TC NOTES

PRACTICAL **LEADERSHIP**
AND **GUIDANCE** FROM
TORONTO CENTRE

HOW SUPERVISORS CAN IMPROVE THE EFFECTIVENESS OF FINANCIAL EDUCATION

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HOW SUPERVISORS CAN IMPROVE THE EFFECTIVENESS OF FINANCIAL EDUCATION

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HOW SUPERVISORS CAN IMPROVE THE EFFECTIVENESS OF FINANCIAL EDUCATION

Introduction and summary[1]

This Toronto Centre Note sets out how supervisors can improve the effectiveness of financial education and literacy initiatives to improve consumer outcomes. Achieving positive results is very challenging. Globally, there are significant and long-standing gaps in consumer understanding of key financial concepts and products, and how to access and manage such products successfully. Large gaps exist in both developing and developed countries, so development alone will not solve the problem.

Gaps in capability are difficult to shift. It seems clear that better financial literacy is correlated with a host of beneficial outcomes from financial markets, across banking, securities, insurance and pensions. But the ability of a range of interventions – from national campaigns to local teaching and engagement – to boost financial literacy and improve decisions is more difficult to demonstrate. Moreover, such interventions obviously have delivery costs, as well as an opportunity cost in relation to other supervisory interventions. However, there is positive evidence of the effectiveness of carefully crafted and evaluated interventions that take cost benefit calculations seriously, so success is possible (Kaiser and others 2020).

This Note follows an earlier Toronto Centre (2018a) Note on financial literacy that provided a comprehensive summary of the wide range of initiatives, and policy guidance, on financial education and literacy. This material is not repeated here but is a useful resource for readers interested in the full background to the subject. The focus of this Note is to develop practical recommendations for specific actions that supervisors (and others) could realistically undertake.

This Note starts with a brief background of the data on financial literacy and the key features of the problem. This is followed by a series of examples across the financial services sectors that show promising approaches that can deliver improvements in outcomes. These cases, plus reflections on the role and tools of a supervisor more generally, yield a set of key lessons. These are summarized below and will help supervisors improve the returns to resources devoted to financial education and literacy.

Recommendations for supervisors

1. Supervisors should decide on financial literacy initiatives only as part of an integrated (risk-based) supervisory assessment framework.[2] Specific financial education and literacy initiatives should go ahead only if there is good reason to believe they will add value compared to other supervisory interventions. For some supervisors this will indicate that more resources are needed – but for others it may reveal that they are spending significant sums on interventions that do not help mitigate risks. In this case, reducing or reshaping spending should be seen as a positive outcome of a rigorous approach to mitigating risks, not as a failure.

[1] This Note was written by Olga Fuentes and William Price.

[2] This Note does not cover the development and use of risk-based supervision. This can be found in the Toronto Centre (2018b) Note on Risk-Based Supervision that covers risk-based supervision generically across sectors.

2. Supervisors should prioritize interventions that build in a test-evaluate-adapt design. This will give a better idea of what works for them (and does not), in their specific country, market, target group, and time period. While there is overwhelming evidence of large and persistent gaps in financial literacy in all countries surveyed, there is much less evidence of interventions that work, particularly with results sustained over time. Moreover, although poor financial literacy seems to be a generic finding, the results of what works can be very country specific. This approach will help design interventions that work and fill important gaps in knowledge and improve the cost-effectiveness of money spent on financial education.

3. Supervisors should proactively prioritize the development of partnerships and tools that will enable the test-evaluate-adapt approach. This could be with university researchers, with financial providers committed to good outcomes and full transparency, or with in-house resources. All can particularly benefit from developments in digital financial services since the tools and techniques for optimization used by technology companies can be leveraged to see in real time what is helping to change behaviours.

