondents

| Country | Holds saving or retirement product | Holds payment product | Holds insurance | Holds credit product |
|---|---|---|---|---|
| Albania | 28% | 29% | 15% | 18% |
| Austria | 80% | 97% | 76% | 55% |
| Belarus | 24% | 83% | 9% | 30% |
| Belgium | 92% | 94% | 78% | 72% |
| Brazil | 21% | 8% | 3% | 48% |
| British Virgin Islands | 98% | 92% | 94% | 62% |
| Canada | 90% | 93% | 77% | 85% |
| Croatia | 40% | 88% | 34% | 50% |
| Czech Republic | 52% | 83% | 37% | 28% |
| Estonia | 63% | 96% | 97% | 42% |
| Finland | 69% | 99% | 91% | 69% |
| France | 90% | 100% | 73% | 51% |
| Georgia | 5% | 27% | 9% | 57% |
| Hong Kong, China | 98% | Not asked | 53% | 66% |
| Hungary | 22% | 75% | 43% | 28% |
| Jordan | 34% | 50% | 51% | 43% |
| Korea | 73% | 98% | 89% | 77% |
| Latvia | 26% | 94% | 48% | 40% |
| Lithuania | 67% | 87% | 43% | 40% |
| Malaysia | 93% | 65% | 33% | 24% |
| Netherlands | 77% | 78% | 44% | 58% |
| New Zealand | 97% | 86% | 73% | 86% |
| Norway | 85% | 83% | 65% | 81% |
| Poland | 23% | 71% | 64% | 17% |
| Portugal | 45% | 94% | 77% | 48% |
| Russian Federation | 20% | 77% | 17% | 32% |
| South Africa | 64% | 47% | 59% | 36% |
| Thailand | 79% | 10% | 27% | 40% |
| Turkey | 8% | 43% | 19% | 32% |
| United Kingdom | 76% | 76% | 44% | 61% |
| **Average, all countries** | **58%** | **74%** | **51%** | **53%** |
| **Average, OECD countries** | **63%** | **86%** | **64%** | **61%** |

Notes: Average, all countries and Average, OECD countries report the mean of the country %. Each country is therefore given equal weight.

**Table 28. Does not agree with short-term attitude statement**

Percentages (weighted data): all respondents

| Country | Percentage putting themselves at 4 or 5 on the scale | | |
|---|---|---|---|
| | Does not tend to live for today | Does not find it more satisfying to spend | Does not agree that money is there to be spent |
| Albania | 61% | 67% | 36% |
| Austria | 66% | 51% | 20% |
| Belarus | 58% | 30% | 14% |
| Belgium | 59% | 56% | 24% |
| Brazil | 42% | 55% | 27% |
| British Virgin Islands | 55% | 53% | 33% |
| Canada | 64% | 47% | 38% |
| Croatia | 44% | 37% | 16% |
| Czech Republic | 37% | 46% | 20% |
| Estonia | 51% | 46% | 28% |
| Finland | 70% | 61% | 18% |
| France | 68% | 48% | 23% |
| Georgia | 69% | 32% | 7% |
| Hong Kong, China | 28% | 33% | 11% |
| Hungary | 59% | 59% | 26% |
| Jordan | 27% | 23% | 18% |
| Korea | 58% | 41% | 21% |
| Latvia | 45% | 26% | |
| Lithuania | 63% | 42% | 25% |
| Malaysia | 41% | 31% | 24% |
| Netherlands | 55% | 46% | 19% |
| New Zealand | 70% | 60% | 51% |
| Norway | 78% | 53% | 28% |
| Poland | 36% | 21% | 15% |
| Portugal | 63% | 57% | 30% |
| Russian Federation | 45% | 29% | 22% |
| South Africa | 54% | 44% | 35% |
| Thailand | 50% | 41% | 18% |
| Turkey | 54% | 45% | 19% |
| United Kingdom | 53% | 44% | 34% |

