Sound Practices for Investment Risk Education

Final Report

THE BOARD
OF THE
INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS

FR21/2015	SEPTEMBER 2015

Copies of publications are available from:
The International Organization of Securities Commissions website www.iosco.org

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Executive summary

IOSCO members regularly see instances of retail investors losing money they did not expect, or could not afford, to lose because of a misalignment between the investor's understanding of the risk (and the level of risk that is appropriate for them) and the actual level of risk to which they may be exposed through an investment. This misalignment leads to uninformed decision-making, potentially causing investors significant financial loss and emotional harm.

In keeping with IOSCO principles, IOSCO members generally play an active role in conducting investor education as one way of seeking to address this misalignment. In this way, investor education contributes to IOSCO members' broader investor protection objectives and is an important part of the regulatory toolkit, complementary to enforcement and surveillance activities.

Research indicates that an investor's approach to investment risk is influenced by a number of factors – including gender, age and experience with financial products – and that understanding of investment risk is often limited amongst the retail investor population. Further, Behavioural Economics research indicates that investor behaviour and attitudes relating to investment risk are strongly affected by behavioural biases.

There are many common characteristics in the context in which securities regulators conduct investment risk education activities. Regulators also experience a similar range of challenges and issues in undertaking their investment risk education activities. They seek to overcome these challenges and issues in the design, development and delivery of their initiatives and programs, and employ a range of different approaches and practices to their work in this area.

Based on an analysis of the approaches adopted by the members of the IOSCO Committee 8 on Retail Investors (C8), a number of sound practices for investment risk education initiatives have been identified. In summary, these sound practices are to:

1. focus on influencing retail investor attitudes and behaviour, as well as knowledge;
2. develop initiatives that take an evidence-based approach in response to the needs of retail investors;
3. test initiatives with the target audience;
4. develop initiatives that reach people close in time to the making of investment decisions and that are promoted in a variety of ways to expand reach and interaction;
5. send clear messages that are adapted for different target groups (e.g. beginner and more savvy investors) and for the different ways people access information;
6. use engaging content and delivery styles;
7. design activities that are current and up to date with emerging new technologies and developments in financial markets;
8. where relevant, develop investor education initiatives that complement regulatory actions to enhance impact; and
9. develop evaluation frameworks and measures at the outset and seek to evaluate outputs and outcomes.[1]

[1] This is not intended to be an exhaustive list. It is acknowledged by the C8 working group that other sound practices may also exist, and be adopted by C8 and other IOSCO members.

1. Introduction

According to Principle 3 (Key Issue 6) of the IOSCO Methodology, "Regulators should play an active role in promoting the education of investors and other market participants." [2] In this context, the primary mandate of C8 is to conduct IOSCO's policy work on retail investor education and financial literacy.

The IOSCO Strategic Framework for C8 (the Strategic Framework) establishes three initial areas of focus for C8 under the primary mandate. These are:

1. investment knowledge and understanding;
2. financial skills and competence; and
3. program design, delivery and measurement.[3]

Within each area of focus, the Strategic Framework identifies topics for possible future investor education and financial literacy initiatives. One of the topics identified within item (1) above is "investment risk education".[4]

This report is the primary output of work by C8 to explore how regulators use investment risk education. The purpose of the project was to:

- review the context for investment risk education;
- summarise information about the various approaches taken by C8 members to investment risk education;
- facilitate information sharing amongst IOSCO members;
- identify and profile key initiatives; and
- identify sound practices.

The first and second parts of the report consider the context in which C8 members operate, including:

- theories of investing behaviours and the role of research;
- retail investors' levels of financial literacy; and
- factors which may affect retail investors' attitude towards risk.

The third part of the report considers the role of securities regulators in investment risk education, including:

- the role of the regulator in investor education;

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2 See FR08/11 *Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation*, IOSCO, September 2011 (revised August 2013), available at: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD359.pdf.

3 See FR09/14 *Strategic Framework for Investor Education and Financial Literacy*, Final Report, Report of the Board of IOSCO, October 2014, available at: http://www.iosco.org/library/pubdocs/pdf/IOSCOPD462.pdf.

4 See *Strategic Framework for Investor Education and Financial Literacy*, IOSCO, October 2014, supra fn 3.

- the objectives of investment risk education;
- the strategic framework for investment risk education; and
- fees and funding models.

Part four of the report outlines C8 members' challenges, approaches and practices in relation to their investment risk education activities.

The report concludes with a number of sound practices for investment risk education initiatives.

1.1. Scope and methodology

The report comprises a literature review of relevant research, identified by C8 members, and the results of a survey of C8 members about their approaches to investment risk education and related topics. A list of C8 members that participated in the survey can be found at Appendix A.

1.1.1. Scope – Investment risk

For the purposes of this report, "investment risk" is defined as the risk that an investment will not deliver the expected yield and/or lose value. This concept is applied broadly in the report and taken to include a variety of risks such as:

- volatility risk;
- capital risk;
- liquidity risk;
- inflation risk;
- credit risk; and
- interest rate risk.

Risk relating to investment fraud, an assessment of mandatory disclosure requirements, financial product advertising and the use of financial advisors are beyond the scope of this project.

1.1.2. Scope – Investment risk education

While various definitions of "investor education", "financial literacy" and similar terms exist, there are no universally accepted definitions. Investor education is generally considered to be a subset of the broader concept of financial literacy.[5]

Financial literacy generally relates to all aspects of a person's financial situation and can include the concept of financial capability (a person's awareness, knowledge, skills, attitudes and behaviours towards financial matters).[6]

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5 See *Strategic Framework for Investor Education and Financial Literacy*, IOSCO, October 2014, supra fn 3.

6 See *Strategic Framework for Investor Education and Financial Literacy*, IOSCO, October 2014, supra fn 3.

Investor education focuses on issues relevant to the education and information needs of individuals who participate, or are considering participating, in the securities markets (commonly referred to as 'retail investors').[7]

In its 2012 report on the investor education websites of IOSCO members, the IOSCO Education and Training Team identified the concept of 'investor literacy' as the "understanding ordinary investors have of market principles, instruments, organizations and regulations".[8]

For the purposes of this report, "*investment risk education*" is defined to include a range of education, information and communication activities, aimed at retail investors, which seek to:

- promote and support a greater awareness and understanding of key investment concepts;
- influence the attitudes and behaviours of investors in relation to the management of investment risk; and
- improve investors' financial skills and competence.

1.1.3. Methodology

For the literature review, C8 members were asked to provide relevant research reports that they have conducted and/or used to inform their work. Thirty-seven reports were provided, which were then analysed and summarised by a small working group. A list of the source materials reviewed for this purpose can be found at Appendix B.

A survey of C8 members (the C8 survey) asked questions about their current approaches to investment risk education, including:

- the retail investor market in each jurisdiction;
- their role in relation to investor education;
- data collected and research conducted; and
- approaches and practices in relation to investor education about investment risk.

Twenty-six C8 members responded to the survey. A copy of the C8 survey questions can be found at Appendix C.

Note: Unless otherwise specified, observations attributed to C8 members in this report are based on the responses to the C8 survey.

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7 See *Strategic Framework for Investor Education and Financial Literacy*, IOSCO, October 2014, supra fn 3.

8 See *Investor Education: An Analysis of IOSCO Member Websites and Web-Based Information*, Final Report, Report of IOSCO, June 2012.

See also FR02/12 *Report on Investor Education Initiatives Relating to Investment Services*, Final Report, Report of IOSCO, February 2013, available at: www.iosco.org/library/pubdocs/pdf/IOSCOPD404.pdf.

2. Background and context

Investor protection and the promotion of investor confidence in the integrity of securities markets are at the heart of IOSCO's objectives and are, to varying degrees, also the objectives of IOSCO members.[9]

IOSCO members regularly see instances of retail investors losing money they did not expect, or could not afford, to lose because of a misalignment between the investor's understanding of the risk (and the level of risk that is appropriate for them) and the actual level of risk to which they may be exposed through an investment. This misalignment leads to uninformed decision-making, potentially causing investors significant financial loss and emotional harm.

In keeping with IOSCO principles, IOSCO members generally play an active role in conducting investor education as one way of seeking to address this misalignment. In this way, investor education contributes to IOSCO members' broader investor protection objectives and is an important part of the regulatory toolkit, complementary to enforcement and surveillance activities.

Regulators are in a unique position to play a role in the development of investor education because of their independence, impartiality, access to data and insights into the workings of the markets.[10]

Investor education about investment risk is increasingly important as the financial landscape continues to evolve and innovate rapidly. Increases in product complexity and in the diversity of financial services being offered, and shifting responsibility for retirement planning from employers to individuals using market-linked investments, are other factors giving rise to the need for investors to have a better understanding of financial concepts, including investment risk.[11]

Investment risk education has the potential to improve financial outcomes for retail investors worldwide by promoting and supporting:

- more informed saving and investment decision-making;
- better financial and retirement planning;
- greater confidence and higher rates of participation in the securities markets, and potentially a better functioning market;
- improved chances of wealth accumulation;
- increased awareness of investor rights and responsibilities;[12] and
- heightened investor expectations that financial advisors will offer suitable and appropriate products and advice.

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9 See *Strategic Framework for Investor Education and Financial Literacy*, IOSCO, October 2014, supra fn 3.

10 See *Strategic Framework for Investor Education and Financial Literacy*, IOSCO, October 2014, supra fn 3.

11 See *Strategic Framework for Investor Education and Financial Literacy*, IOSCO, October 2014, supra fn 3.

12 See *Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation*, IOSCO, August 2013, supra fn 2.

Better educated and informed retail investors are more likely to accurately determine their investment risk profile and assess investment products and services, understand key investment management concepts, and avoid the pitfalls associated with the mis-selling of financial products, investment scams and fraud.

2.1. Regulatory definitions of "retail investors"

The majority of C8 members characterise retail investors in a way that is consistent with the definition used by IOSCO – that is, "Although the terms 'retail participation,' 'retail investors,' and 'retail investment' vary by jurisdiction, it is well-accepted in regulatory circles that these terms refer to investors other than those normally referred to as 'professional,' 'qualified' or 'sophisticated' investors".[13]

In this context, it is understood that professional, institutional or sophisticated investors possess certain characteristics, such as a particular level of experience and knowledge about how to invest appropriately, that retail investors generally do not have. Retail investors, therefore, are generally considered to be a group requiring a higher level of protection than professional, institutional or other sophisticated investors.

While a number of C8 jurisdictions do not have a formal definition of "retail investor",[14] the basic concept of them being distinct from these other classes of investors is generally maintained.

2.2. Investor behaviour theories

According to the results of the literature review conducted for this report, there are a number of theoretical approaches that aim to explain investor behaviour, particularly in relation to investment risk.

Modern Portfolio Theory has often been used to explain how investors can maximise the expected return for a given level of portfolio risk, emphasising that risk is an inherent part of higher reward.[15] Modern Portfolio Theory assumes that all investors are rational and risk averse, have an accurate understanding of possible returns, and are interested only in wealth maximisation.

In recent years, the assumptions of Modern Portfolio Theory in the context of retail investor decision-making have been challenged by alternative theories of investor behaviour.

For instance, Prospect Theory, propounded by Mitchell and Utkus, provides an explanation for how investors measure utility under conditions of uncertainty.[16] Prospect Theory

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13 See *Regulatory and Investor Protection Issues Arising from the Participation by Retail Investors in (Funds-of) Hedge Funds*, Final Report, Report of the Technical Committee of IOSCO, February 2003, available at: www.iosco.org/library/pubdocs/pdf/IOSCOPD142.pdf.

14 For example, Hong Kong, China, Brazil and France do not define "retail investor".

15 See I. Omisore, M. Yusuf and N. Christopher, "The modern portfolio theory as an investment decision tool", *Journal of Accounting and Taxation*, vol. 4(2), 2012, pp. 19–28.

See H.M. Markowitz *Portfolio Selection: Efficient Diversification of Investments*, 2nd edn, John Wiley & Sons, New York, 1959, pp. 95–112.

16 See O.S. Mitchell and S.P. Utkus, "Lessons from Behavioural Finance for Retirement Plan Design", in *Pension Design and Structure – New Lessons from Behavioural Finance*, Oxford University Press 2004, Oxford, UK, pp. 3–41.

emphasises the role of incremental gains and losses rather than wealth maximisation when making investment decisions. In other words, investors derive direct utility not only from consumption but also from fluctuations in value of their personal wealth. Prior losses tend to lead them to be reluctant to invest out of fear of incurring additional losses, whereas they view gains as a cushion that enables them to take on risk.[17]

Mitchell and Utkus[18] found that miscalculations by savers are the result of bounded rationality and self-control. They term those who are prone to defer consumption as "exponential discounters" and those who save little or nothing as "hyperbolic discounters", reflecting different subjective discount rates applied to the time value of money. They also noted other irrational behaviour amongst investors such as overconfidence and overreliance on past performance as a predictor of future performance.

Other studies have also shown that investors have a tendency to invest in the familiar.[19]

Such biases are evident in 401(k) employer-sponsored contribution pension investing in the United States, where employees continue to remain heavily invested in their own company's stock, despite being empowered to choose their own asset allocation and contribution rates and being exposed to news stories featuring company collapses wiping out employee retirement funds.[20]

Statman offers another perspective on investing behaviour – Behavioural Portfolio Theory.[21] According to this theory, investors are not always risk averse, nor do they consider their portfolios as a whole. In the most simplistic version, investors construct their portfolios as a two-layer pyramid, where the bottom layer provides protection against poverty and the upper layer is "designed to make them rich". In a more elaborate version, the pyramid consists of many layers, "each of which corresponds to a goal or aspiration". According to this theory, investors' aspirations, more than their attitude towards risk, drive their investment behaviour.

Behavioural Economics research suggests that individuals often act irrationally due to cognitive processes and environmental conditions, and may be affected by a number of unconscious biases.[22] Behavioural Economics is the study of how people think and make decisions and is grounded in empirical evidence from a range of social sciences, including both economics and behavioural psychology.

Behavioural Economics is increasingly used by many C8 members in designing their overall approach to investor education, to promote better outcomes for investors.

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17 See N. Barberis, M. Huang and T. Santos, "Prospect Theory and Asset Prices", *The Quarterly Journal of Economics*, vol. 116, no. 1, 2001, pp. 1–53.

18 See O.S. Mitchell and S.P. Utkus, "Lessons from Behavioural Finance for Retirement Plan Design", in *Pension Design and Structure – New Lessons from Behavioural Finance*, 2004, supra fn 16.

19 See G. Huberman, "Familiarity Breeds Investment", *Review of Financial Studies*, vol. 14, no. 3, 2001, pp. 659–80.

20 See J.J. Choi, D. Laibson, and B.C. Madrian, "Are Empowerment and Education Enough? Underdiversification in 401(k) Plans", *Brookings Paper on Economic Activity*, vol. 2, 2005, pp. 151–98.

21 See M. Statman, "The Diversification Puzzle", *Financial Analysts Journal*, 2004, vol. 60, no. 4, 2004, pp. 44–53.

22 For further discussion on key behavioural responses in financial decision-making, see *Strategic Framework on Investor Education and Financial Literacy*, IOSCO, October 2014, supra fn 3.

For instance, the United States Financial Industry Regulatory Authority (US FINRA) Investor Education Foundation has funded a number of research projects involving behavioural finance concepts[23] and, in partnership with AARP (formerly the American Association of Retired Persons) and the Retirement Security Project, has developed a campaign called Retirement Made Simpler, which is based on original research and provides a website with information about automatic retirement plans. The campaign champions behavioural finance principles to foster improved retirement savings.

The United Kingdom Financial Conduct Authority (UK FCA) has published two occasional papers on Behavioural Economics to explore how people make financial decisions.[24] The UK FCA is using Behavioural Economics to combine knowledge of consumer behaviour, firm behaviour, competition and regulation, to consider questions such as: why do consumers buy the products they do, why are firms competing on some features but not on others, and how are both likely to respond to changes in regulation?

The Australian Securities and Investments Commission (ASIC) also recently released two Behavioural Economics research reports based on experiments conducted as part of its push to better understand market and consumer behaviour, and is engaged in a number of other projects focused on incorporating Behavioural Economics principles into its work.

For instance, ASIC is:

- developing its first field-based randomised control trial; and
- running trials with industry to test innovative disclosure models, recognising that new technologies and digitisation are changing the way people are presented with, and respond to, information.[25]

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23 See *Individual Differences in Financial Risk Taking Across the Lifespan*, Stanford University Department of Psychology and the Kellogg School of Management, Northwestern University, available at: www.finrafoundation.org/web/groups/foundation/@foundation/documents/foundation/p122153.pdf.