4. Supervisors should look for interventions that are not standalone but are combined with improvements in policy and design of a system. The literature on behavioral economics and the pervasive problems that even well-informed individuals have with procrastination, recency bias, and loss aversion among other issues shows how difficult it is to get people to proactively make good decisions. It makes the case for improved defaults (noting that mandatory participation is even simpler than auto-enrollment). But it does not mean that there is no role for financial literacy. On the contrary, some of the most successful reforms built on behavioral economics had strong associated communications.[3]

5. Supervisors (and others) should avoid broad-based, generic financial education for adults in classroom settings, since this is rarely likely to be useful. Instead, the focus should be on (tested and piloted) interventions that focus on making real decisions simpler to understand, easier to make, and (potentially) mediated by trusted (and unconflicted) intermediaries. Hence, interventions can be explored around improving saving by personalizing projected balances, improving the choice around annuities by simplifying options and developing simple visual tools to illustrate them, making it easier for people to engage with bank accounts, and improving the management of credit card debt. Providers have a clear role to play in developing tools to help consumers. Supervisors need to ensure this is the case, and that the information developed is clear, fair, and not misleading. Supervisors also need to be able to target consumers directly and rapidly, for example during major crises such as the COVID-19 pandemic.

6. Supervisors should support classroom interventions for children rather than adults – because when suitably developed and efficiently delivered, they can have a positive cost-benefit impact. This is an area that many countries have explored. A 2017 survey found 41% of 120 jurisdictions had financial education in the school curriculum in some form (World Bank 2017). Such initiatives are typically part of a country-wide initiative of which the supervisor may be a part but is unlikely to be the main instigator and driver. However, where appropriate, the supervisor should engage in these initiatives – pushing for the type of approach to interventions identified by the other recommendations in this Note.

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[3] One example is the UK's introduction of auto-enrollment into private workplace pensions, which was supported by the 'I'm In' campaign that focused on discouraging opt-outs – a very clear decision that everyone would have to face (DWP 2014). This and other examples below show the importance of simple messages, multi-channel delivery, and a focus on real decisions people will need to make in the near future.

7. Supervisors should supplement a focus on information and disclosure by using their own regulatory powers or working with the relevant ministry to improve the overall design of banking, insurance, securities, and pensions. The aim should be simpler, safer, and better value products that work well for consumers with low financial literacy. Products should be built to deliver good outcomes in the context of the severe gaps in financial literacy that will undoubtedly persist for many years, rather than assume radical transformations in the level of financial literacy that will not be achieved. Interventions such as mandatory pensions, improved defaults, controls on fees, and limits to leverage in housing (which may also be useful for macroprudential reasons) can all help consumers purchase good value products without other expensive interventions. Playing an active role in supporting good evidence on what can and cannot be achieved by financial education programs will prevent supervisors (and governments and providers) putting time and resources into solutions that will not work. It will enable them to focus on effective initiatives and achievable financial literacy aims. It is certainly a tough challenge, but it is one that can have successful results as part of a well-developed overall strategy.

Understanding the challenge

Financial illiteracy is a widespread problem with a substantial impact on all areas of financial services. People without bank accounts can face very high costs of payments but they may be confused as to how to open a bank account or not understand different charges. Lack of insurance can leave people destitute after certain shocks – but complex and confusing product terms may leave them uncovered even if they have a policy. People may be 'recklessly conservative' and have all their money in cash instead of investing in securities. Or, in contrast, they may invest in products they do not understand that contain large (transparent or hidden) risks. Members of pension systems may have low financial knowledge but need to make decisions regarding voluntary contributions, retirement age, investment strategy, or which pension product to choose. Individuals are faced with complex decisions with not enough information or understanding on the subject as well as facing behavioral biases such as inertia and decisions based on very recent past performance.

A key starting point for countries facing these kinds of issues is to see how bad the situation is. If one cannot measure the problem, then it is difficult to fully understand it. But rather than just focus on the (large) gaps on average, it is critical to see if there are differences by age, gender, education, race, or region that are important in developing interventions to improve the situation.

The debate on measurement usually starts with the foundational work of Lusardi and Mitchell (2008). They designed a simple core set of questions that have been used in many countries around the world and over time and thus allows comparisons. The results are pretty stark. As Lusardi (2019) notes, "across countries, financial literacy is at a crisis level, with the average rate of financial literacy...at 30%." She also highlights that "the average hides gaping vulnerabilities of certain population sub-groups and even lower knowledge of specific financial topics. Furthermore, there is evidence of a lack of confidence, particularly among women…"

The need for a fully-rounded (and measured) definition of financial literacy is commonly agreed, with numerical knowledge just as a starting point.[4] Carpena and Zia (2018, 2020) have an intuitively appealing (and experimentally useful) approach that looks at financial