**Table 29. Minimum target score (more than 3) on financial attitudes**

Percentages (weighted data): all respondents

| Country | Percentage achieving minimum target score (more than 3) | | |
|---|---|---|---|
| | All | Female | Male |
| Albania | 61% | 66% | 56% |
| Austria | 58% | 63% | 53% |
| Belarus | 39% | 41% | 35% |
| Belgium | 56% | 60% | 52% |
| Brazil | 50% | 52% | 49% |
| British Virgin Islands | 55% | 59% | 51% |
| Canada | 64% | 68% | 60% |
| Croatia | 40% | 40% | 40% |
| Czech Republic | 46% | 47% | 44% |
| Estonia | 53% | 55% | 51% |
| Finland | 59% | 60% | 58% |
| France | 52% | 56% | 48% |
| Georgia | 35% | 44% | 24% |
| Hong Kong, China | 28% | 30% | 24% |
| Hungary | 63% | 66% | 59% |
| Jordan | 25% | 21% | 29% |
| Korea | 51% | 53% | 48% |
| Latvia | 39% | 41% | 38% |
| Lithuania | 56% | 57% | 54% |
| Malaysia | 39% | 41% | 37% |
| Netherlands | 57% | 64% | 49% |
| New Zealand | 75% | 75% | 74% |
| Norway | 73% | 81% | 65% |
| Poland | 30% | 31% | 28% |
| Portugal | 63% | 64% | 62% |
| Russian Federation | 40% | 42% | 38% |
| South Africa | 48% | 49% | 48% |
| Thailand | 47% | 48% | 46% |
| Turkey | 48% | 50% | 47% |
| United Kingdom | 57% | 58% | 56% |
| **Average all countries** | **50%** | **53%** | **47%** |
| **Average, OECD countries** | **55%** | **58%** | **52%** |

Notes: Average, all countries and Average, OECD countries report the mean of the country %. Each country is therefore given equal weight.

**Table 30. Indicators of financial inclusion**

Percentages (weighted data): all respondents

| Country | Aware of at least 5 products | Recently chose a financial product | Turned to family and friends |
|---|---|---|---|
| Albania | 38% | 62% | 34% |
| Austria | 95% | 36% | 8% |
| Belarus | 96% | 42% | 5% |
| Belgium | 93% | 60% | 6% |
| Brazil | 83% | 67% | 8% |
| British Virgin Islands | 99% | 53% | 18% |
| Canada | 96% | 89% | 13% |
| Croatia | 94% | 41% | 17% |
| Czech Republic | 84% | 37% | 9% |
| Estonia | 96% | 46% | 14% |
| Finland | | 97% | 13% |
| France | 98% | 69% | 11% |
| Georgia | 98% | 76% | 36% |
| Hong Kong, China | 91% | 56% | 19% |
| Hungary | 85% | 27% | 7% |
| Jordan | 76% | 71% | 22% |
| Korea | 97% | 92% | 10% |
| Latvia | 97% | 54% | 20% |
| Lithuania | 91% | 67% | 16% |
| Malaysia | 89% | 85% | 14% |
| Netherlands | 64% | 34% | 6% |
| New Zealand | 99% | 61% | 9% |
| Norway | 91% | 94% | 6% |
| Poland | 76% | 47% | 10% |
| Portugal | 98% | 58% | 14% |
| Russian Federation | 96% | 89% | 22% |
| South Africa | 92% | 64% | 30% |
| Thailand | 94% | 65% | 42% |
| Turkey | 95% | 52% | 29% |
| United Kingdom | 85% | 52% | 10% |
| **Average, all countries** | **89%** | **61%** | **16%** |
| **Average, OECD countries** | **91%** | **59%** | **11%** |

Notes: Average, all countries and Average, OECD countries report the mean of the country %. Each country is therefore given equal weight.

## ANNEX 2: GUIDE TO CREATING THE FINANCIAL LITERACY SCORES AND FINANCIAL INCLUSION INDICATORS

The purpose of the guide is to provide information on how to create financial literacy scores that are comparable to the ones in this report.