See also: National Bureau of Economic Research (NBER), Managing Risk and Minimizing Fees:

- *Can Psychological Aggregation Manipulations Affect Portfolio Risk-Taking?* available at: www.finrafoundation.org/resources/research/;
- *How Does Simplified Disclosure Affect Individuals' Mutual Fund Choices?*, Working Paper No. 14859, April 2009, available at: www.nber.org/papers/w14859;

See also: *Overcoming Biases to Promote Wise Investing*, Princeton University Department of Psychology and Public Affairs, Research Summary, available at: www.finrafoundation.org/resources/research/.

24 See UK FCA, *Occasional Paper No. 1 – Applying Behavioural Economics at the Financial Conduct Authority*, April 2013, available at: www.fca.org.uk/your-fca/documents/occasional-papers/occasional-paper-1#.

See UK FCA, *Occasional Paper No. 2 – Encouraging Consumers to Claim Redress: Evidence from a Field Trial*, April 2013, available at: www.fca.org.uk/your-fca/documents/occasional-papers/occasional-paper-2.

25 See ASIC, *ASIC Increasing Use of Behavioural Economics Across its Regulatory Business*, Media Release 15-059, 18 March 2015, available at: http://asic.gov.au/about-asic/media-centre/find-a-media-release/2015-releases/15-059mr-asic-increasing-use-of-behavioural-economics-across-its-regulatory-business/.

2.3. Levels of financial literacy

Research from a number of jurisdictions shows that, while investors are generally able to understand basic investment concepts, understanding of more advanced concepts is limited.

Examples

Australia: In 2008 and 2010, ASIC reviewed a number of available studies that assessed Australians' level of financial knowledge using various methods (most commonly via surveys).[26] ASIC found that adult Australians had differing attitudes towards financial matters and varying levels of financial knowledge. Overall, Australians seemed more knowledgeable and confident about familiar issues, such as budgeting, managing debt and saving, but were less familiar with more complex issues, such as investing, superannuation and saving for retirement.

Canada: The Canadian Securities Administrator's (CSA) 2012 Investor Index found that Canadians' overall investment knowledge was relatively low, with 40% of Canadians failing a general investment knowledge test.

While basic investment concepts – such as simple compound interest, diversification as a means of minimising risk and the relative riskiness of an individual stock as compared to a mutual fund – were more widely understood, one in two respondents did not understand that returns are not guaranteed for mutual funds and more than half did not understand the fundamental principle of risk/reward trade-off.

Indeed, a national study conducted for the Ontario Securities Commission's (OSC) Investor Education Fund[27] found that Canadians tended to equate product performance with rates of return. Products potentially offering higher rates of returns were considered better performing products than low-risk products with correspondingly lower rates of return.[28]

France: A study conducted by the Crédoc (a research centre on living conditions) on financial literacy[29] found that a majority of the French population surveyed understood the concept of diversification (70% understood that diversifying investments on a stock exchange reduces risk) and the relative risks of products (87% classified shares as high-risk products and 93% classified savings plans as low risk). However, almost one quarter did not appear to understand risk/return trade-offs and still believed in easy gains (i.e. high return with little risk).

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26 See ASIC, *Report 230: Financial Literacy and Behavioural Change*, March 2011, available at: http://asic.gov.au/regulatory-resources/find-a-document/reports/rep-230-financial-literacy-and-behavioural-change/.

27 As of 1 April, 2015, the Investor Education Fund was merged into the Ontario Securities Commission's new Office of Investor Policy, Education and Outreach.

28 See E.L. Weinstein (on behalf of the OSC), *The Canadian Money State of Mind Risk Survey 2014: Investor Risk, Behaviour & Beliefs*, 2014, available at: http://www.getsmarteraboutmoney.ca/en/research/Our-research/Pages/Investor-Risk-Behaviours-and-Beliefs-2014.aspx.

The survey involved 2002 Canadians: 50% from Ontario, 20% from Quebec, 10% from each of British Columbia and Alberta, and 5% from each of the Prairie provinces and Atlantic provinces. Respondents were evenly split by gender, with two-thirds of respondents falling within the 36–55 year old age group.

29 See R. Bigot, P. Croutte and J. Muller, *La culture financière des Français*, CRÉDOC, Institut pour l'Education Financière du Public and Autorité des Marchés Financiers, October 2011, available at: http://www.credoc.fr/pdf/Sou/La_culture_financiere_des_Francais_2011.pdf.

This study was published by Institut pour l'éducation financière du public (an institute for public financial education) in partnership with Autorité des marchés financiers (AMF France) in November 2011.

Netherlands: Based on questionnaires about financial literacy submitted to a sample of the Dutch population, researchers found that while most households were knowledgeable about basic financial concepts, such as compound interest, inflation and the time value of money, few understood more advanced financial concepts for successful investing (e.g. the difference between stocks and bonds, the inverse relationship between bond prices and interest rates and risk diversification).[30]

United Kingdom: Similarly, research conducted by UK FCA and the Money Advice Service (UK) found that, while 80% of the adult population were confident about managing their money,[31] there was less understanding of more complex financial topics. Research from the FCA into consumers' understanding of structured products found that, while most respondents had some understanding of what inflation is and why it is important, they often overlooked the impact that inflation could have on capital erosion.[32]

2.4. Factors that may affect investors' attitude towards risk

Retail investors are a diverse and heterogeneous group. Recognising this, research suggests that there are a number of factors that may affect some investors' financial behaviour and their attitude towards risk. These factors include financial knowledge and experience, gender, age, the complexity of the product in which they are investing and behavioural biases.

2.4.1. Investment knowledge and experience

Research indicates that the level of investment knowledge may be positively correlated with ownership of risky assets. Weinstein found that, as investors become more knowledgeable, their willingness to take on risk increases, although experiencing a loss did not seem to visibly affect their judgement of their future investment success.[33] When faced with a major loss, the two dominant patterns of response were to do nothing (51%) or flee to safety (36%). A smaller group would try to recoup losses by buying more high-risk products.

In 2007, Glaser and Martin sought to shed light on why investors do not learn from their past mistakes.[34] The study focused on the difference between estimated and realised performance. It considered an investor's ability to accurately assess how their stock portfolios have performed in the past compared to other investors' portfolios. The study showed that investors tend to overstate their past performance and believe that they have done better than others. This was attributed to their not having a good understanding of the concept of returns

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30 See M. van Rooij, A. Lusardi and R. Alessie, "Financial Literacy and Stock Market Participation", National Bureau of Economic Research Working Paper No. 13565, October 2007, available at: http://www.nber.org/papers/w13565.

31 See Money Advice Service, *The Financial Capability of the UK*, November 2013, p. 13, available at: https://www.moneyadviceservice.org.uk/en/corporate/the-financial-capability-of-the-uk.

32 See *Structured Products – Qualitative Research with Consumers*, prepared by Ignition House for the Financial Conduct Authority, June 2014, p. 36, available at: https://www.fca.org.uk/your-fca/documents/research/structured-products-qualitative-research-with-consumers.

33 See E. L. Weinstein, *The Canadian Money State of Mind Risk Survey 2014: Investor Risk, Behaviour & Beliefs*, 2014, supra fn 28.

34 See M. Glaser and W. Martin, "Why inexperienced investors do not learn: They do not know their past portfolio performance", *Finance Research Letters*, vol. 4, 2007.

and the way that brokers present their portfolio returns. As investors gained more investment experience (five years or more), their ability to estimate portfolio returns improved.

Glaser and Martin also found that the lower returns are, the worse investors are at judging their realised returns. Reasons for this could be that investors tend to look at their portfolio less when their returns are negative or because they simply do not want to admit they have fared badly. Depending on their risk profile, investors may also tend to focus more on their losses or gains when evaluating their portfolio over time.[35]

Conversely, less knowledgeable investors may avoid investing altogether. Van Rooij, Lusardi and Alessie found a causal link between low levels of financial literacy and stock market participation.[36] They advocated for investor education programs (for private retirement plans) that target the least financially sophisticated segments of the population to address investors' reluctance to invest in the stock market.

In 2011, Almenberg and Widmark conducted a study in Sweden and found that numeracy and financial literacy were strongly correlated with participation in both stock and housing markets.[37] These findings were in line with prior research by Calvet, Campbell and Sodini (2007)[38] and supported the view that non-participation is a common response to shortfalls in numeracy and financial literacy.

Too many options may also result in less knowledgeable investors making poor financial decisions. A study in the United States in which 211 adults were asked to make investment choices in their 401(k) plans found that, when less knowledgeable investors were presented with more fund choices, they demonstrated a statistically significant shift in assets from bond to stock funds.[39] This was attributed to their difficulty in distinguishing between bond and equity funds, and perceiving that equity funds offered more variety. More knowledgeable investors were better able to understand the benefits of diversification and tended to adhere to asset allocation goals.

2.4.2. Gender

Globally, evidence suggests that men, on average, hold more high-risk assets than women.[40] This is sometimes attributed to women being more risk averse than men.[41] However, a recent

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35 See E.L Weinstein, *The Canadian Money State of Mind Risk Survey 2014: Investor Risk, Behaviour & Beliefs*, 2014, supra fn 28.

36 See M. van Rooij, A. Lusardi and R. Alessie, "Financial Literacy and Stock Market Participation", National Bureau of Economic Research Working Paper No. 13565, October 2007, supra fn 30.

37 See J. Almenberg, and O. Widmark, "Numeracy, Financial Literacy and Participation in Asset Markets", Working Paper, April 2011, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1756674.

38 See L.E. Calvet, J.Y. Campbell and P. Sodini, "Down or Out: Assessing the Welfare Costs of Household Investment Mistakes", *Journal of Political Economy*, vol.115, 2007, pp. 707–747.

39 See M. Morrin, S. Broniarczyk, J. Inman and J. Broussard, "Saving for Retirement: The Effects of Fund Assortment Size and Investor Knowledge on Asset Allocation Strategies", *Journal of Consumer Affairs*, vol.42, 2008, pp. 206–222.

40 *Education: Evidence, Policy Responses and Guidance*, Book, Organisation for Economic Cooperation and Development (OECD), October 2013, available at: http://www.oecd.org/daf/fin/financial-education/women-and-financial-education-2013.htm.

41 See B. Jacobsen, J.B. Lee, W. Marquering and C.Y. Zhang, "Gender Differences in Optimism and Asset Allocation", *Journal of Economic Behaviour*, vol. 107, 2014, pp. 630–651.

study sought to test two alternative explanations: differences in asset allocation between men and women may also occur if investors have different expectations about future returns and/or different perceptions about the riskiness of financial assets.[42] The findings of the study suggested that the difference between men and women in holding higher-risk assets largely stemmed from women being less optimistic about future market performance and more likely to predict a higher level of market risk than men.[43] Jacobsen et al noted that men's optimism may be linked to having higher confidence levels and a greater perceived ability to influence outcomes. They also found that gender difference in optimism is not limited to the stock market, but extends to other aspects of the economy and private life.

A survey of investors in Canada found that optimism is a personal trait that often leads to mistakes due to overconfidence.[44] In line with their generally higher risk appetite, men were more likely to experience a major investment loss than women.[45] This gender difference may also explain statistics showing that three out of four pre-retirement investors who have been the target of investment fraud are men.[46]

ASIC's study on financial literacy and behavioural change found that men are more likely to invest and ignore the advice of others, while women are less likely to invest and more likely to urge caution. ASIC's study also took note of findings in Barber and Odean's 2001 paper that 45% more men trade than women overall, and single men trade 67% more than single women.[47]

2.4.3. Age

A report by Stanford University, supported by a grant from the US FINRA Investor Education Foundation, found that older people tend to make more investment mistakes when choosing higher-risk assets.[48] Investment mistakes were associated with the anticipation of

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42 See B. Jacobsen, J.B. Lee, W. Marquering and C.Y. Zhang, "Gender Differences in Optimism and Asset Allocation", *Journal of Economic Behaviour*, 2014, supra fn 41.

43 See B. Jacobsen, J.B. Lee, W. Marquering and C.Y. Zhang, "Gender Differences in Optimism and Asset Allocation", *Journal of Economic Behaviour*, 2014, supra fn 41.

44 See E.L Weinstein, *The Canadian Money State of Mind Risk Survey 2014: Investor Risk, Behaviour & Beliefs*, 2014, supra fn 28.

45 See E.L Weinstein, *The Canadian Money State of Mind Risk Survey 2014: Investor Risk, Behaviour & Beliefs*, 2014, supra fn 28.

46 See *How to Appeal to Investors with Fraud Prevention Messages: Survey Findings From a Survey Among a Segment of Pre-Retirement Investors*, prepared by Porter Novelli Public Services for the US CFTC, March 2014, available at: http://www.cftc.gov/ucm/groups/public/documents/file/messagetestingsurveyreport.pdf.

47 See B.M. Barber and T. Odean, *"Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment"*, *The Quarterly Journal of Economics*, vol. 116, 2001, pp. 261–292.

48 See Stanford University, *Individual Differences in Financial Risk Taking Across the Lifespan,"* 2014, supra fn 23.

This report provides a lay summary of a series of research supported in part by a grant from the US FINRA Investor Education Foundation. The goal of the project was to use a team of psychologists, neuroscientists, and economists combining diverse measures (including brain activity, behavioural responses in laboratory investing tasks, and real-world financial assets and debts) to understand how and why individuals may be vulnerable to different mistakes in financial decision-making from young adulthood to old age. The research identified behaviours and brain responses that are associated with both optimal and non-optimal risky financial decisions, as well as with real-life financial outcomes. Based on the findings, a large collection of measures of risk-taking and decision-making were reduced rewards, suggesting that older adults might make overly optimistic predictions about the potential earnings of risky stocks. However, it was further found that these mistakes could be reduced by providing "decision aids" in the form of simple, graphical depictions of the approximate expected earnings for the risky investments. Interestingly, the format of these decision aids was also important – older adults made better choices when provided with these simplified estimates of expected value than when provided with a detailed record of each asset's prior returns over time.

2.4.4. Product complexity

In 2012, the United States Securities and Exchange Commission (US SEC) commissioned a study to assess investors' understanding of target date retirement funds.[49] These funds, which are often mutual funds, hold a mix of stocks, bonds, and other investments. Over time, the mix gradually shifts according to the fund's investment strategy and its timeline. The study showed that some respondents did not fully understand the investment risks of target date retirement funds. For example, many survey respondents had misconceptions about the point at which the asset allocation of a target date fund stops changing. In addition, only 36% of respondents correctly indicated that a target date fund does not provide guaranteed income in retirement.[50]

The UK FCA has also carried out a review to investigate how well retail investors understand and value structured deposits – a type of complex product.[51] The review sought to assess whether there are systematic biases in investors' evaluation of the expected performance of these products, and whether giving targeted information improves this evaluation. The key findings included that:

- consumers had a good understanding of basic product features, but struggled with the details;[52]

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into a single online instrument designed to help individuals assess their financial risk-taking tendencies and improve their financial decision-making process.

49 See *Investor Testing of Target Date Retirement Fund (TDF) Comprehension and Communications*, prepared by Siegel & Gale LLC for US SEC, February 2012, available at: http://www.investor.gov/sites/default/files/Investor-Testing-Target-Date-Funds.pdf (Target Date Retirement Fund Study). The Target Date Retirement Fund Study presents the findings of Siegel & Gale LLC and does not necessarily reflect the views of US SEC, its Commissioners, or members of US SEC's staff.

50 See Target Date Retirement Fund Study, supra fn 49, at p. 28. US SEC's investor bulletin on target date retirement funds is available at: http://www.sec.gov/investor/alerts/tdf.htm.

51 This involved:

- research with retail customers, consisting of a survey of 384 retail investors who had previously bought structured deposits or other structured products;
- research with retail firms (the "retail review"), where researchers assessed nine firms engaged in manufacturing and distributing structured products (structured deposits and capital protected structured investment products) to their own or other retail customers; and
- research with wholesale firms (the "wholesale review"), where researchers assessed 14 investment banks that manufacture structured notes for issuers.

See UK FCA, *Occasional Paper No. 9 – Two Plus Two Makes Five? Survey Evidence That Investors Overvalue Structured Deposits*, March 2015, available at: http://www.fca.org.uk/news/occasional-paper-no-9.

52 Few consumers had a good understanding of the underlying factors driving potential returns, and most did not consider likely market levels when making investment decisions.

- consumers struggled to assess potential product outcomes or performance, and significantly overestimated expected returns on structured deposits;[53]
- a firm's sales processes had a strong influence on whether consumers bought structured deposits instead of alternatives; and [54]
- targeted disclosure somewhat improved how investors make comparisons.[55]

Overall, the research findings reinforced UK FCA's belief in the importance of designing structured products that are a reasonable match for the financial sophistication of the particular target market. It also highlighted areas in which further research could be undertaken to better understand which combination of product features and behavioural biases drive investors to have unrealistically high expectations of product returns and impede their ability to evaluate and compare structured products.