[4] There are many useful frameworks for measuring and monitoring literacy and financial inclusion – see for example the updated OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion (2018).

literacy as a combination of numeracy skills, financial awareness, and attitudes towards personal finance. The OECD defines financial literacy as “a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing” (OECD 2018). These wider definitions are important, and they help to highlight the scale of the challenge, because even if everyone scored 100% on the numeracy tests, they would still need other capabilities. The fact that only around 30% correctly answer all three core questions on inflation, interest rates, and diversification shows how wide the gap is.[5]

As well as poor literacy on average, there are problems in particular groups. These include age, gender, income, and education level. For example, in a US survey (FINRA 2016) on the ‘Big Three’ financial literacy questions mentioned above, the best scores by age were still only 51%. This was for people aged 70-74 who had a lot of life experience (and noting that even answering these three questions does not mean someone is financially capable). The 18-24 group scored only 13% and the 25-29 group scored only 18% (see Figure 1). Yet these are groups with recent experience of education and who will already be exposed to significant financial needs from bank accounts, insurance, savings, and pensions.

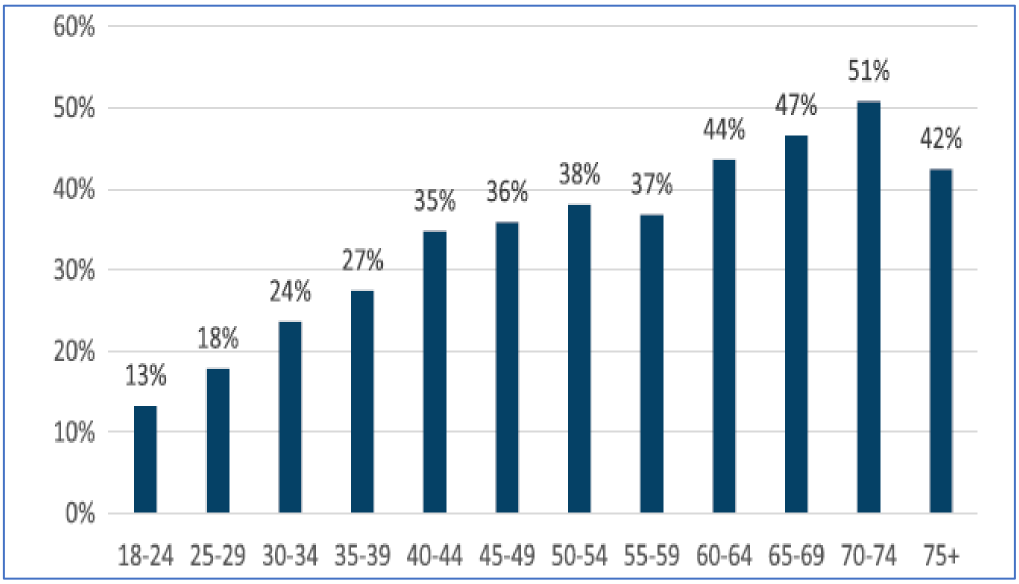
Also of note is the decline from 51% for the 70-74 age group to 42% for the 75+ age group. This highlights potential risks as people reach old age – where they may have significant assets but potentially declining abilities. This issue was picked up recently as part of the Japanese Presidency of the G20.[6]

The message from these data is that supervisors should develop a clear understanding of the size of the literacy gaps among the key target groups – and should intervene in ways that are tailored to specific groups. Developing and using good data to understand the key risks faced is a core part of following Recommendation One, namely, to put the financial education issue into the overall (risk-based) supervision model used to determine how best to allocate scarce resources.

[5] The development of deeper and more sophisticated ways to measure financial literacy is important to uncover any causal factors between better literacy and better decisions. Nicolini and Haupt (2019) use a much more detailed set of questions for 5 European countries. This helps to separate out the impacts on better literacy by having questions answered by people with and without a particular financial product. It is then possible to see if it is having the product that creates the literacy – and hence there is reverse causation – or whether people are literate in an area despite not having the product.