The guide closely follows the approach used for the pilot study (Atkinson and Messy, 2012).[32] Scores are replicated as closely as possible, with the exception of the creation of the Choosing Products score, which has been very slightly refined to better reflect the benefits of using independent information or advice.[33]

### *1. Financial knowledge score*

The knowledge score is computed as the number of correct responses to the financial knowledge questions, according to Table 1. It ranges between 0 and 7 (it is also possible to replicate the 8 point score created in 2012 for countries using QK2 by adding the additional response).[34]

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32 http://www.oecd-ilibrary.org/finance-and-investment/measuring-financial-literacy_5k9csfs90fr4-en
There are some minor differences due to slight changes in the core questions between the two waves, as indicated in the question map in the 2015 toolkit. The main difference is that QK2 (Division) is optional in the 2015 questionnaire; this is not anticipated to have a large impact as it was answered correctly by almost all respondents.

33 In most countries the refinement makes a difference of less than half a percentage point, but there are exceptions. Some other minor variations from the previous approach are inevitable due to the slight updates of the core questionnaire since the pilot.

34 Where countries substitute questions, or reword them, we incorporate them by also giving a value of 1 to a correct response and 0 in all other cases to the alternative/reworded questions. In the case of a country with fewer than 7 financial knowledge questions we rescale each score within the two groups of questions identified as 'part A' and 'part B' (for instance, if statement in question QK7 is missing, the two remaining points will be multiplied by a factor of 3/2). Note that this will not make the scores exactly comparable, and we do not recommend that the core questions are changed or omitted.

**Table 31. Computing a financial knowledge score**

| Topic | Question number | Discussion | Value towards final score | |
|---|---|---|---|---|
| Time-value of money | QK3 | This is multiple response and very context specific, and so the 2015 question includes an indicator of the rate of inflation | 1 for correct responses [c, unless the country indicates otherwise; or d, if mentioned spontaneously]. 0 in all other cases. | |
| Interest paid on a loan | QK4 | This is open response and a correct answer indicates that the respondent understands the concept of interest on a loan | 1 for correct response [0]. 0 in all other cases. | |
| Interest plus principal | QK5 | This is open response and a correct answer is an indicator of applied numeracy | 1 for correct response [102]. 0 in all other cases. | |
| Compound interest | QK6 | QK6 is a multiple-response question; there are four options given. In order to take into account some of the potential for guessing the answer to this question, the score is based on a derived variable that filters out those respondents that could not calculate simple interest at QK5. | 1 for a correct response to QK6 if and only if the response to "Calculation of interest plus principal" (QK5) was also correct. 0 in all other cases. | Part A |
| Risk and return | QK7_1 | This is a true/false question | 1 for a correct response [1/True]. 0 in all other cases. | |
| Definition of inflation | QK7_2 | This is a true/false question | 1 for a correct response [1/True]. 0 in all other cases. | |
| Diversification | QK7_3 | This is a true/false question | 1 for a correct response [1/True]. 0 in all other cases. | Part B |
| Division | QK2 | In 2015 this has become an optional question, as it is relatively easy and is not a good discriminator of financial literacy in the majority of countries. It is therefore not included in the 2015 financial knowledge score.<br>If this question is included it can be used to create an 8 point score as used in 2012. However it will not be used in the main reporting in 2015. | 1 for correct response [200]. 0 in all other cases. | Optional |

Note: Question numbers refer to the 2015 toolkit

### *2. Financial behaviour score*

The behaviour score is computed as a count of the number of "financially savvy" behaviours according to Table 2. It ranges between 0 and 9 as in 2012. As people do not necessarily indicate all of these financial behaviours in a given period it may not be realistic to expect everyone to achieve the minimum target score.