2.4.5. Behavioural biases

There have been several studies in the United States highlighting the importance of accounting for individual investment behaviours and biases when designing retirement plans.[56] For example, a study examining employees' behaviours towards 401(k) plans indicated that individuals have a tendency towards passive decision-making and taking the "path of least resistance".[57] The study found that automatic enrolment policies tend to result in many participants remaining at the employer-specified default for both the contribution rate and asset allocation.[58]

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53 Investors were unable to recognise that all structured deposits in the survey would have been unlikely to return more than fixed-term cash deposits. They predominantly sought a "safe" investment (as regards risk of capital loss) and superior performance (as compared with cash deposits). Taken at face value, structured deposits appear to address these underlying financial needs. Contrary to standard portfolio theory, consumers also showed a systematic bias towards overestimating expected returns from structured deposits. This led them to prefer such products over alternatives such as cash savings.

54 The "push" nature of the sales process, coupled with the relatively short decision-making timelines, mean that, left to their own devices, some consumers will not compare products before making their purchase decisions.

55 Disclosure of likely product returns and risk led investors who had initially overestimated returns or underestimated risk of return to change their preferences. Presenting likely product returns based on a quantitative model was to some extent more effective than showing returns under various hypothetical scenarios.

56 Choi, Laibson, Madrian and Metrick also found that 401(k) plan participants have a disturbing tendency to hold large balances in employer stock. Apart from passivity, such tendencies could be due to familiarity bias and loyalty to employers.

See J.J. Choi, D. Laibson and B.C. Madrian, "Are Empowerment and Education Enough? Underdiversification in 401(k) Plans", *Brookings Papers on Economic Activity*, vol.2, 2005, pp.151-98.

57 See J.J. Choi, D. Laibson, B.C. Madrian and A. Metrick, "Defined Contribution Pensions: Plan Rules, Participant Choices, and the Path of Least Resistance", *Tax Policy and the Economy*, 2002, supra fn 56; O.S. Mitchell and S.P. Utkus, "Lessons from Behavioural Finance for Retirement Plan Design", *Pension Design and Structure – New Lessons from Behavioural Finance*, 2004, supra fn 16.

58 These findings were corroborated by another study on the behaviour of participants in the 401(k) plan at a large US corporation that adopted an automatic enrolment policy. These investing behaviours were attributed to tendencies to inertia, the power of suggestion, as well as employees' perception that the default contribution rates and allocations represent investment advice: see B.C. Madrian and D.F. Shea, "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behaviour", *Quarterly Journal of Economics*, vol. 116, 2001, pp. 1149–1187.

Madrian and Shea (2001) recommended simplifying investment choices for investors and providing investor education to combat the inclination of investors to procrastinate about savings.[59]

2.5. Regulatory protections for retail investors

As noted above, investor education is part of a broader investor protection framework. Retail investors are generally afforded a higher level of regulatory protection than other classes of investor. Investor protection responses take many forms – including, for example, disclosure requirements, public warnings or, in some instances, restrictions on the products that may be offered to retail investors. While not in scope for this project, these latter examples are briefly discussed below, as they involve related concepts and issues of investor education and financial literacy.

2.5.1. Disclosure requirements

The majority of C8 members noted that investment products sold to retail investors are subject to mandatory disclosure requirements that seek to explain various features of the product, including risk. In some cases, disclosure documents may be lodged, reviewed or approved by the securities regulator before being offered to the retail investor market.

Research indicates that some disclosure documents can be difficult for some retail investors to understand.[60] Reasons for this can include investor disengagement, the complexity of the disclosure materials and the products, behavioural biases and low financial literacy.[61]

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59 See B.C. Madrian and D.F. Shea, "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behaviour", supra fn 58.

Employers may also exacerbate such investment patterns through employee stock option plans and employer matching contributions. Studies have also shown that investors tend to take a naive diversification approach towards asset allocation in defined contribution plans: see S. Benartzi and R.H. Thaler, "Naïve Diversification Strategies in Defined Contribution Saving Plans", *American Economic Review*, vol. 91, 2001, pp. 79–98. This is an investment strategy whereby investors simply allocate their assets proportionally among available investment options. This research linked the increase in retirement funds invested in equities in the 1990s to an abundance of equity funds added to defined contribution plans over that period. While such an investment approach may not necessarily be bad for unsophisticated investors, this may prove costly if the employer provides a poor selection of choices or does not anticipate investors choosing this way.

60 A team of researchers from Harvard and Yale conducted a study on 186 non-faculty Harvard employees from the ranks of the administrative, professional, clerical and technical staff to estimate the effect of a two-to-four page summary prospectus on investors' choices. It was found that, while the summary prospectus did decrease the average time spent on making portfolio allocation decisions from about 30 to 20 minutes, participants did not otherwise feel better about their investment decisions. The researchers also found that the summary prospectus did not help participants to consider mutual fund fees in their investment strategy, or change the extent to which they deviated from the naive diversification strategy of equal allocation to available fund options.

See J. Beshears, J.J. Choi, D. Laibson and B.C. Madrian, *How Does Simplified Disclosure Affect Individuals' Mutual Fund Choices?*, supra fn 23.

Difficulties faced by investors in evaluating a fund's overall fee structure were also highlighted in another study, which found that investors tend to vastly overweight loads (cost of buying fund) relative to expense ratios (cost of owning fund): see R.T. Wilcox, "Bargain Hunting or Star Gazing? Investors' Preferences for Stock Mutual Funds", *Journal of Business*, vol. 76, 2003, pp. 645–663.

61 See Financial System Inquiry Committee, *Financial System Inquiry*: *Final report*, 2014, p. 199, available at: http://fsi.gov.au/.

A study by Kozup, Howlett and Pagano found that investors have trouble sifting through information about mutual fund characteristics and are often unduly influenced by past fund performance, search costs (costs of selecting stocks from a universe of available stocks), the size of the mutual fund company and the level of the company's marketing efforts.[62] The study found that supplemental information disclosure, particularly in graphical format, helped investors make better choices, although some investors continued to place too much emphasis on prior fund performance.

2.5.2. Product warnings, labels and restrictions

In some jurisdictions, restrictions are placed on the products that can be marketed and sold to retail investors.[63] In some other jurisdictions, certain investment products are provided to retail investors with information regarding the level of risk associated with the product or service via a system of risk labels and/or warnings.

Examples

The Prudential Supervisory Authority (ACPR) and Autorité des marchés financiers (AMF France) have established criteria to determine whether the products to be marketed are likely to cause investors to underestimate the risks involved or misunderstand the investment product. AMF France requires all marketing documents for complex products to include the following warning: "The AMF considers this product too complex to be marketed to retail investors and has not therefore examined the marketing documents."

In Portugal, it has been a requirement since 2012 that all information documents and marketing materials for complex financial products include a warning symbol that draws attention to the relevant characteristics of the financial product and the possibility of partial or total capital loss. Examples of the suite of warning symbols used in Portugal for this purpose are included below.[64]

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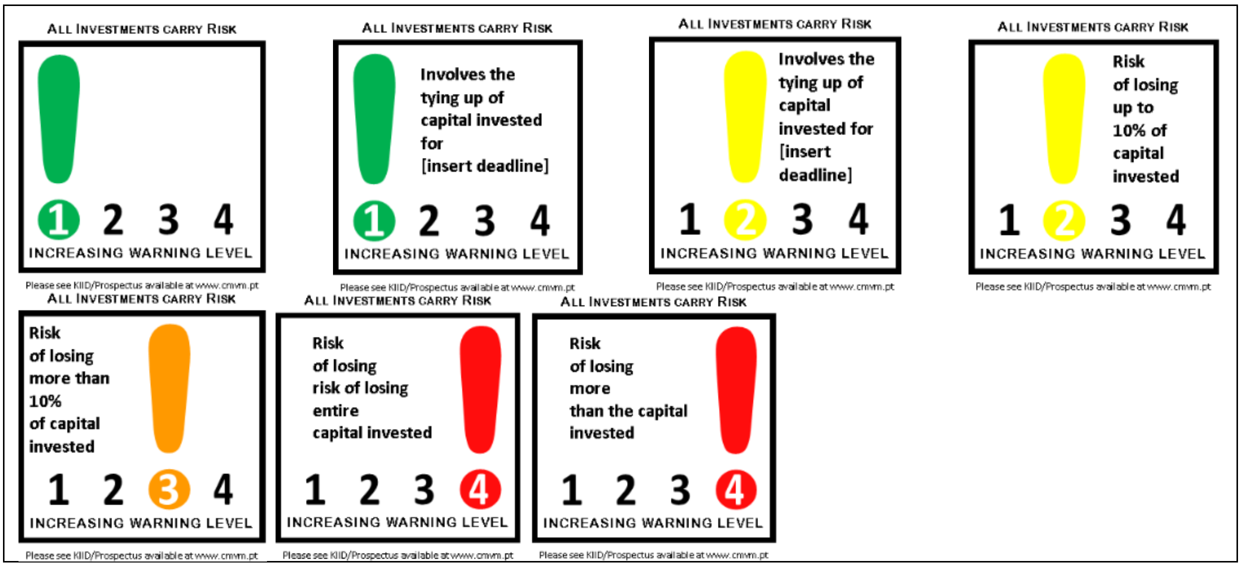
62 See J. Kozup, E. Howlett and M. Pagano, "The Effects of Summary Information on Consumer Perceptions of Mutual Fund Characteristics", *Journal of Consumer Affairs*, vol. 42, 2008, pp. 37–59.

63 In Malaysia, for example, certain bonds, structured products, wholesale funds and over-the-counter (OTC) derivative products may only be offered to high net worth or accredited investors. Similarly in Ontario, as on 30 June 2015, only certain types of investors can invest in exempt securities, such as accredited investors or those who have a specific relationship with certain principals of the business (e.g. family member or close personal friend). In France, the marketing of "structured" investment funds and complex debt securities is restricted. Belgium FSMA has banned the sale of particularly complex structured products and of certain types of investment products (e.g. life settlements) to retail investors. In Japan, JSDA's member association may only be permitted to offer certain complex bond and investment trusts, as well as to conduct high-risk transactions, such as margin and derivative transactions, to investors who meet internal criteria developed under the JSDA's self-regulatory rules.

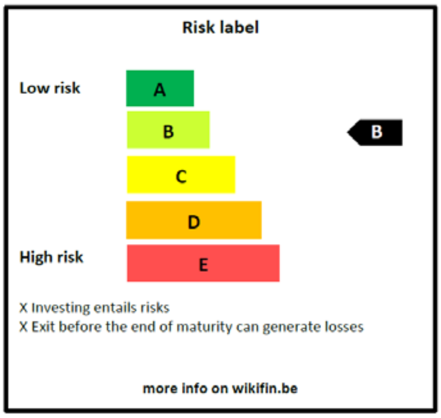
64 The warning symbol shall be applied according to the following:

- green – green may only be assigned to complex financial products (CFPs) that constitute guaranteed income when issued or is guaranteed by an entity either subject to prudential supervision in the European Union or covered by the mutual recognition system;
- yellow – yellow may only be assigned to CFPs with guaranteed income that are not issued or guaranteed by an entity referred to in the previous item, and also to CFPs where the maximum loss of capital at maturity is less or equal to 10% of the capital invested;
- orange – orange is assigned to CFPs where there is a possibility of a capital loss at maturity that is greater than 10% and less than 100% of the capital invested; and
- red – red is assigned to all CFPs where there is a possibility of a capital loss greater than or equal to 100% of the capital invested. The warning symbol must also contain the following phrase: "All



Case study – Risk labels – Belgium

In early 2014, Hendrik Van Driessche presented a paper to Belgium FSMA on introducing a diagrammatic risk label to help consumers evaluate banks' savings and investment products.[65] Van Driessche had tested six different types of risk labels with 16 individuals with various investing backgrounds before developing a proposed risk label that was generally understood by all respondents surveyed (pictured below).



Respondents generally understood that the risk label was intended to aid their investment choices by providing an overview of the relative level of risk of an investment product. Van Driessche noted, however, that the reported effectiveness of such a label depended on the respondent's individual knowledge level:

investments carry risk" and, where applicable, "See the KIID (Key Investor Information Document)/Prospectus available on www.cmvm.pt."

See CMVM Regulation No. 2/2012 *Disclosure Duties Relating to Complex Financial Products and Marketing of Unit-Linked Insurance Plans*, available at: http://www.cmvm.pt/en/Legislacao/National_legislation/Regulamentos/Documents/RegulamentoPFC2_2012E.pdf.

65 See H. Van Driessche, *FSMA – Risk Label*, Belgium FSMA Presentation Document No. 1843, March 2014.

- Those with a high level of financial knowledge appreciated the initiative, but indicated that such a label would not influence their decision-making.
- Those with some knowledge of financial asset management indicated that such a tool would help them in their research and discussions about products with their financial advisors.
- Those with little knowledge also thought that such a tool would be useful as a filter to eliminate the riskier products from their pool of potential investments. However, this latter group was also likely to misunderstand the "green" and letter "A" risk level to mean "no risk at all" or "100% safe".

Other concerns involved the neutrality of the institution in charge of the risk-labelling framework, the competency of the person ranking the products, and the criteria for the labels.

Building upon the model presented by Van Driessche, the Belgium FSMA has since drafted regulations regarding the technical requirements of the risk label for all types of financial products – savings products, investment products and insurance products (with certain exceptions) – marketed to retail investors.[66]

66 The Belgian government has postponed the entry into force of the new regulations, taking into account the work in progress on the European level: see "FSMA Regulation of 3 April 2014 Regarding the Technical Requirements of the Risk Label", *Belgian Official Gazette*, 12 June 2014. For further information see:

http://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&ved=0CCAQFjAAahUKEwiv1v-qxIHHAhVEgdsKHQZCBYk&url=http%3A%2F%2Fwww.fsma.be%2F~%2Fmedia%2FFiles%2Ffsmafiles%2Fwetgeving%2Freglem%2Fen%2Freglem_25-04-2014.ashx&ei=GGe5Va_qJ8SC7gaGhJXICA&usg=AFQjCNFHHbrEi8H8ZlmAbAQQZA91UqYl5A&bvm=bv.99028883,d.ZGU; and

http://www.fsma.be/en/RSS/Article/press/div/2014/2014-06-12_labels.aspx#_ftn1.

3. The role of securities regulators in investment risk education

The responses below are based on the results of a survey of C8 members conducted for the purposes of this project.

3.1. Mandate

All C8 members noted that the mandate to conduct investor education fits within their broader objective of investor protection. This is consistent with IOSCO Principle 3 (Key issue 6) of the IOSCO Methodology, which states: "regulators should also play an active role in the education of investors and other participants in capital markets".[67]

In some cases, the mandate for investor education and/or financial literacy is explicit; in other jurisdictions, the regulator has an implicit responsibility for investment and financial consumer education consistent with its investor protection role. In a few jurisdictions, the responsibility for investor education and financial literacy has been delegated to subsidiaries or falls to other government agencies.

Examples

Legislative mandate

In Nigeria, legislation states that the Securities and Exchange Commission (Nigeria SEC) is responsible for promoting investor education.[68] Similarly, in South Africa, the Financial Services Board has a legislative responsibility to "provide, promote or otherwise support financial education, awareness and confidence regarding financial products, institutions and services".[69]

As an authorised association under the *Financial Instruments and Exchange Act 1948*, the Japan Securities Dealers Association (JSDA) has a statutory mandate to disseminate financial knowledge.[70]

Implicit responsibility

In jurisdictions that do not have an explicit legislative mandate, investor education often forms part of the regulator's broader responsibilities to investors. For instance, in France, the AMF's Strategy 2013–2016, "Making finance meaningful again", has three pillars, one of which is to "restore investor confidence".[71] AMF France's financial education initiatives are seen as integral to achieving this goal.

Similarly, US FINRA considers investor education as a key element to furthering its investor protection aims.

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67 See FR08/11 *Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation*, IOSCO, September 2011 (revised August 2013), supra fn 2.

68 See s13(s) of the *Investments and Securities Act 2007*, Nigeria.

69 See the *Financial Services Board Act (No.97 of 1990)*, South Africa.

70 See Article 77-4 of the *Financial Instruments and Exchange Act (No. 25 of 1948)*, Japan.

71 See *The AMF Outlines the Key Points of its 2013–2016 Strategy*, AMF France, June 2013, available at: http://www.amf-france.org/en_US/Reglementation/Dossiers-thematiques/l-AMF/Plan-strategique-de-l-AMF/L-AMF-presente-les-grandes-orientations-de-sa-strategie-2013-2016.html.

Other government agencies

In the United Kingdom and Mexico, legislative responsibility for investor education and financial literacy belongs to other government agencies – namely, the Money Advice Service[72] and the Comisión Nacional para la Defensa de los Usuarios de las Instituciones Financieras (CONDUSEF), respectively, which work closely with the regulators.