**Table 32. Computing a financial behaviour score**

| Behaviour | Question number | Discussion | Value towards final score |
|---|---|---|---|
| Responsible and has a household budget | QF1 and QF2 | The score is based on a derived variable, created from the responses to two questions. | 1 point if personally or jointly responsible for money management [QF1=1 or 2] AND household has a budget [QF2=1]. 0 in all other cases. |
| Active saving | QF3 | This question identifies a range of different ways in which the respondent may save. A refusal is scored as 0. | 1 point for any type of active saving (answers a, c, d, e, f, g), and relevant options added at the national level.<br>0 in all other cases. Letting money build up in a bank account is not considered to be *active saving* (answer b) and gives 0 points towards the score. |
| Considered purchase | QF10_1 | This is a scaled response ("Before I buy something I carefully consider whether I can afford it") | 1 point for respondents who put themselves at 1 or 2 on the scale [agree]. 0 in all other cases. |
| Timely bill payment | QF10_4 | This is a scaled response ("I pay my bills on time"). | 1 point for respondents who put themselves at 1 or 2 on the scale [agree]. 0 in all other cases. |
| Keeping watch of financial affairs | QF10_6 | This is a scaled response ("I keep a close personal watch on my financial affairs"). | 1 point for respondents who put themselves at 1 or 2 on the scale [agree]. 0 in all other cases. |
| Long term financial goal setting | QF10_7 | This is a scaled response ("I set long term financial goals and strive to achieve them"). | 1 point for respondents who put themselves at 1 or 2 on the scale [agree]. 0 in all other cases. |

| Behaviour | Question number | Discussion | Value towards final score |
|---|---|---|---|
| Choosing products | Qprod2 and Qprod3 | This score uses a derived variable drawing information from 2 questions. It is only possible for a respondent to score points on this measure if they have chosen a product: those with 0 score on this measure have either refused to answer, not chosen a product, or not made any attempt to make an informed decision.<br><br>The list of products is tailored to national markets. The score seeks to make a general comparison of behaviour when choosing a financial product. | The variable "choosing products" is constructed by creating two intermediate variables, and then creating a derived variable. Country specific responses can also be coded.<br><br>The two intermediate variables are the following:<br><br>1) **Qprod_D1**: "Tried to compare across providers" taking value of:<br>▪ 1 if variable Qprod2 is equal to 1 or 4 (I considered several or I looked around but there were no others), and<br>▪ 0 otherwise. Note that 0 includes no recent product choice/not applicable.<br><br>2) **Qprod_D2**: "Sought information or advice" taking values<br>▪ 1 if yes at Qprod3 b, c, d, i, j, k, l, m or r (information picked up in branch/ product specific information found on the internet/Information from sales staff of the firm providing the products / Advice of friends/relatives (not working in the financial services industry) / Advice of friends/relatives (who work in the financial services industry) / Employer's advice / Newspaper articles / Television or radio programmes / Other source [if relevant])<br>▪ 2 if yes at Qprod3 e, f, g or h (Best-buy tables in financial pages of newspapers/magazines / Best-buy information found on the internet / Specialist magazines / Recommendation from independent financial adviser or broker)<br>▪ 0 otherwise. Note that 0 includes no recent product choice.<br><br>The final variable – Qb7_new "Tried to shop around or use independent info or advice" has been slightly refined from earlier versions. It takes the following values:<br>▪ 2 if CProd_D2 =2. The value of 2 indicates "Used independent info or advice"<br>▪ 1 if CProd_D1 =1 ***or*** CProd_D2 =1. The value of 1 indicates "Some attempt to make informed decision"<br>▪ 0 Otherwise. The value 0 indicates "'Not shopped around and no attempt to make informed decisions (including no recent product choice)".<br><br>The change has been made to better reflect the benefit of using independent information and advice. |

| Behaviour | Question number | Discussion | Value towards final score |
|---|---|---|---|
| Borrowing to make ends meet | QF12 | The score is based on a derived variable that seeks to identify respondents who are making ends meet without borrowing. It uses QF12 to identify those who have borrowed to make ends meet. | 0 if the respondent used credit to make ends meet, that is if he/she responded Yes at any of the following – or other country specific responses indicating that he/she used credit to make ends meet:<br>QF12_3_e = Borrow from family or friends<br>QF12_3_f = Borrow from employer/salary advance<br>QF12_3_g = Pawn something that you own<br>QF12_3_h = Take a loan from your savings and loans clubs<br>QF12_3_i = Take money out of a flexible mortgage account<br>QF12_3_j = Apply for loan/withdrawal on pension fund<br>QF12_4_k = Use authorised, arranged overdraft or line of credit<br>QF12_4_l = Use credit card for a cash advance or to pay bills/buy food<br>QF12_5_m = Take out a personal loan from a financial service provider (including bank, credit union or microfinance)<br>QF12_5_n = Take out a payday loan<br>QF12_5_o = Take out a loan from an informal provider/moneylender<br>QF12_6_p = Use unauthorised overdraft<br>QF12_6_q = Pay my bills late; miss payments<br>1 in all other cases, including refusals and respondents who did not have problems in making ends meet. |

Note: Question numbers refer to the 2015 toolkit

### *3. Financial attitudes score*

The attitudes score is computed as the sum of the values for the three statements and then divided by three[35]. The attitudes score, therefore, ranges from 1 to 5.