3.2. Objectives of investment risk education activities

The objectives of C8 members' investment risk education activities generally include the following broad and interrelated priorities:

- to increase retail investors' awareness and understanding of investment risk and key investment concepts;
- to positively influence retail investors' behaviours and attitudes towards investment risk; and
- to equip investors with the skills needed to appropriately manage investment risk.

Some C8 members noted that their objectives focus on raising awareness and financial knowledge and ability for certain target groups.[73]

3.3. Strategic framework for investment risk education

In many cases, C8 members' investment risk education activities are part of a broader strategic program of investor education and/or financial literacy, depending on their regulatory remit.[74]

Case study – National Financial Literacy Strategy – Australia

In Australia, ASIC is responsible for leading and coordinating the National Financial Literacy Strategy. As well as providing a strategic framework for all stakeholders involved in financial literacy, ASIC's own investor education and communication campaigns are aligned and contribute to the national strategy.

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72 In the UK, the Money Advice Service's board is appointed by, but acts independently of, the FCA. For more information see: https://www.moneyadviceservice.org.uk/en.

73 For example, Sweden Finansinspektionen's (FI) objectives focus on those groups with the least knowledge and who are less active in investing.

74 For example, Autorité des marchés financiers' (AMF Quebec) broader strategy focuses on asking the right questions when investing, which includes on risk, return and fees. US SEC's investment risk education is integrated within its broad investor education program, the three pillars of which are fraud, fees and risk. Investment risk education falls within the overarching framework of Australia's National Financial Literacy Strategy, which ASIC developed in consultation with key stakeholders. Singapore's approach aims for investors to be clear about their needs (investment objectives), be able to withstand risk and losses, and understand if a product is suitable for their needs. Similarly, US FINRA notes that investment risk education is integrated into virtually all of its investor messaging and resources and, in Brazil, investment risk education is embedded in all investor education initiatives of the CVM. Sweden FI's overall financial education strategy focuses on assisting certain target groups through a "teach the teacher" model. The intermediaries who reach the target audience provide seminars and workshops on budgeting and planning, savings, credit and investing, including the relationship between risk and return and diversification.

Case study – Investor Education Blueprint – Malaysia

The Malaysia Securities Commission's (SC) approach to investor education is contained in its Investor Education Blueprint. The relevant key elements include:

- educating existing and potential investors, with efforts directed at widening the coverage of investor education programs coupled with the need for a responsible industry;
- designing financial literacy programs for different segments of society, ensuring that both current and potential investors are taken in a step-wise fashion from basic financial understanding through to financial capability; and
- elevating financial literacy into investment literacy and capability, to facilitate more informed participation in the capital market.

3.4. Fees and funding for investment risk education activities

All C8 members noted that their investment risk education resources are generally free of charge for retail investors. Some noted that for particular activities, such as workshops and seminars, they may charge a fee on a cost recovery basis.

Responses to the survey indicated that there are two primary funding models used by C8 members: one is funding from the industry, through either a levy or from fines and penalties;[75] the other funding method is from the regulator's operating budget.

[75] For example, AMF Quebec manages the Education and Good Governance Fund, which supports projects focusing on investor protection and education. This fund allows AMF Quebec and other relevant organisations to undertake research, consumer awareness and education projects. It is financed mainly from fines and penalties.

4. Investment risk education by C8 members: Challenges, approaches and practices

Survey responses by C8 members provided information about their approaches to investment risk education and revealed a number of similarities across the collective experience of the members in their efforts to develop effective investment risk education strategies, products and activities.

Despite the challenges, C8 members are using insights gained from research and other evidence-based sources to develop and implement investor education initiatives aimed at addressing many of the issues outlined above.

In addition to work being conducted in individual C8 jurisdictions, C8 itself provides a new and useful forum to coordinate further work as well as sharing of information and expertise across IOSCO.

4.1. Challenges

In responding to the survey, C8 members reported a number of issues and challenges which they seek to address and overcome in relation to their investment risk education activities. These challenges and issues are discussed below.

4.1.1. Product complexity

There is general acknowledgement, amongst C8 members, that the number and complexity of retail investment products means that it is difficult to assist investors who are trying to assess whether a certain product is appropriate for them. C8 members seek to find ways to deliver key messages on these complex and technical aspects of a product in a way that will be easy to understand for retail investors.

Example

US FINRA noted it is difficult to communicate effective messages about investment risk broadly when investor risk profiles are very individualistic. US SEC noted it is difficult to develop an investment risk education program beyond communicating simple messages, such as that 'all investments carry risk' and that investment risk is a more complex topic to communicate to investors than other investment concepts in relation to fraud or fees.

4.1.2. Reaching investors at the right time

Many C8 members reported that reaching retail investors at the right time (i.e. when they are making decisions about investing) can be challenging.

Example

Germany BaFin noted that, as there is no obligation for investors to educate themselves about risk, retail investors can only be reached on a voluntary basis. While it may be possible to reach those investors who are aware and "risk-conscious", reaching others is more difficult.

4.1.3. Taking account of investors' behavioural biases

As mentioned earlier in this report, it is recognised by the majority of C8 members that retail investor decisions are impacted upon by many factors, including behavioural biases. C8 members have noted the need to create education initiatives that appeal to, take advantage of, or work in conjunction with, investors' behavioural biases.

Examples of behavioural biases include a tendency by some retail investors to:

- invest in the familiar (country or company);
- be risk averse; and
- have a negative perception about the safety and return of financial markets.[76]

4.1.4. The role of advisors and other financial intermediaries

While out of scope for this project, some C8 members provided feedback on the role of financial advisors or other intermediaries in the context of providing effective investment risk education for retail investors. Some members noted that many investors do not ask sufficient questions of their advisor and that there is a heavy reliance on the advisor's opinion when making a decision.

Examples

Ontario OSC's research, *Investor behaviour and beliefs*, demonstrated that advisors were an information source for more than eight out of ten investors, showing a very heavy reliance on advisors' opinions.[77] Foerster, Linnainmaa, Melzer and Previtero further found that some advisors tend to adopt a "one-size-fits-all" approach to giving financial advice that is independent of the client's risk preferences and life cycle stage. Indeed, they found that a client's portfolio mostly reflected the advisor's own portfolio even after controlling for investor attributes.[78]

The challenge for C8 members, as identified by Comisión Nacional del Mercado de Valores (CNMV) Spain, is to strengthen the ability and capacity of investors to ask the right questions and to proactively seek independent and unbiased information before making a decision and relying solely on intermediaries.

While the role of financial advisors is out of scope for this project, it is important to recognise their potential to influence the behaviour of investors when it comes to dealing with investment risk.

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76 For example, the Netherlands Authority for the Financial Markets (AFM) found that investors tend to often be risk averse and may be missing out on achieving a higher return with appropriate risk taking.

77 See *Investor Behaviour and Beliefs: Advisor Relationships and Investor Decision-Making*, Prepared by The Brondesbury Group for the OSC, 2012, available at: http://www.getsmarteraboutmoney.ca/en/research/Our-research/Pages/Investor-behaviour-and-beliefs.aspx#.VPO42vmSxic.

78 See S. Foerster, J.T. Linnainmaa, B.T. Melzer and A. Previtero, *Retail Financial Advice: Does One Size Fit All?*, National Bureau of Economic Research Working Paper No. 20712, November 2014, available at: http://www.nber.org/papers/w20712.

4.1.5. Measuring and evaluating investment risk education initiatives

One of the most common challenges faced by the majority of C8 members related to finding ways to effectively measure and evaluate their investment education initiatives.

C8 members recognise that, in accordance with the IOSCO Strategic Framework,[79] program monitoring and evaluation is important as it allows members to assess a program's effectiveness and identify areas for improvement. Effective measurement and evaluation techniques also help inform the development of future investment education initiatives.

However, it is acknowledged by C8 members that, while quantitative measurement is relatively straightforward, measuring program outcomes systematically can be challenging because the effects of such initiatives often take years to materialise. It can also be difficult to isolate the impact of an investment risk education initiative from the other influences and factors that contribute to a financial decision.

C8 members continue to work on addressing this issue and are adopting a variety of methods to evaluate the impact of their investment risk education activities, a number of which are discussed under the heading "Evaluation techniques" below.

Despite the challenges, C8 members are using insights gained from research and other evidence-based sources to develop and implement investor education initiatives aimed at addressing many of the issues outlined above.

In addition to work being conducted in individual C8 jurisdictions, C8 itself provides a new and useful forum to coordinate further work as well as sharing of information and expertise across IOSCO.

4.2. Research

Research plays an important role in establishing the evidence base and informing the development of investor education theory, policy and practice.[80] Research in relation to investment risk education is important for a number of reasons, including because:

- it helps securities regulators to better understand the level of knowledge, skills, attitudes and behaviours of the retail investors in their jurisdiction, and allows appropriate prioritisation and targeting of resources and messages;
- it provides securities regulators with key insights into their retail investor population – for example, in relation to demographics or the communication and delivery preferences of their investors; and
- it assists with evaluating effectiveness.

C8 members conduct or commission a number of different types of research.

4.2.1. Investor surveys

A number of C8 members noted that they use investor surveys to understand their retail investor population, either at a national level or of particular groups of investors. By

79 See *Strategic Framework for Investor Education and Financial Literacy*, IOSCO, October 2014, supra fn 3.

80 See *Strategic Framework for Investor Education and Financial Literacy*, IOSCO, October 2014, supra fn 3.

conducting a survey of the relevant or target population, C8 members are able to gain a better understanding of their retail investor market and investor attitudes and behaviours. Surveys can also be used to establish benchmarks which members can use to measure changes over time.

Examples

AMF Quebec's Financial Awareness Index, published in 2012 and 2014, measures financial awareness across a number of areas, including investment issues such as investor profile, anticipated return, and risk, the reading of documentation, diversification and tax issues.

US FINRA similarly conducts a large-scale survey to better understand the financial capability of adults in the US retail market. The first wave of the US FINRA Investor Education Foundation's National Financial Capability Study was conducted in 2009. A second wave followed in 2012 and plans are underway to collect data for a 2015 study.

Hong Kong IEC also conducted a survey of its adult population in 2014. The IEC's Knowledge, Attitudes and Behaviour towards Money and Debt Management provided insights into the demographics of investors in Hong Kong, their investing behaviours and attitudes.

4.2.2. Economic and other data

A number of C8 members noted that they use economic data to understand market trends and identify main risks for investors. The consideration of data and themes arising from investor queries and complaints was also identified by C8 members as a useful way to understand the particular target market and to inform the development of investment risk education activities.

Case study – Use of economic data – Risk and trend mapping - France

In the 2014 edition of its *Risk and Trend Mapping for Financial Markets and Savings*, AMF France explained two approaches it uses to measure and monitor the degree of household savings' exposure to principal risk.[81]

The first approach simply classifies all assets held into a matrix, classifying them by degree of liquidity (liquid; others) and principal risk (risk; non-risk).

The second approach attempts to provide a more accurate breakdown of the chains of intermediation behind wealth management, and categorises financial assets held by households into five risk classes according to degrees of risk (from one: lowest-risk, to five: highest-risk) – as illustrated in the table below.[82] This approach recognises that measuring households' exposure to principal risk has become more complicated as multiple layers of intermediation have become more common.[83]

81 "Principal risk" refers to the eventuality of losing all or part of the value of the principal initially invested. Generally, the degree of principal risk is measured by the volatility of the value of principal recovered when the investment ends: the higher the volatility, the greater the risk.

82 See *Risk and Trend Mapping No 15: Risk and Trend Mapping for Financial Markets and Savings*, AMF France, July 2014, pp. 138 and 140 respectively, available at:

This economic data is generally collected and analysed by internal departments, which assists AMF France with identifying what topics or issues may require an education response.

Table 17: Risk classes of financial assets

Degree of risk	Composition
Class 1	- Currency and deposits, including cash and savings held at banks (sight deposits, passbookssavings accounts, fixed-term deposits, PELs, PEPs) - Money-market mutual funds units, - Short-term debt securities held directly, - Non unit-linked life insurance
Class 2	- Longer-term debt securities (bonds) held directly, - Bond funds, - Structured guaranteed funds
Class 3	- Equity funds, - Balanced and alternative investment funds
Class 4	- Listed shares held directly - Listed shares held in employee savings plans
Class 5	- Other equity than listed and unlisted shares, - Unlisted shares.

Source: AMF.

4.2.3. Segmentation

A number of C8 members noted that they have recently started to apply a segmentation approach to their retail investor population to better focus and target their investment risk education activities.

Segmentation generally means dividing a broad population into smaller segments or subsets where the members of those segments share certain characteristics. Segmentation may be done in a number of ways – for example, by life stage, demographics or geographically. For the purposes of investment risk education, segmentation may support targeting of particular groups in the population. C8 members adopt different approaches to segment the retail investor market.

Examples

Based on its Financial Awareness Index, AMF Quebec segmented its market into three groups based on knowledge and experience.[84]

ASIC has segmented financial consumers and retail investors on the basis of life stages and events to help inform targeting and positioning of education and communication campaigns.

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http://www.amf-france.org/en_US/Publications/Lettres-et-cahiers/Risques-et-tendances/Archives.html?docId=workspace%3A%2F%2FSpacesStore%2Fb87033f5-ecbf-41f1-8236-ee44c91df3c7.

83 For example, an investment in life insurance will typically be invested in mutual funds units.

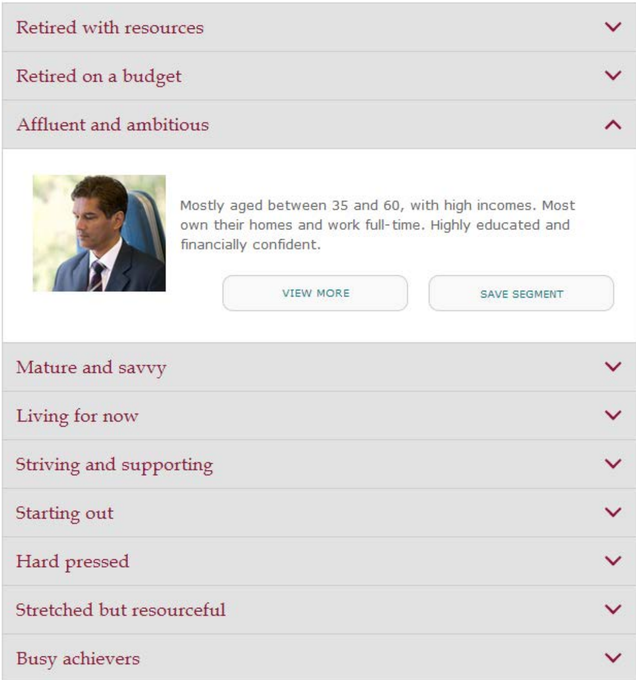
84 Knowledgeable consumers (55%) have extensive behavioural knowledge and tend to put it into practice; ambivalent consumers (31%) have good behavioural knowledge but tend not to apply it; and indifferent consumers (14%) have relatively little financial knowledge and do not adopt the behaviours of knowledgeable consumers. AMF Quebec focuses predominantly on ambivalent consumers.

In an alternative approach, the OSC segments its retail investor market based on financial means.[85]

Case study – Segmentation - UK

UK FCA has developed the "Consumer Spotlight" to segment its retail population. The Consumer Spotlight examines how people in the UK deal with money and financial services, with a unique focus on the capabilities and potential vulnerabilities of different groups.

The FCA uses Consumer Spotlight to build a deeper understanding of consumers, their attitudes and behaviours, and what influences them when they make financial decisions. It has divided the population into ten segments based on their financial needs and attitudes.[86]



4.3. Use of Behavioural Economics principles

Many C8 members are increasingly working to understand and apply Behavioural Economics principles to their investment risk education initiatives in order to focus their efforts on promoting and facilitating behavioural change, beyond just the provision of information.

While approaches vary, as well as the degree to which the application of Behavioural Economics principles is explicit, C8 members reported that they have incorporated these principles into their investor education activities in the following ways:

- the promotion of simple action steps;

85 In Ontario, individuals with greater levels of income and/or financial assets are assumed to be more able to evaluate investment opportunities, pay for proper advice and/or withstand financial loss.

86 See http://www.fca-consumer-spotlight.org.uk/.

- the use of real-life case studies;
- the employment of social marketing techniques;
- the provision of information at the time that people are most likely to engage with it;
- the use of rule of thumb logic where appropriate; and
- the user testing phases of investor education projects, during development and on an ongoing basis.

Some C8 members also provide staff with training on Behavioural Economics and the impact of cognitive and mental biases in investment decisions.[87]

Examples

- ASIC has created a dedicated Behavioural Economics internal team whose responsibilities include identifying new ways in which ASIC can employ Behavioural Economics principles across its business and functions. ASIC has also developed a National Financial Literacy Strategy which specifically references the importance of the ongoing application of Behavioural Economics learnings to financial education activities to enhance their effectiveness;[88]
- Comissão de Valores Mobiliários (CVM) Brazil set up a Behavioural Sciences Committee in 2014 to provide advice and recommendations to the Commission for applying insights from behavioural theory to its educational policy;
- Netherlands AFM's future strategies include further incorporating Behavioural Economic principles into its investment risk activities. Its focus will include providing "just-in-time" education resources and tools which allow investors to monitor their investments easily and feel more in control; and
- Hong Kong IEC and Malaysia SC are considering ways to evaluate their investment risk education activities for behaviour change.

A number of C8 members also noted that they are conducting research into Behavioural Economics and retail investors to inform the development of their broader regulatory activities.

Examples

- Netherlands AFM has conducted research on the behaviour of retail investors. Based on that research, the AFM has concluded that current measurements (information provision) are not sufficient to prevent retail investors from investing inappropriately. The AFM plans to require providers of investment services to adopt measures to decrease the impact of potential risks, at the time of selling.

87 In response to the C8 survey, the China Securities Regulatory Commission (CSRC), Hong Kong IEC and ASIC all reported that they provide staff with training on Behavioural Economics principles.

88 See ASIC, *Report 403: Australia's National Financial Literacy Strategy (2014–2017)*, p. 23, available at: http://asic.gov.au/regulatory-resources/find-a-document/reports/rep-403-national-financial-literacy-strategy-2014-17/.

- US SEC's Office of Investor Education and Advocacy has commissioned studies into the behavioural characteristics of investors and is considering how it will make use of these learnings to improve the effectiveness of its education programs.[89]

4.4. Working with stakeholders

Many C8 members work collaboratively with other stakeholders in the development and delivery of investment risk education activities. Such collaboration reflects the fact that the goals of investor education are widely shared, and allows the reach of investment risk education activities to be expanded while avoiding overlap.

Typically C8 members will collaborate with stakeholders from a range of sectors, including government, education, business and community organisations.[90]

Working with stakeholders can take numerous forms, from formal partnerships to more ad hoc or informal arrangements. While different C8 members adopt different approaches, determining which stakeholders to work with, and the degree of collaboration, often depends on the nature of the stakeholder and the activity.

Examples

The Netherlands Ministry of Finance has initiated the "Money Wise" platform where partners from business, community, government, academia and civil society can work together to improve citizens' financial skills. Its mission is to pool their strengths to advance responsible financial behaviour.

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89 See *Annotated Bibliography on the Behavioral Characteristics of U.S. Investors*, prepared by Federal Research Division, Library of Congress, for US SEC, August 2010, available at: http://www.sec.gov/investor/locinvestorbehaviorbib.pdf.

See *Behavioral Patterns and Pitfalls of U.S. Investors*, prepared by Federal Research Division, Library of Congress, for US SEC, August 2010), available at: http://www.sec.gov/investor/locinvestorbehaviorreport.pdf.

These reports present the findings of the author and do not necessarily reflect the views of US SEC, its Commissioners, or members of US SEC's staff.

90 For example, in Spain, the Banco de España cooperates with the CNMV (together they co-founded the National Financial Education Plan and are working together to launch the formal survey at a national level); in Portugal, the central bank and Insurance and Pension Funds Authority (ASF) cooperate with Comissão do Mercado de Valores Mobiliários (CMVM) (the three financial supervisors founded the National Financial Education Plan and are working together to launch a formal survey at a national level in 2015); Nigeria SEC works with the Nigerian Stock Exchange, the Central Securities and Clearing System and other self-regulatory organisations and capital market trade groups to organise outreach, seminars and workshops for investors in Nigeria; Malaysia SC hosts investor education events with other regulatory agencies, associations and the private sector in Malaysia; and US FINRA partners with the American Library Association to provide library patrons with access to financial education resources, including general investment risk education.

The Japan Financial Services Agency (FSA) compiled a report regarding the future direction of financial education and proposed to clarify a minimum level of financial literacy to be attained (15 items in four categories) in April 2013. Based on that report, in June 2014, the Committee for the Promotion of Financial Education published the "Financial Literacy Map", focusing on the minimum level of financial literacy that is expected to be attained for various age groups. Experts from the financial industry and academia, government officials from related ministries and agencies, and representatives from financial industry associations were closely involved in both discussions. Further information can be found at: http://www.fsa.go.jp/en/news/2013/20130430-1.html.

AMF Quebec leads the Quebec Financial Education Specialists Network, which brings together financial education specialists from various organisations who meet once a year and share new trends and best practices. AMF Quebec also leads the Financial Education Advisory Committee, comprised of major players in financial education including government, consumer agencies and financial services industry groups, which keeps an inventory of new initiatives and tools and contributed to the National Financial Education Strategy.

4.4.1. Schools, universities and other formal education providers

Many C8 members have links to, and programs in, schools and universities. While investment risk education may not be the sole or primary focus of such programs, it forms part of the broader financial education approach.

C8 members employ a variety of approaches when engaging with schools and other education providers. A common approach is to engage through program and curriculum development. This includes the development of lesson plans on investment risk and working with education departments to integrate investment risk education into the school or university curriculum.[91]

Other examples of how C8 members work with schools and other education providers include through:

- the promotion and distribution of investment risk education information through university libraries;
- the delivery of lectures to students at universities;
- the conducting of quizzes and competitions run through schools; and
- the provision of educational materials developed specifically for teachers.[92]

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91 For example, Ontario has developed education assets that will now be offered by the Ontario Teachers Federation; details of the education programs are available at: InspireFinancialLearning.ca.

This website provides lesson plans that had been created by the Investor Education Fund for grades 4–11, and covers fundamental risk concepts. Similarly, Hong Kong IEC developed financial education resources covering investment risk, which fit into particular high school and university curricula. Nigeria SEC has introduced capital market studies in four universities and in six subjects of the curriculum of senior secondary schools. The Jersey Financial Services Commission (FSC) has developed a pilot program in three secondary schools which will provide some basic financial education concepts, including how investment risk can be influenced by consumer behaviour. Argentina National Securities Commission (NSC) has signed several agreements with national universities to develop investment education activities when its' National Education and Financial Inclusion Plan is published in 2015.

92 For example, AMF Quebec develops tools and information specifically for high school teachers which are available at: tesaffaires.com/index.php/en/.

The Japan FSA and JSDA also provide junior high school and high school teachers with tools and information, including tutorial manuals.

Similarly, Sweden FI provides seminars and workshops for teachers and textbooks, videos and teachers' guides. Belgium FSMA also developed educational materials for teachers of secondary schools including investment risk education. In Portugal, CMVM, in cooperation with the Portuguese Central Bank and ASF, develops educational materials and provides seminars especially for high school teachers through its "Todos Contam" website.

Case study – Investment risk education in schools – US

US FINRA has funded a number of financial and investor education initiatives that address the topic of risk and that focus on students in schools and higher education providers. This includes the "Love your money" program, which has enrolled 5,443 students from 576 institutions.

Case study – Competitions to inform education strategy – Portugal

In Portugal, the "Todos Contam" (Everyone Counts) competition is one of the most successful initiatives taken by the National Council of Financial Supervisors, comprising the Banco de Portugal (Portuguese Central Bank), the CMVM (Portuguese Securities Market Commission), the ASF (Supervisory Authority for Insurance and Pension Funds) and the Ministry for Education and Science.

In 2014, approximately 21,000 students from 100 different schools submitted a total of 71 projects. The fourth edition of this competition will be launched in 2015 and aims to promote and encourage financial education initiatives in public and private schools and during vocational training.

4.4.2. Differentiating investment risk education activities from the private sector

C8 members noted that it was important to differentiate their investment risk education activities from the marketing and other communication activities of the private sector.

Retail investors need to know that investment risk education provided by the regulator is impartial, can be trusted and is not linked to product sales. In order to achieve this, C8 members use an unbiased, independent and impartial tone in all communications, tools and messages,[93] while some also emphasise that the messages are from an official source, particularly through branding.[94]

93 AMF France uses a common message in its communications, which states that the information is objective, impartial and independent. Unlike private organisations, communications by C8 respondents focus on the principles concerning risk and avoid specific product recommendations. Marketing for the OSC's GetSmarterAboutMoney.ca website emphasises that the information it offers about investment risk principles is free, unbiased, general information and not linked to any specific investments.

94 Nigeria SEC has developed a brand and systemic pattern for its investor education activities demonstrating its link to government and its unbiased nature. Similarly, CNMV Spain uses a neutral

4.5. Key messages: content, delivery and promotion

In general terms, the high-level key messages that C8 members seek to convey via their investment risk education activities may be summarised as follows:

- all investments carry risk and investors can lose some or all of their money;
- investors should conduct their own research to make sure they understand the risk they are taking on before investing;
- investors need to understand the relationship between risk and return before investing;
- it is important to be able to identify high-risk investments and the risk characteristics of particular investment products;
- investors should understand the role of strategies such as diversification and asset allocation to help them manage risk;
- historical performance is a guide, but not a predictor, of how investments will perform in the future;
- investors need to understand and assess their own tolerance for risk; and
- risk profiles can change as investors age or enter different life stages – for example, when starting a family or when reaching retirement.

Given the fact that these messages are relevant to the entire population of retail investors, C8 members tend to deliver their key messages broadly, in a way that can be applied to all retail investors at all stages of their lives, regardless of their investing history or experience.

Most C8 members said they also seek to tailor messages for different target audiences in order to maximise the appeal and reach of those messages. In some cases, this is done to reach groups who have the least knowledge about investing (e.g. students) or because of particular demographic characteristics which could potentially make the audience especially vulnerable to uninformed investment decisions (e.g. pre retirees).

Some C8 members take a life-stage approach to their investment risk education activities so that they focus on the investment decisions associated with a particular stage of life, at a time when people need it and are likely to be looking for it, and make messages more relevant and pertinent.

As noted earlier in this report, a number of C8 members have adopted a segmentation approach in order to tailor their investment risk education initiatives to different audiences or groups in the retail investor population.

Examples

- Nigeria SEC targets students and low income earners among their audiences.
- Malaysia SC targets students, women, blue collar workers and rural communities, who are educated on basic risk education principles, whereas professionals and existing investors are provided with more advanced information on risk diversification and management.

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logo, “Finanzas para todos” (Finances for all) which is inclusive, addresses all population groups and indicates that this is clearly a public institution.

- Japan FSA/JSDA targets students at junior high school, high school and university, young adults, adults, senior citizens and working women.
- CMVM Portugal uses simpler language in its training sessions for youth, along with interactive games and demonstrations. Topics covered include risks associated with investing in financial products and the relationship between risk and return.

Case study – Target audiences – Malaysia

Malaysia SC operates a number of programs targeted at new investors, students and workplaces. The "Cash@Campus" program includes seminars, quizzes and a virtual investment club.[95]

C8 members use a variety of channels to deliver and distribute their investment risk education, reflecting the different ways that investors like to engage with such activities. By using a variety of channels together, C8 members can enhance the likely reach and impact of their activities.

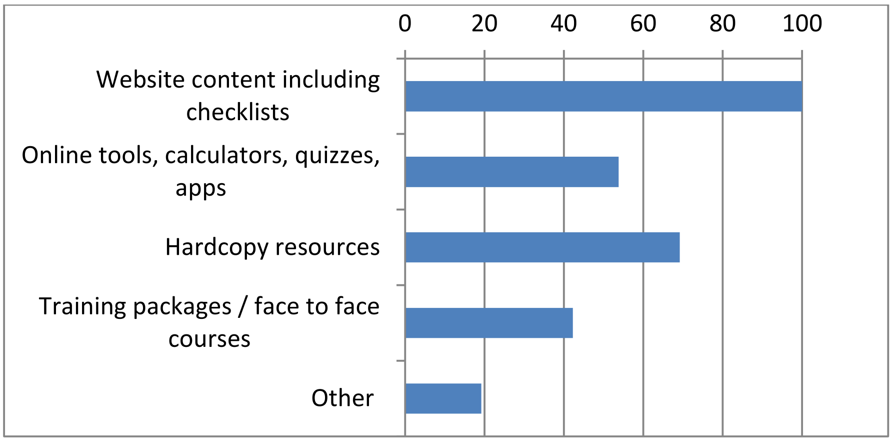
The types of distribution and delivery channels used by C8 members include:

- websites with informative content, warnings, checklists, videos, glossaries and media releases;
- online tools, calculators and quizzes to assist investors in seeing the effect of investment risk on an investment, mobile apps for smartphones and tablets;
- hard copy brochures and publications;
- face-to-face seminars and training days for retail investors and other relevant stakeholders;

[95] For instance, see: http://investsmartsc.my/programmes.

- telephone services allowing retail investors to ask questions;
- training packages for intermediaries who deal with retail investors; and
- online seminars and webinars for retail investors.

Diagram 1 – C8 member delivery channels (by %)



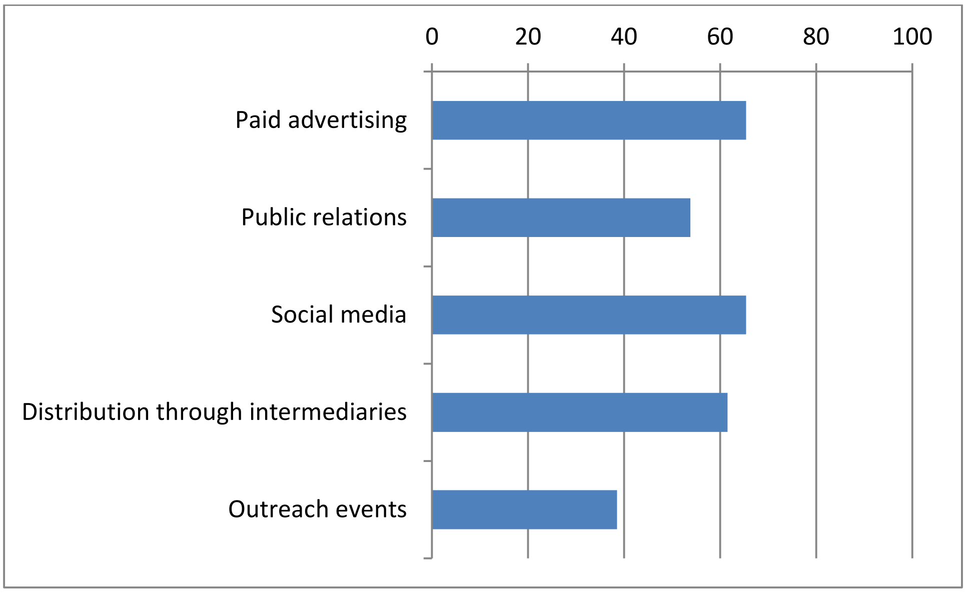
Case study – Targeted delivery – UK One particular focus area for the UK's Money Advice Service is to ensure it is reaching investors at relevant times. It does this by using targeted activity – through partners and directly – to interrupt people, get people to think about their finances and provide them with the advice they need, when they need it. Key target points used include: • targeting through search engines (i.e. when investors are searching about financial matters or life events online); • providing printed guides enclosed in correspondence that investors receive about financial products (e.g. letters from pension providers to people considering retirement will include a guide from the Money Advice Service); and • developing the "Partnerships self-service hub", which allows other organisations access to Money Advice Service content and to embed relevant tools from the Money Advice Service into the partner's own services.

In terms of promotion, C8 members use a range of methods to generate awareness of their investment risk education activities, including:

- mass media paid advertising (e.g. newspapers, websites, blogs, radio, television and Google AdWords);
- media and public relations, including using media releases, participating in media interviews featured in newspapers, news websites, blogs, radio and television;
- campaigns to promote particular investment risk issues;
- social media, including Facebook, Twitter, YouTube, LinkedIn and Google+;

- search engine optimisation;
- online and hard copy newsletters;
- through intermediaries and partners' communication channels, including libraries and other government agencies; and
- through outreach activities and other relevant events.

Diagram 2: C8 member distribution and promotion methods (by %)



Case study – Promotion methods – Videos and radio – Quebec

In 2013, AMF Quebec launched "les bonnes questions" (good questions) campaign. These are 20 short videos aired during prime time on week days on the French Canadian Broadcasting Corporation and its continuous News channel. The videos include, "What type of investor are you?" and "Have you diversified your investments?" [96]

[96] See: http://www.lautorite.qc.ca/fr/les-bonnes-questions-conso.html.