**Table 33. Computing a financial attitudes score**

| Attitude | Question number |
|---|---|
| I tend to live for today and let tomorrow take care of itself | QF10_2 |
| I find it more satisfying to spend money than to save it for the long term | QF10_3 |
| Money is there to be spent | QF10_8 |

Note: Question numbers refer to the 2015 toolkit

### *4. Overall financial literacy score*

The overall financial literacy score is obtained as the sum of the three previous scores (financial knowledge (7), financial behaviour (9) and financial attitudes (5) at the level of the respondent. It can take any value between 1 and 21 and can be normalised to 100 for reporting by multiplying by 100/21.

[35] Where two attitude statements have been used, the score is also based on the average.

When comparing 2015 data with data collected with the previous questionnaire, the 2012 financial literacy score will be recomputed without QK2.

### *4. Financial inclusion indicators*

| Indicator | Question number | Discussion | Method used |
|---|---|---|---|
| Holds payment product | Qprod1_b | Identifies payment products across country level data. These may include prepaid cards and current/checking accounts. | Binary variable: takes value of 1 if any product is held, otherwise 0 |
| Holds saving or retirement product | Qprod1_b | Identifies savings, investment and retirement products across country level data. These may be pensions, investment accounts, savings accounts, or savings clubs. | Binary variable: takes value of 1 if any product is held, otherwise 0 |
| Holds insurance | Qprod1_b | Identifies insurance products across country level data. These may include car or travel insurance. | Binary variable: takes value of 1 if any product is held, otherwise 0 |
| Holds credit product | Qprod1_b | Identifies credit products across country level data. These may include mortgages, credit cards and microloans. | Binary variable: takes value of 1 if any product is held, otherwise 0 |
| Aware of at least 5 products | Qprod1_a | Counts all positive responses across Qprod1_a | Binary variable: takes value of 1 if at least five positive responses, otherwise 0 |
| Recent financial product choice | Qprod1_c | Identifies individuals that have made at least one product choice | Binary variable: takes value of 1 for any recent choice, otherwise 0 |
| Relying on family and friends | QF3 and QF13 | Identifies people who turn to family or friends to save money for them, or to help them to make ends meet | Binary variable: takes value of 1 if saving through family and friends **or** turning to family and friends to make ends meet, otherwise 0 |

## ANNEX 3: SURVEY INFORMATION

**Table 34. Background information from participating countries**

| Countries | **Commissioning body** | **Date and type of survey and sample*** | **Data and questionnaire availability** | **Data weighting** | **% inflation used in knowledge question** |
|---|---|---|---|---|---|
| Albania | Bank of Albania | Aug-Sep 2015, face-to-face. Stratified sampling | Translated questionnaire (in Albanian) can be shared publically; raw data remain confidential | Weighted using gender, age group, region (urban/rural) | No % specified, only "positive rate of inflation" |
| Austria | National Bank (ONB) | Sep-Nov 2014; face-to-face. Stratified sampling | Translated questionnaire (in German) can be shared publically; raw data remain confidential | Weighted using gender, age, region | 2% |
| Belarus | National Bank | Oct-Nov 2015. Face-to-face. Stratified sampling | Translated questionnaire (in Russian) can be shared publically; raw data remain confidential | Designed to be unweighted | 7.8% |
| Belgium | Financial Services and Markets Authority | January 2015; telephone interviews, random digit dialling | Translated questionnaire (in Flemish and French) can be shared publically; raw data remain confidential | Iterative weights across gender, age, region and social group | 1.5% |
| Brazil | Central Bank | April 2015; face-to-face. Stratified cluster sampling in 3 stages. | Translated questionnaire (in Portuguese) can be shared publically; raw data can be made available. | Designed to be unweighted | |
| British Virgin Islands | Financial Services Commission | April – August 2015; telephone interviews; random sample. *NB: A small number of responses (84 in total) were collected using a "group interview method", wherein questions were read out loud to the group and respondents had to record their answers on an answer sheet.* | Core questionnaire and additional questions provided in toolkit used without translation; can be shared publically; raw data remains confidential | Not weighted | 1% |