Case study – Promotion methods – Television campaigns – Quebec

AMF Quebec has linked its investment risk education messages with the Quebec version of "Deal or No Deal" (Le Banquier). The television show host is the AMF spokesperson. The AMF's messaging is integrated within the television show in a 30-second 'capsule.' The "Verify Question, Compare" Campaign reminds investors to ask questions of their financial advisor so that they completely understand the risks before investing. Close to two million people in Quebec view this primetime show, which achieves an expansive reach for the AMF.

Case study – Promotion methods – Mass media campaign – Australia

ASIC has conducted four phases of an advertising campaign to generate awareness and use of ASIC's "MoneySmart" website and resources for retail investors. The multi-pronged campaign comprises print, online and radio advertising, including targeted promotions for particular audiences. Commencing in 2012, each phase has contributed to a sustained increase in visitors to ASIC's MoneySmart website. As well as some key messages about managing risk, the most recent campaign also promoted ASIC's "Investing Between the Flags" online and hard copy resource for retail investors.

Case study – Promotion methods – Mass media campaign – Hong Kong

Hong Kong IEC developed a television commercial which uses a celebrity, recognising the behavioural bias to be influenced by others. It uses a simple message of: "Know the risks, understand your responsibilities and think before you invest".[97]

4.6. Decision-making tools and resources

A number of C8 members have developed decision-making tools and resources for retail investors, most of which are offered via digital means. These tools and resources are designed to go beyond the provision of information and allow people to interact, test, learn and obtain more personalised and tailored information based on their particular circumstances.

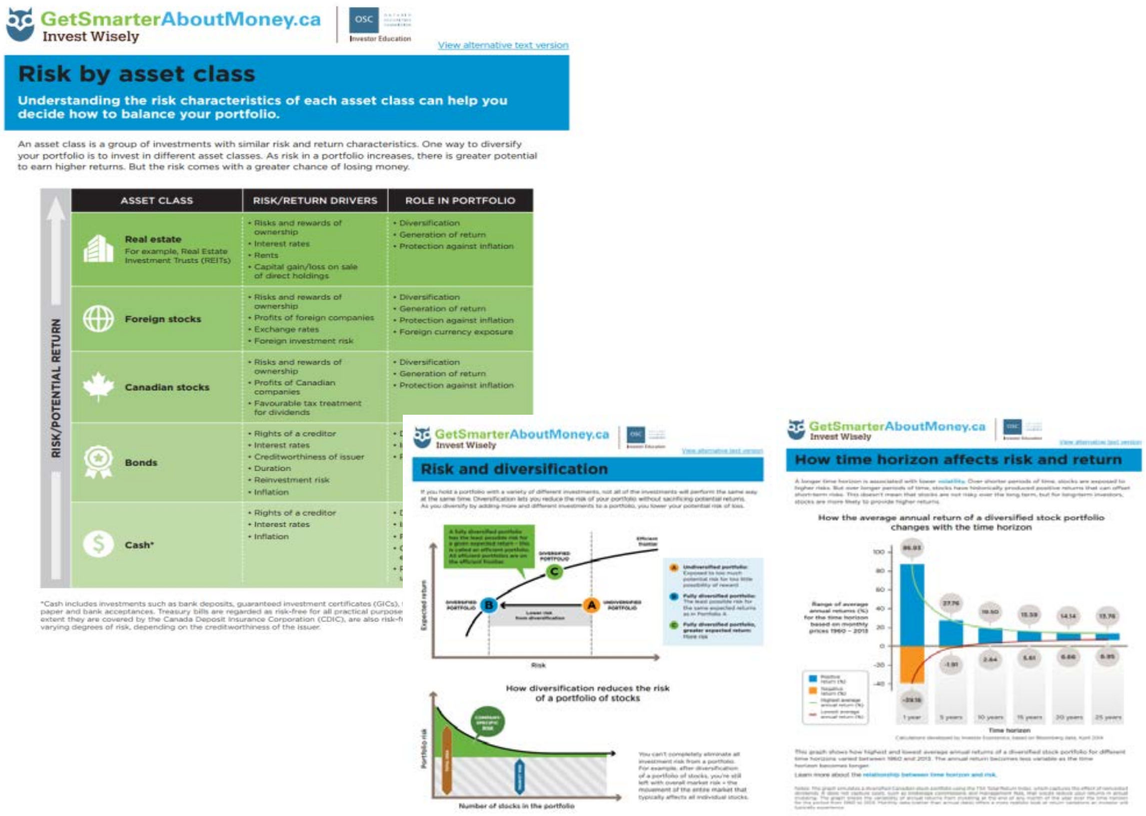
The tools and resources provide scope for innovative approaches, which respond to the growing availability and use of digital means of communicating and transacting. A key element of the development of these decision-making tools and resources is testing with the target audience to ensure that they meet the users' needs.

A number of case studies follow which illustrate the different approaches taken by C8 members towards the development and use of decision-making tools as part of their investment risk education initiatives.

97 This clip was previously available at https://www.youtube.com/watch?v=eZSKOKO2ml0, but can no longer be viewed. If you would like to obtain access to the clip, or would like further information, please contact the IEC via its website at http://www.hkiec.hk/web/en/.

Case study – Investment risk articles and infographics – Ontario

OSC published three infographics on its website relating to "Risk and diversification", "Risk by asset class" and "How time horizon affects risk and return", to complement a series of articles dealing with a variety of topics related to investment risk.[98] The full suite of articles and resources allows investors to learn about their own attitude towards risk, as well as learn how different types of risk affect their investments. Since creating the series in June 2014, OSC reported that there have been over 25,000 article views and 1,500 infographic downloads.



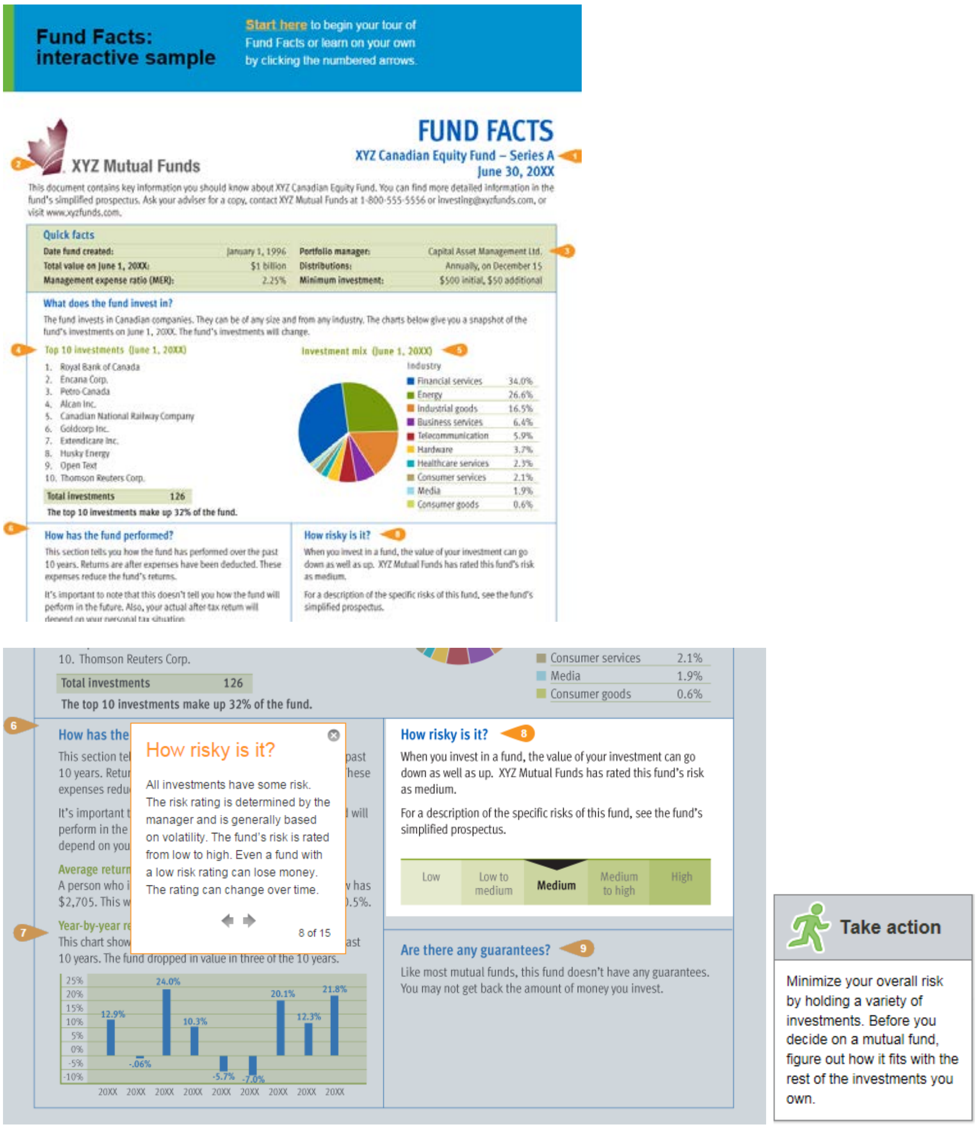
Case study – Interactive disclosure documents explaining risk – Canada

The OSC, AMF Quebec and Canadian Securities Administrators (CSA) have developed a summary disclosure document for mutual funds called the "Fund Facts" [99] which makes it easier for retail investors to find and use key information. Fund Facts is aimed at helping investors when they are making a decision regarding whether to invest in a mutual fund and assist them with asking appropriate questions when dealing with a financial advisor. It uses plain language, simple, clear messages, is no more than two pages double-sided, and highlights key information, including past performance, risks, and the costs of investing in a mutual fund.

98 See: www.getsmarteraboutmoney.ca.

99 See: http://www.getsmarteraboutmoney.ca/en/tools_and_calculators/infographics/Pages/Fund-Facts-Interactive-sample.aspx.

To help investors use Fund Facts, an interactive sample of the document is found on the CSA website and the OSC's GetSmarterAboutMoney.ca website.[100] The interactive tool provides explanations of the main sections in Fund Facts and highlights why these sections are important. There is a specific section entitled, "How risky is it?"



Case study – Investment risk tool – Risk survey and quiz – Canada

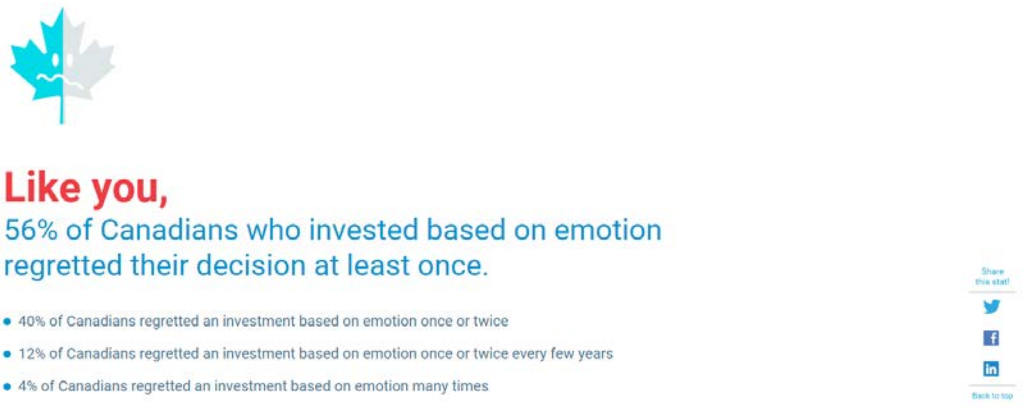
The Canadian Money State of Mind Risk Survey 2014[101] is an interactive quiz based on findings from the Ontario OSC's *Investor risk, behaviour and beliefs* research report, released in early 2014. The research survey asked investors across Canada questions that provided insight on three key investment influences:

- How does the economic environment affect risk-taking?
- How do attitudes and beliefs affect risk-taking?
- How do past actions (or inaction) affect risk-taking and investment choices?

100 Supra fn 99.

101 See E.L Weinstein, *The Canadian Money State of Mind Risk Survey 2014: Investor Risk, Behaviour & Beliefs*, 2014, supra fn 28.

The quiz is aimed at retail investors to help them learn how risk (and perceived risk) affects their investment decisions and how they deal with investment losses. The quiz-taker's results are compared to the findings in *Investor risk, behaviour and beliefs* to see how their behaviour compares to other Canadian investors.



A final page provides additional resources and asks investors to self-identify with one of six investor profiles. Based on their selection, investors are provided with links to articles, videos, blog posts and calculators.

Case study – Investment risk tool – Risk profile quiz – Ontario

The Ontario OSC's "Risk profile quiz", available on its website GetSmarterAboutMoney.ca,[102] features a series of simple questions that determine risk-taking habits, time horizon and perception of risk. For example, one of the questions asks whether the investor is prepared to take a guaranteed $1,000 now or a 50% chance at $5,000. The questions identify users as having a low, medium or high tolerance for risk. For instance:

- users with a *low tolerance for risk* are described as being very concerned about losing any amount of money and having a preference for investing in guaranteed investments;
- users with a *medium tolerance for risk* are described as liking a balance of protection from loss and opportunities to grow investments;
- users with a *high tolerance for risk* are described as seeing profit where others see danger – losing money does not worry them and they thrive on uncertainty.

Each risk profile is followed by links to information related to the user's risk tolerance, including information about guaranteed investment certificates, mutual funds and stocks.

All users receive links to information about adapting to risk with age and asset allocation, stressing the importance of understanding risk tolerance and various asset classes regardless of whether they self-identify as having a low, medium or high tolerance for risk.

102 See: http://www.getsmarteraboutmoney.ca/en/tools_and_calculators/Quizzes/Pages/risk-profile-quiz.aspx.

Effectiveness measures of this quiz are counted as a "conversion" – an engagement measure counted only when a user fully completes the quiz. During the 12-month period ending 30 April 2015, the quiz received nearly 7,000 conversions.

Case study – Investment risk tool – How long will it take my investment to recover? – Quebec

AMF Quebec developed – with Ontario's Investor Education Fund – the tool, "How long will it take for my investments to recover?"[103] The tool shows the investor how long it will take an investment to recover after a market downturn and how long it will take to meet the investor's original investment goal.[104]

Case study – Retirement planner online tool – Australia

ASIC's "Retirement Planner" is an online tool that helps investors make more informed investment decisions. It is available on ASIC's dedicated website for consumers and investors, MoneySmart. This tool takes investors through a detailed question and answer format to help them work out:

- how much income they are likely to have from superannuation and the age pension after they retire;

103 See: http://www.getsmarteraboutmoney.ca/en/tools_and_calculators/calculators/Pages/investment-recovery-calculator.aspx.

104 Supra fn 103.

- how contributions, investment options, fees and retirement age might affect their retirement income from superannuation; and
- what actions they can take to boost their superannuation and retirement income.

By combining a variety of potential and different income streams into a single tool, ASIC has developed a tool that can produce multiple outcomes for investors, depending on the information they submit, which can then be saved and printed. The planner also produces a tailored action plan for investors, based on the information they have provided, to assist them with reaching their retirement income goals.[105]

Approximately 30,000 people use the Retirement Planner every month.

C8 members continue to develop new digital and interactive tools and resources, and find new ways to engage with retail investors. Some projects currently in development include:

- a risk meter, quiz or other risk-related tool, to be hosted on US SEC's website, Investor.gov;
- an investment risk project that will refine and update content on ASIC's MoneySmart website and include an online investment risk quiz or module; and
- a website redesign by US FINRA to allow its web-based information on investment risk to be spotlighted and to incorporate more video and infographic content.

Case study – Simulated portfolio returns risk calculator - US

K Jeremy Ko has proposed a risk calculator that could help US federal government employees better assess risk and return by displaying simulated portfolio returns.[106]

Unlike online financial calculators that characterise risk at a single point in the distribution, Ko's proposed calculator, which was developed using data from the Thrift Savings Plan (TSP), a retirement plan for US federal employees (similar to a 401(k) plan), characterises a portfolio's risk at multiple points in time. With more information on the probabilities of different outcomes, investors could potentially be steered towards superior allocations and contribution rates. Greater familiarity and confidence with portfolio allocations may also help prevent common investment "mistakes" and increase savings rates generally.

105 See: https://www.moneysmart.gov.au/tools-and-resources/calculators-and-apps/retirement-planner.

106 See K.J. Ko, *White Paper on Computing Tools for Promoting Sound Investment Decisions*, US SEC Staff Paper, June 2014, available at: https://www.sec.gov/dera/staff-papers/white-papers/risk-calc-05-2014.pdf.

The views expressed are those of Mr Ko and do not necessarily reflect the views of US SEC, its Commissioners, or members of US SEC's staff.

Ko's proposed calculator attempts to avoid problematic or implicit assumptions about risk aversion. Unlike risk calculators that require users to input a risk-tolerance level, which is then used to generate an optimal or benchmark portfolio based on unspecified algorithms, Ko's calculator enables users to choose their own optimal portfolio based on a more accurate assessment of risk and return.