| Countries | **Commissioning body** | **Date and type of survey and sample*** | **Data and questionnaire availability** | **Data weighting** | **% inflation used in knowledge question** |
|---|---|---|---|---|---|
| Canada | Financial Consumer Agency of Canada | May-June 2015; telephone interviews, stratified by region, nested quotas using random digit dialling | | Weighted using region, gender and age | 1% |
| Croatia | Croatian National Bank and Croatian Financial Services Supervisory Agency | Oct-Nov 2015; face-to-face. Two-stage stratified sample based on region and settlement size | Translated questionnaire (in Croatian) can be shared publically; raw data can be made available. | Weighted by gender, age, region, settlement size, education. | +ve number used, although actual inflation was -ve |
| Czech Republic | Ministry of Finance | September 2015; face-to-face. Quota sample | Translated questionnaire (in Czech) can be shared publically; raw data remains confidential. | Weighted | 2% |
| Estonia | Ministry of Finance | June-July 2015; face-to-face. Stratified sampling | Translated questionnaire (in Estonian) can be shared publically; raw data remains confidential. | Weighted by gender, age, region, education. | 2% |
| Finland | University of Tampere and University of Vaasa | February-April 2014; face-to-face. Stratified cluster sampling | Translated questionnaire can be requested; raw data can be made available. | Weighed by region, gender, age and socio-economic position. | 2% |
| France | Ministry of Finance | 6-28 June 2014; telephone interviews. 2 booster samples were collected for age 18-22 and 55-59, but are not used in these analyses. | Translated questionnaire available at http://www.banque-france.fr/ccsf/fr/index.htm; raw data remain confidential. | Weighted by region, size of populated area, age, gender and professional situation | 2% |
| Georgia | National Bank of Georgia | April 2015; Face-to-face. Stratified cluster sampling | Translated questionnaire (in Georgian) and raw data remain confidential. | Weighted by region and size of populated area and age. | +ve |
| Hong Kong, China | Investor Education Center | June 2015; Face-to-face. Stratified sampling | Translated questionnaire (in Chinese) can be shared publically; raw data can be made available. | Weighted using gender, age to national population. These have been recalibrated by OECD to the sample size. | 2.8% |

| Countries | **Commissioning body** | **Date and type of survey and sample*** | **Data and questionnaire availability** | **Data weighting** | **% inflation used in knowledge question** |
|---|---|---|---|---|---|
| Hungary | Hungarian Central Bank | July 2015; Face-to-face. Quota sample from stratified probability starting point | Translated questionnaire (in Hungarian) not available to public; raw data can be made available. | Weighted by age, settlement type and qualification | 2% |
| Jordan | Injaz | March 2016 Face to face. Stratified sampling | Translated questionnaire (in Arabic) not available to public; raw data can be made available. | Weighted using region, Urban/Rural, gender and age. | 2.8% |
| Korea | Financial Supervisory Service | Nov.-Dec. 2014.<br>Face-to-face. Stratified sampling | Translated questionnaire(in Korean) can be shared publically; raw data remain confidential | Weighted using gender, age, region | 3% |
| Latvia | Financial and Capital Market Commission | March-April 2015; face-to-face, stratified random sample | Translated questionnaire (Latvian and Russian) available in study report. Raw data remains confidential, but overview reports available | Weighted by region, nationality, age and gender | 3% (note that actual inflation is around 0%) |
| Lithuania | Bank of Lithuania | Sep 2015 | | Weighted by OECD using age and gender data from Lithuanian Government Statistics, 2015. | |
| Malaysia | Bank Negara Malaysia | Jan-March 2015; face-to-face; disproportionate stratified sampling (additional booster samples of low income, credit counselling clients and micro-enterprises collected but no submitted) | Translated questionnaire not publically available. Raw data remains confidential. | Weighted using proportionate rim weighting based on stratum, race, age and gender | |
| Netherlands | Money Wise | April-May 2015; Online | | Weighted using agency criteria, including age and gender | |
| New Zealand | Commission for Financial Capability | May-July 2015; mixed method online and telephone-random digit dialling and stratified sampling | Data can be made publically available | Weighted by age and gender | 2% |