Simulation outputs from the calculator demonstrating that riskier investments (equities) can lead to higher wealth outcomes than less risky options may also encourage US federal government employees who avoid equity investments in the TSP to participate in them. However, Ko noted that this outperformance is sensitive to assumptions about expected equity returns, particularly at long horizons. In addition, the risk of such investments increases with time horizon, in contradiction to the fallacy of time diversification.

4.7. Combining regulatory and education action

As noted above, investor education by regulators is complementary to their surveillance and other regulatory activities as part of their overall regulatory toolkit. In some cases, C8 members deploy a combination of regulatory tools in response to an investor protection issue in order to enhance or maximise their impact. C8 members have reported instances where investor education and other regulatory work have been linked.

Case study – Change in prospectus results in greater investor awareness – Australia

Since mid-2012, ASIC has required all hybrid securities prospectuses to include a reference on its MoneySmart website to its guidance for investors on hybrids. In February 2014, ASIC amended the wording for inclusion in hybrid prospectuses to the following:

"ASIC has published guidance on hybrid securities on its MoneySmart website which may be relevant to your consideration of the hybrid. You can find this guidance by searching 'hybrid securities' at www.moneysmart.gov.au."

At the same time, ASIC updated its guidance to include a series of questions investors can ask themselves, as well as a short quiz users can complete to check their understanding of how hybrid securities work, their features and risks.

In early 2015, ASIC noticed an increase in searches for "hybrid securities" on its dedicated consumer and investor website, MoneySmart. There had been three significant offers of hybrid securities to the Australian retail market at about the same time as the peak in hybrid search terms, raising a total of A$2.62 billion from retail investors.

During the more recent public offer period for the hybrids (i.e. from late January 2015 to the end of March 2015), ASIC observed a significant increase in visits to the hybrid webpages and quiz, and further increases in searches for this term. For example, page views of website content dealing with hybrid securities and notes went from an average of approximately 550 page views in November and December 2014 to almost 3,000 page views in February 2015 (i.e. at the same time the hybrid offers were being made by banks to retail investors).

By making relatively small changes, ASIC was able to influence the behaviour of investors and nudge them to seek out further information about the nature and risks of the financial products they were considering as investment options.

Case study – Education and regulatory action to tackle forex investment – France

In 2014, AMF France noted that foreign exchange intermediaries were becoming more and more commercially aggressive – for example, through the extensive use of online adverts persuading the general public to trade in foreign exchange products. In response, the AMF developed an integrated campaign which involved informing the public of the risks involved, as well as taking action to reduce the audience for the foreign exchange intermediaries.

Amongst other things, the AMF displayed false advertisements, similar to real forex advertising. Once users clicked on the false advertisement, they were redirected to AMF's website to learn more about these products, using the AMF's educational tools.

A number of regulatory activities were also undertaken by the AMF including:

- blocking several websites operating without approval in France;
- raising awareness among advertising agencies about the importance of ensuring well-balanced adverts including mention of the risk of losses; and
- banning advertising relating to highly speculative products (in progress, subject to a modification of French law).

AMF combined regulatory and educational activities so it could better protect consumers by limiting the intermediaries' access to the retail investor audience.

4.8. Evaluation techniques

C8 members use different methods to measure and evaluate the effectiveness of their investment risk education initiatives.

4.8.1. Quantitative measures

All C8 members seek to measure their investment risk education activities quantitatively (i.e. by measuring the number of outputs). This is commonly done by recording the number of hits to websites, attendance at seminars and events and/or the number of materials distributed. Quantitative measures are useful as an indicator of demand from retail investors.

Case study – Types of quantitative data – France

For the forex campaign outlined above, AMF France used quantitative evaluation measures of effectiveness, observing the following results:

- the number of people clicking on false adverts that directed users to educational materials: 37,000 clicks in seven weeks;
- an increase in the number of visits to the AMF's website: up 25% in October 2014 compared to September 2014;
- a significant increase (ten times) in the web buzz intel compared to the last press release on the same subject (i.e. a press release on Forex blacklisted companies was published by the AMF in September 2014); and
- a doubling of the number of people calling the AMF helpline to obtain information about Forex (in October 2014 compared to September 2014).

While noting this was the first time AMF France had used false adverts and that there was an increase in activity by forex intermediaries, AMF France considers that this campaign was a successful one, which increased quantitative outputs and provided a reference point for future campaigns.

Case study – Measures of effectiveness - Investment survey and risk quiz – Canada

As outlined earlier in this report, the "Canadian Money – State of Mind" risk survey uses an interactive quiz to help investors learn how risk (and perceived risk) affects their investment decisions, and how they deal with investment losses. Because the tool includes many elements, engagement is measured in a number of ways:

- filling in an answer to a quiz question;
- viewing each results page;
- reaching the final results page; and
- whether or not the investor selected any additional resources.

In addition, every results page includes social media links if users want to share the statistics or their results with their social circles. Of the nearly 5,000 users who fully completed the tool to arrive on the results page, 1,600 selected a profile and hundreds of others downloaded the infographic and research.[107]

Case study – Distribution, usage, media and event data – Sweden

Sweden FI reports on the number of seminars and workshops it holds and the attendee numbers at each event. It also tracks the number of distributed books, website hits, media coverage and seminars broadcast on television.

Case study – Measures of demand – Portugal

The 'Oficina de Formação de Professores no Âmbito do Referencial de Edcuação Financeira', a workshop for teachers on financial education in Portugal, is an initiative that uses levels of demand as an indicator of success. To date, three workshops have been run for teachers from northern and central Portugal and from the Lisbon area. There has been a high level of interest in this program, with the number of applications far exceeding the number of available places – for example, there were approximately 800 applications for a total of 120 places (40 places per region).

107 See *The Canadian Money State of Mind Risk Survey 2014* at: http://www.getsmarteraboutmoney.ca/en/tools_and_calculators/Quizzes/Pages/The-Canadian-Money-State-of-Mind-Risk-Survey-2014.aspx.

See also E.L Weinstein, *The Canadian Money State of Mind Risk Survey 2014: Investor Risk, Behaviour & Beliefs*, 2014, supra fn 28.

4.8.2. Qualitative measures

Another approach to evaluation is to measure outcomes. C8 members use methods such as feedback from users and other stakeholders, focus groups and pre- and post-testing to gather qualitative input.

Case study – Recall – Hong Kong

In Hong Kong, after its major education campaign on Investment Linked Assurance Schemes (ILAS), Hong Kong IEC conducted a survey to track the percentage of recall and perception of the campaign by the target audience to assess effectiveness. The survey also identified where there were gaps in knowledge after the campaign. For example, following the campaign, Hong Kong IEC found that investors were not aware that the ILAS holders do not own the assets but the policies. This intelligence guided the content of future campaigns.

Malaysia SC measures the performance of its investment risk education activities through a combination of assessing output indicators (the number of programs held, collateral published and distributed and individuals reached targets for these are set in advance and are generally exceeded); and outcome indicators by tracking awareness and literacy levels and behavioural change through surveys, internal feedback, statistics and information from their complaints handling function. While expectations about awareness and levels and ratings of programs are set in advance and generally met, the SC noted that it is challenging to set targets for behaviour change.

Case study – Conversion rates – Ontario

Ontario OSC uses conversions – how many people come to the website and complete an activity that would facilitate learning – for its performance measures. Completing the OSC's Risk Assessment Tool, or reading three articles about risk, would qualify as a learning or conversion. This allows the OSC to determine whether users are gaining a learning experience from the content on their website, GetSmarterAboutMoney.ca.

As noted above, measuring outcomes systemically is challenging and requires commitment over time. C8 members are continuing to explore and develop new ways to evaluate the outcome of their investment risk education activities.

Examples

Hong Kong IEC is formulating an evaluation framework to track the behavioural change of its target audience as a result of its financial education initiatives, including investment risk education activities.

Malaysia SC is planning to conduct more comprehensive surveys to measure how its education efforts are affecting behaviour change over the long term.

4.8.3. Measuring changes in attitudes and behaviours

Some jurisdictions have developed indices or trackers to measure the attitudes and behaviour of retail investors and then to measure changes in these attitudes and behaviours over time. Such approaches aim to consider the impact of investor risk education activities in the broader context of the environment in which retail investors are operating which may influence their behaviours and attitudes.

Case study – Tracking attitudes and behaviours – Australia

In 2014, ASIC launched the Australian Financial Attitudes and Behaviour Tracker, which surveys the Australian adult population and helps ASIC identify and understand the key financial attitudes and behaviours of adult Australians, including their understanding and approach to investment risk. The purpose of conducting this research is to:

- track changes and trends in some key financial attitudes and behaviours at regular intervals to build up a picture of changes over time;
- inform and support ASIC's efforts to promote investor and financial consumer trust and confidence; and
- inform broader research, measurement and evaluation of Australians' financial literacy levels and wellbeing.[108]

To date, ASIC has conducted two waves of the survey (publishing the results of each) and will repeat the survey at regular intervals in the future.[109]

Case study – Financial Awareness Index – Quebec

AMF Quebec's objective for its financial literacy and education initiatives is to increase its Financial Awareness Index. To date, there has been a positive increase from 58.5% to 60.1% between 2012 and 2014, while 61.5 % is the objective target for 2017.

108 See ASIC, Report 419, 2014, at: http://asic.gov.au/regulatory-resources/find-a-document/reports/rep-419-australian-financial-attitudes-and-behaviour-tracker/.

109 A copy of the first and second waves of the results from ASIC's Financial Attitudes and Behaviour Tracker, covering the periods March to August 2014 (wave 1) and September 2014 to February 2015 (wave 2) is available at: http://www.financialliteracy.gov.au/research-and-evaluation/financial-attitudes-and-behaviour-tracker.

5. Conclusions: Sound practices for investment risk education

Based on the research conducted and the C8 member responses to the survey conducted for this report, a range of "sound practices" for investment risk education initiatives has been identified. These practices are variously used by some C8 members in designing and delivering their investment risk education initiatives.[110]

Practice 1: ***Focus on influencing retail investor attitudes and behaviour as well as improving knowledge.***

A focus on influencing the attitudes and behaviour of retail investors is likely to be more effective than just the provision of information to improve knowledge. Use of innovative decision-making tools and resources can help achieve this.

Practice 2: ***Develop initiatives that take an evidence-based approach in response to the needs of retail investors.***

Investment risk education activities should be evidence-based and take into account insights gained from research, including Behavioural Economics, to help IOSCO members better understand the decision-making behaviours of the target retail investor audience. Incorporating Behavioural Economics principles into investment risk education helps to adapt to, or even take advantage of, investors' behavioural biases.

Based on the feedback and responses provided by C8 members for the purposes of this workstream, it is evident that some C8 members are already integrating Behavioural Economics principles into the design of their investor education strategies and programs, and using those principles to inform the design and development of their investment risk education tools and resources.

Practice 3: ***Test initiatives with the target audience.***

In order to maximise the likely effect of any investment risk education initiative, testing with the target audience is an important step in the process. Testing can be conducted during development and on an ongoing basis, allowing changes to be made in response to user needs which may change over time.

Practice 4: ***Develop initiatives that reach people close in time to the making of investment decisions and that are promoted in a variety of ways to expand reach and interaction.***

Providing information, tools or resources at the right time is likely to be most effective – that is, at the point in time when it can positively influence an investor's decision-making or promotes action.

Practice 5: ***Send clear messages that are adapted for different target groups (e.g. beginner and more savvy investors) and for the different ways people access information.***

Using simple, clear and easy-to-understand messages ensures that key messages can be understood by the broad range of individuals within any given target audience. More complex or nuanced information can also be made available for those investors who want it.

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110 This is not intended to be an exhaustive list. It is acknowledged by the C8 working group that other sound practices may also exist, and be adopted by C8 and other IOSCO members.

A life stage or life event approach is likely to be effective as it capitalises on the point when people are seeking information and are most likely to engage with it.

Using a range of channels – such as online, hard copy, video and case studies – helps to maximise reach. Approaches such as segmentation can also help with targeting messages to particular groups in the population.

Practice 6: ***Use engaging content and delivery styles.***

To cut through the volume of information surrounding people, it is important to carefully consider which content style and delivery channels will produce the highest levels of engagement, when developing investment risk education tools.

Practice 7: ***Design activities that are current and up to date with emerging new technologies and developments in financial markets.***

The availability and use of digital technology to communicate and transact is growing. This provides opportunities to develop and design education approaches that make use of new technology. As investment products and services continue to evolve and new technologies emerge, it is acknowledged by the majority of C8 members that any products or resources developed as part of an investment risk program should keep pace with changes in each of these areas.

Practice 8: ***Where relevant, develop investor education initiatives that complement regulatory actions to enhance impact.***

Survey responses suggest that, where relevant, investment risk education initiatives that complement regulatory actions can enhance impact through combining the use of regulatory tools.

Practice 9: ***Develop evaluation frameworks and measures at the outset and seek to evaluate outputs and outcomes.***

The measurement and evaluation of investment risk education activities are important and should be considered from the outset in the development of an initiative.

While C8 members acknowledge that measuring the impact and outcomes from investment risk education initiatives can be challenging, particularly as behavioural change is a long-term journey (and typically impacted by a combination of many inputs and experiences, as well as factors such as environment, product availability and life stage), work by C8 members in this area continues to evolve.

6. Recommendations

Based on the research conducted and the C8 member responses to the survey conducted for this report, C8 recommends the following:

- IOSCO members consider one or more of the “sound practices” outlined in this report, as forming part of a regulatory toolkit when designing and implementing their investment risk education strategies and programs.
- Mechanisms, such as an online IOSCO portal, are developed and maintained to provide ongoing opportunities for IOSCO members to share learnings in relation to the evolution of various investment risk education initiatives across member jurisdictions.
- Further consideration of effective approaches to measuring and evaluating investment risk education activities for behavioural change is undertaken by C8.

Appendix A – C8 members participating in the survey

Argentina – National Securities Commission (NSC)

Australia – Australian Securities and Investments Commission (ASIC)

Belgium – Financial Services and Markets Authority (Belgium FSMA)

Brazil – Comissão de Valores Mobiliários (CVM)

China – China Securities Regulatory Commission (CSRC)

France – Autorité des marchés financiers (AMF France)

Germany – BaFin (Germany BaFin)

Hong Kong – Investor Education Centre (Hong Kong IEC)

Japan – Financial Services Agency (FSA) and Japan Securities Dealers Association (JSDA)

Jersey – Jersey Financial Services Commission (FSC)

Malaysia – Securities Commission (Malaysia SC)

Mexico – Comisión Nacional Bancaria y de Valores (CNBV)

Netherlands – Authority for the Financial Markets (Netherlands AFM)

Nigeria – Securities and Exchange Commission (Nigeria SEC)

Ontario, Canada – Ontario Securities Commission (OSC)

Portugal – Comissão do Mercado de Valores Mobiliários (CMVM)

Quebec, Canada – Autorité des marchés financiers (AMF Quebec)

Singapore – Monetary Authority of Singapore (MAS)

South Africa – Financial Services Board (FSB)

Spain – Comisión Nacional del Mercado de Valores (CNMV)

Sweden – Finansinspektionen (FI)

Turkey – Capital Markets Board of Turkey (CMB)

United Kingdom Financial Conduct Authority (UK FCA)

United States Commodity Futures Trading Commission (US CFTC)

United States Financial Industry Regulatory Authority (US FINRA)

United States Securities and Exchange Commission (US SEC)

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    The survey involved 2002 Canadians: 50% from Ontario, 20% from Quebec, 10% from each of British Columbia and Alberta, and 5% from each of the Prairie Provinces and Atlantic provinces. Respondents were evenly split by gender, with two-thirds of respondents falling within the 36–55 year old age group.

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Appendix C – Survey of C8 members on investment risk education, September 2014

The purpose of this survey is to gather information from C8 members on effective approaches to educating retail investors about investment risk.

Securities regulators worldwide have seen instances of retail investors losing money they did not expect or could not afford to lose because of a misalignment in the investors' understanding of the level of risk they are comfortable with and the actual level of risk they are exposed to. By understanding effective approaches to educating investors about risk, C8 may in the future focus on developing standards and/or recommendations and/or good or sound practices for investment risk education.

This survey is focusing on the typical factors in 'investment risk education' including:

- understanding one's own risk profile;
- understanding that risk exists in all investments, and understanding the relationship between risk and return;
- understanding the implications of risk for achieving (or not achieving) one's financial goals;
- understanding one's own role / responsibilities in risk management; and
- understanding key risk management strategies such as diversification and asset allocation.

The following risks are out of scope for this project:

- investment fraud; and
- any risks associated with using a financial advisor.