| Countries | **Commissioning body** | **Date and type of survey and sample*** | **Data and questionnaire availability** | **Data weighting** | **% inflation used in knowledge question** |
|---|---|---|---|---|---|
| Norway | AksjeNorge | Nov 2015; TNS web panel online survey | Translated questionnaire (in Norwegian) available to public after 12 April 2016; raw data can be made available | Weighted on age, sex, region and education | 3.5% |
| Poland | National Bank | October-November 2015; Face-to-face. Stratified sampling with random route from starting points. | Translated questionnaire (in Polish) available; raw data cannot be made available but the commissioning body will make it public | Unweighted | 0% [Note that this has implications for the responses considered to be correct] |
| Portugal | Banco de Portugal, Portuguese Securities Market Commission and the Portuguese Insurance and Pension Funds Supervisory Authority | May-June 2015; Face-to-face Stratified sampling based on gender, age, location, employment situation and schooling level. | Translated questionnaire (in Portuguese) available in a dedicated publication; no current intention to make raw data available. | Unweighted | 2% |
| Russian Federation | Ministry of Finance | July-August 2015; Face-to-face. Representative stratified sampling. | Translated questionnaire (in Russian) can be shared publically; raw data can be made available. | Designed to be unweighted | |
| South Africa | Financial Services Board (FSB), South Africa | Oct-Dec 2015; face-to-face. Three stage stratified sample based on small area layers (SALs); number of dwelling units and a randomly selected individual selected using equal probability. | Translated questionnaire (isiZulu, isiXhosa, tshiVenda, Setswana, Xitsonga and Afrikaans), can be shared publically; raw data can be made available. | Weighted by gender, age, province, race and geography (urban, rural). Benchmarked to Statistics South Africa's mid-year population estimates. | No inflation amount specified. Question that mentions inflations states that 'inflation remains the same' |
| Thailand | Asian Development Bank and Bank of Thailand | May-August 2015; face-to-face, stratified random sampling. | Translated questionnaire (in Thai) can be shared publically; raw data remains confidential. | Designed to be unweighted | |

| Countries | **Commissioning body** | **Date and type of survey and sample*** | **Data and questionnaire availability** | **Data weighting** | **% inflation used in knowledge question** |
|---|---|---|---|---|---|
| Turkey | Capital Markets Board | May-June 2015; Face-to-Face. Stratified multi-stage random sampling; sampling with probability proportional to size to select district. | Translated questionnaire (in Turkish) not available to public; raw data remains confidential. | Unweighted | 8% |
| UK | Money Advice Service | June-July 2015; mixed method – telephone (30%) and online (70%). Stratified random sample with quotas on age, gender and devolved nation. | No translation made. Raw data can be made available. | Weighted on age, gender, work status and internet use. Design effect is 1.164. This implies that 95% confidence interval would be 2.282 standard errors from the mean. | 3% |

Observations outside the target age range 18-79 have not been included in OECD analyses.

*Significant differences reported at 1% level assume random sampling; they do not take into account design effects.

## OECD/INFE INTERNATIONAL SURVEY OF ADULT FINANCIAL LITERACY COMPETENCIES

30 countries and economies, including 17 OECD countries, participated in an international survey of financial literacy, using the OECD/INFE toolkit to collect cross-comparable data. In total, 51,650 adults aged 18 to 79 were interviewed using the same core questions, in a total of 30 languages. This report provides high-level highlights of the survey's findings focusing on relevant aspects of financial knowledge, behaviour, attitudes and inclusion. Based on this evidence, it gives insights into the financial literacy of the population and their needs in terms of financial education and other forms of policy support.

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