Guide to responding to this survey

Please answer the survey on behalf of your organisation and consult with other departments within your organisation where necessary. Space has been provided at the end of the survey for you to provide any further information you deem relevant to this project**.**

Please note: survey responses may be used as examples in the final report.

Respondent :   Contributions should be sent to investment.risk.education.survey@asic.gov.au by 24 October 2014.

Understanding the investor landscape in your jurisdiction

1.1	How does your organisation define a "retail investor"? Does your definition include any different aspects to the IOSCO description below?[111]	
1.2	Does your organisation's investment risk activities cover the factors described above? If no, which factors are not covered? Are there any additional factors?	
1.3	Are there any restrictions on the investment products offered to retail investors in your jurisdiction?	
1.4	What are the main challenges in educating investors about risk in your jurisdiction?	

Data on retail investors

2.1	Does your organisation segment the retail investor market in your jurisdiction? If yes please describe how you segment your retail investor market and how you use this information.	

[111] IOSCO has described retail investors as the following: "it is well-accepted in regulatory circles that these terms ('retail investors', 'retail investment', 'retail participation'), refer to investors other than those normally referred to as 'professional', 'qualified' or 'sophisticated' investors", from *Regulatory and Investor Protection Issues Arising from the Participation by Retail Investors in (Funds-of) Hedge Funds*, Report, IOSCO (2003).

2.2	Does your organisation collect or have access to the following data about retail investors: • demographic (e.g. age, gender, postcode) • products invested in (e.g. value, volume) • knowledge / understanding of investment products • understanding of investment risk and the factors described above? Please describe how you collect this data and what are your findings for each of the above?	
2.3	How do you know and/or measure any misalignment between investors' understanding of the level of risk they are comfortable with and the actual level they are exposed to? (For example, this may include using intelligence such as queries or complaints received to your organisation.) What are your observations about the cause of this misalignment?	
2.4	Does your organisation conduct a population-wide survey of financial literacy / investor understanding?	

Understanding the regulator's role and mandate

3.1	Do you have a mandate to educate retail investors? Is that legislative? Please describe.	
3.2	Do you have an overall strategy for investment risk education? If yes, please describe key elements of this strategy.	
3.3	Do you use research to inform your work in investment risk education? If yes, please describe what research or data you use.	
3.4	In addition to investor education programs, briefly describe what disclosure requirements your organisation has to assist investors in managing risk.	

Investment risk programs and resources

4.1	Does your organisation conduct investor education activities about investment risk? This could include: • website content • online tools and calculators • hard copy resources • training packages • face to face courses • communication campaigns (these could include radio, TV, road shows, etc).	Yes O No O Don't know O
4.2	Please describe each investment risk education activity and include: • key messages • type of activity • target audience • communication channel (online, face to face) • URLs for online resources.	
4.3	Do behavioural economics principles inform your approach to investment risk education? If yes, please describe.	
4.4	Do you have resources designed to help an investor determine their risk profile? Please describe and provide URLs for online resources.	
4.5	How do you promote / distribute your investment risk education activities. Please describe if you use any of the following: • paid advertising • public relations • social media • distribution through intermediaries • others?	

4.6	Are your investment risk education activities aligned with or implemented in schools, universities or other formal education providers?	
4.7	Do your investment risk education activities differentiate between current investors and potential investors? If so, how?	
4.8	How do you keep your investment risk education activities up to date?	
4.9	Do you charge any fee to use your investment risk education activities?	
4.10	How do you differentiate your activities on investment risk education from those of private organisations?	
4.11	How are your investment risk education activities funded?	

Measurement and evaluation

5.1	What are the objectives of your investment risk education activities?	
5.2	When you implement an investment risk education activity do you have performance measures that you are required to meet? If yes, please describe. Have you evaluated whether these performance measures are met?	
5.3	How have you evaluated your investment risk education activities for behaviour change? What are your findings? Are there any other measures you use for evaluation?	
5.4	What are your key findings from these projects?	

5.5	In light of your experience, what would you do differently in your future projects on investment risk education? Please describe what has and hasn't worked.	

Stakeholder involvement

6.1	Are there other government organisations in your jurisdiction which educate retail investors about risk? Please name them and briefly describe their role.	
6.2	Are there any non-government organisations (e.g. private sector firms) or NGOs in your jurisdiction which educate retail investors about risk? Please name them and briefly describe their role.	
6.3	Do you work in partnership with any other organisations in investment risk education? Please describe the nature of the partnership.	

Future strategies

7.1	Are there any new strategies you are considering in investment risk education? Please describe.	

Other

8.1	Please provide any other information you think would be relevant in understanding how you educate investors about risk.	

Appendix D – Examples of delivery and promotion methods

Jurisdiction	**Investment risk education delivery channels**	**Promotion method**	**Relevant links**
Argentina – National Securities Commission	• Website content online tools and calculators • Hard copy resources • Workshops and seminars	• Paid advertising • Public relations • Intermediaries • Social media	http://www.cnv.gov.ar/English/Main.htm
Australia – Australian Securities and Investments Commission	• Website content, online tools and calculators • Hard copy resources	• Paid advertising • Social media • Distribution through intermediaries • Search engine optimisation	http://www.moneysmart.gov.au
Belgium – Financial Services and Markets Authority	• Website content	• Paid advertising on Google, Facebook and radio • Social media	http://www.wikifin.be/nl?language_selection=true
Brazil – Comissão de Valores Mobiliários	• Website content, tools and calculators • Hard copy resources • Seminars and workshops	• Distribution through intermediaries • Social media • Outreach events	http://www.investidor.gov.br http://www.cvm.gov.br
China – China Securities Regulatory Commission	• Website content • Seminars and workshops	• Paid advertising on TV • Public relations • Social media	http://www.csrc.gov.cn/pub/csrc_en/
France – Autorité des marchés financiers	• Website content • Hard copy resources • Training courses • Outreach events • Communication campaigns	• TV, radio and newspapers	http://www.amf-france.org/

Jurisdiction	Investment risk education delivery channels	Promotion method	Relevant links
Germany – BaFin	• Website content • Hard copy resources • Consumer telephone line	• Give-aways • Public relations • Outreach events	http://www.bafin.de/EN/Consumers/consumers_node.html
Hong Kong – Investor Education Centre	• Website content, tools and calculators • Hard copy resources • Workshops and seminars • Communication campaigns	• Paid advertising on mass media • Public relations • Distribution through intermediaries	http://www.hkiec.hk/web/en/
Japan – Financial Services Agency and Japan Securities Dealers Association	• Website content • Hard copy resources • Seminars • Videos • Communication campaigns	• Paid advertising through TV, newspapers and magazines • Public relations • Social media • Distribution through intermediaries	http://www.shiruporuto.jp/e/ http://www.fsa.go.jp/ordinary/index.html#yakudatu http://www.jsda.or.jp/manabu/index.html
Jersey – Jersey Financial Services Commission	• Website content		http://www.protectyourmoney.je/Pages/homepage.aspx
Malaysia – Securities Commission	• Website content, digital tools and calculators • Hard copy resources • Mobile app • Seminars	• Paid advertisements • Outreach events • Articles and brochures • Social media	http://www.investsmartsc.my https://www.facebook.com/investsmartsc
Mexico – Comisión Nacional Bancaria y de Valores	• Website content	• Social media	http://www.condusef.gob.mx/index.php/material-educativo
Netherlands – Authority for the Financial Markets	• Website content	• Paid advertising • Search engine optimisation • Stakeholder networks	http://www.afm.nl/nl/consumenten.aspx

Jurisdiction	Investment risk education delivery channels	Promotion method	Relevant links
Nigeria – Securities and Exchange Commission	• Hard copy resources • Radio programs • Documentary and other video • Outreach events • Communication campaigns	• Advertising on TV, radio, social media	http://www.sec.gov.ng/
Ontario, Canada – Ontario Securities Commission	• Website content, tools and calculators	• Paid advertising through Google AdWords, newspapers and news magazines • Public relations campaigns • Social media • Distribution through intermediaries • Outreach	http://www.getsmarteraboutmoney.ca
Portugal – Comissão do Mercado de Valores Mobiliários	• Website content • Hard copy resources • Communication campaigns	• Social media • Radio, TV interviews and newspapers	http://www.cmvm.pt
Quebec, Canada – Autorité des marchés financiers	• Website content, tools and calculators • Hard copy resources • Seminars • Communication campaigns	• Advertisements on TV, magazines and newspapers • Social media • Newsletters	http://www.lautorite.qc.ca/en/consumers.html http://www.lautorite.qc.ca/fr/les-bonnes-questions-conso.html http://www.tesaffaires.com/index.php/en/
Singapore – Monetary Authority of Singapore	• Website content • Seminars and workshops • Communication campaigns	• Social media	http://www.moneysense.gov.sg/
South Africa – Financial Services Board	• Seminars and workshops • Hard copy resources	• Radio, TV interviews and newspapers • Distribution through intermediaries	http://www.fsb.co.za/Pages/Home.aspx

Jurisdiction	Investment risk education delivery channels	Promotion method	Relevant links
Spain – Comisión Nacional del Mercado de Valores	• Website content • Hard copy resources • Seminars • Videos	• Newsletters • Distribution through intermediaries • Social media	http://www.finanzasparatodos.es
Sweden – Finansinspektionen	• Seminars and workshops	• Stakeholder network • TV advertising • Promotion to teachers	http://www.fi.se/Folder-EN/Startpage/
Turkey – Capital Markets Board of Turkey	• Website content • Hard copy resources • Seminars	• Social media • Public relations • Distribution through partners, especially Turkish Capital Markets Association	http://www.spk.gov.tr http://www.cmb.gov.tr http://www.tspb.org.tr/tr http://www.tspb.org.tr/eng http://www.yatirimyapiyorum.gov.tr
UK Financial Conduct Authority	• Website content online tools and calculators	• Distribution through intermediaries • Search engine optimisation • Social media • Paid advertising • Public relations	http://www.moneyadviceservice.org.uk
US Commodity Futures Trading Commission	• Website content • Hard copy resources		http://www.cftc.gov/ConsumerProtection/ http://www.SmartCheck.gov
US Financial Industry Regulatory Authority	• Website content • Hard copy resources • Seminars • Podcasts • Communication campaigns	• Public relations • Outreach events • Investor newsletters • Social media • Distribution through partners	http://www.finra.org/Investors/index.htm
US Securities and Exchange Commission	• Website content • Hard copy resources • Outreach events • Communication campaigns	• Outreach events • Social media • Distribution through partners	http://www.investor.gov http://www.sec.gov

Appendix E – Selection of data about retail investors

The information in this appendix represents a sample of examples, provided by some C8 respondents, in relation to their research into retail investors, their knowledge, skills, attitudes and behaviours.

1. AMF Quebec Financial Awareness Index

AMF Quebec published its first Financial Awareness Index in 2012. It measures financial awareness across a number of themes including investment issues such as investor profile, anticipated return, risk, reading of documentation, diversification and tax issues. The 2014 index was the second edition and surveyed 1,500 respondents who identified as being responsible for financial management in their household. From this survey, AMF Quebec segmented its market into three groups:

- *knowledgeable consumers* (55%) – have extensive behavioural knowledge and tend to put it into practice;
- *ambivalent consumers* (31%) – have good behavioural knowledge but tend not to apply it; and
- *indifferent consumers* (14%) – have relatively little financial knowledge and do not adopt the behaviours of knowledgeable consumers.[112]

AMF Quebec focuses predominantly on ambivalent consumers.

2. US FINRA National Financial Capability Study

US FINRA draws on a formal survey to understand its retail market. The FINRA Investor Education Foundation first conducted a National Financial Capability Study (NFCS) in 2009. A second wave was conducted in 2012, and plans are underway to collect data for a 2015 study.

The 2012 study used a sample of more than 25,000 adults aged 18 and over. The study benchmarks key indicators of financial capability and includes information concerning demographics, products invested in, knowledge and understanding of investment products and concepts, including investment risk. The dataset includes a question that assesses the respondent's willingness to take investment risk. The results indicated that risk tolerance, as measured by the NFCS, is fairly low. In 2012, only 17% of respondents indicated that they were willing to take risks (an increase from 12% in 2009); and men are much more likely than women to say they are willing to take risks in financial investments (24% versus 11%).[113]

In 2015, the FINRA Investor Education Foundation will conduct an Investor Module as a supplemental study to the 2015 NFCS, approximately one month after the NFCS data has been collected. US FINRA estimates that 8,800 respondents from the 2015 state-by-state survey will identify themselves as owning investments outside of retirement accounts – and

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112 Further information can be found at: http://www.lautorite.qc.ca/en/press-releases-2014-autre.html_2014_amf-index-financial-awareness-up-slightly-among-quebeckers30-04-2014-13-3.html.

113 Further information about the NFCS can be accessed at: http://www.finrafoundation.org/programs/capability/.

they will contact these respondents to answer a number of questions intended to provide the foundation and researchers with a better understanding of how and why investors make investment decisions.

The Investor Module inquiry will include types of investments owned, the investment decision-making process, usage of brokerage firms and advisors, as well as attitudes towards risk and return. The module will also measure respondents' self-reported investment knowledge versus their objectively measured investment knowledge (i.e. their responses to investment-specific financial literacy questions). This dataset will allow US FINRA to explore in much greater depth investor knowledge and behaviour.

3. Hong Kong IEC Knowledge Attitudes and Behaviour towards Money and Debt Management

The Hong Kong IEC also conducted a survey of its adult population in 2014. The IEC Knowledge, Attitudes and Behaviour towards Money and Debt Management provided insights into the demographics of investors in Hong Kong, and their investing behaviours and attitudes. One-third of investors expected to have over 20% annual investment returns and over half (53%) did not have a stop-loss strategy to limit their potential investment losses. This was particularly apparent in females and people on a lower income.[114]

4. Japan's Financial Literacy Survey by the Central Council for Financial Services Information

The 2011 Financial Literacy Survey by the Central Council for Financial Services Information in Japan revealed information about financial knowledge and behaviours such as the basis for decision making related to financial instruments and transactions, and demographic data. Some findings related to the understanding of investment risk and included the following:

- The question concerning the relation between risk and return (*"An investment with a higher-than-average return is likely to have higher-than-average risk"*) showed that 68.7% of people indicated the correct responses, while 27.0% of respondents said they did not know the answer. This question also revealed that respondents over 65 years old tended to show a lower rate of correct answers compared with other age groups.
- The question concerning the benefits of risk diversification (*"Buying a single company's stock usually provides a safer return than a stock mutual fund"*) showed that 34.9% of people indicated the correct responses, while 59.0% of respondents said they did not know the answer. This might be due to the unclear composition of the stock mutual fund for respondents, and they might not understand the question as the risk diversification problem.[115]

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114 Further information can be found at: http://www.hkiec.hk/web/en/tools-and-resources/research/money-management-2014.html.

115 Further information can be found at: http://www.shiruporuto.jp/e/survey/kinyuryoku2011/pdf/11kinyuryoku.pdf.

5. Australia's Financial Attitudes and Behaviour Tracker

The Australian Financial Attitudes and Behaviour Tracker provides a snapshot at regular intervals of some key financial attitudes and behaviours of adult Australians.

The tracker is an important initiative under the 2014 National Financial Literacy Strategy, led and coordinated by ASIC.

The research was conducted for the first time in August 2014. The tracker aims to:

- track changes and trends in certain key financial attitudes and behaviours at regular intervals to build up a picture of changes and trends over time;
- inform and support ASIC's priority to promote investor and financial consumer trust and confidence; and
- inform broader research and the measurement and evaluation of Australians' financial literacy levels and wellbeing.

Findings in relation to investment risk include:

- When asked about the concept of "risk/return trade-off", approximately two-fifths (41%) of people reported not having heard of the concept, 28% of people stated they had heard of it but did not understand it, and 30% of people said they had heard of and understood it.
- Of the 30% of people who said they had heard of and understood the concept, 9% were unable to accurately describe the risk/return trade-off when tested.
- More than half of those surveyed either had not heard of diversification (34%), or had heard of it but felt they did not really understand it (26%).
- When asked to assess the risk associated with various types of investments, two in five (41%) rated direct property / real estate investments as low or very low risk investments.[116]

6. FSMA Belgium National Measurement of Financial Literacy

The FSMA has conducted a first national measurement of financial literacy on the basis of the OECD questionnaire. The results were presented in March 2015. In relation to risk education, the study showed that:

- one out of four respondents is willing to take risks when saving or investing – this was mainly the case for men in the high-income 18–29 age group; and
- in response to the assumption that 'it is usually possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares', 56% answered that this statement is correct.

In a more general way, the conclusion of the measurement was that there is a low correlation between financial knowledge, behaviour and attitudes.

[116] Further information can be found at: http://www.financialliteracy.gov.au/research-and-evaluation/financial-attitudes-and-behaviour-tracker.