[6] See for example http://gpfi.org/news/coming-gpfi-forum-aging-and-financial-inclusion-june-7th-tokyo

Figure 1: Financial literacy by age in the USA 2015
(Percentage who correctly answer 'Big Three' financial literacy questions by age group)



Source: Lusardi (2019)

Practical examples and considerations

This section highlights some practical and replicable examples of positive interventions that have (correctly) tried to be specific and targeted in order to have a better chance of working. A key theme is the importance of testing and adapting through pilots. Fortunately, the use of technology enables simpler testing.[7] This allows targeting to the precise country context and also to the specific gaps that exist – for example gaps by age, region, gender, or race. All the examples are ones that supervisors should either directly deliver if they have the internal capacity, or support others to deliver if not. A critical lesson is that what will work in one market or one country may not work in another. So, supervisors designing financial literacy interventions need to test and learn, from their own experience and that of financial services providers.

Effective tools for budgeting, saving, insurance, and debt

In an ideal world, financial education and literacy interventions would be delivered in a form that allows the most robust testing of effectiveness. This will not always be possible, but if it is possible then there are many benefits to using an experimental design approach.[8] A good

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[7] Technology enables simpler testing of the impact of different interventions because it makes it easier to identify, track, and evaluate. So, for example, if an intervention to improve the financial literacy materials on a website is being tested, different versions of the website can be created and people visiting the website can be randomly assigned to different versions. Their subsequent behavior can then be tracked, for example whether they bought a product or accessed other parts of a website – allowing very precise monitoring of different interventions. This can be extended to their behavior when using different products, and can be linked to the detailed demographic information on the customer or user.
[8] The 2019 Nobel Prize for Economics was awarded to Banerjee, Duflo, and Kremer "for their experimental approach to alleviating global poverty" – the approach recommended in this Note. However, this is not an 'academic' recommendation – one of the key recommendations of this Note is to develop partnerships to allow such work to be done. They can be very effective at both identifying positive impacts but also unexpected negative impacts of well-intentioned reforms. They can allow

example of testing financial literacy and its impact across a range of financial services comes from a real-life field study that tested a range of potential interventions, using random assignment (choosing people to be involved randomly) to deliver more robust insights.

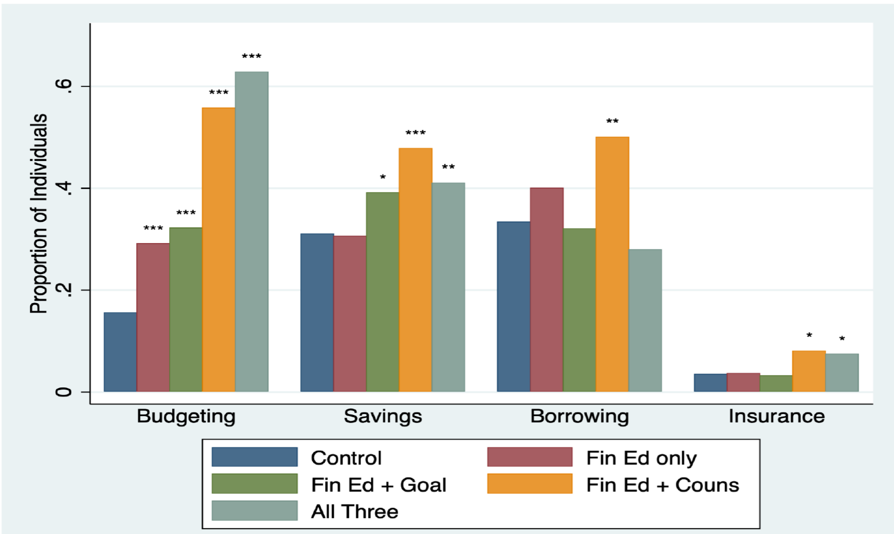
Figure 2 from Carpena and Zia (2020) shows the results of different interventions on financial behavior from budgeting, having a saving account, borrowing for a productive purpose, and taking out life insurance. There were four interventions based on three approaches: video-based financial education; goal setting to set short-term but achievable aims like opening a bank account; and individualized financial advice and one-on-one instruction. The four interventions considered financial education only, financial education combined with each of the other two approaches, and finally all the three approaches combined together.

The headline finding was as follows:

> Strikingly, we find that numeracy does not mediate any effects of financial education on financial outcomes. For simple financial actions such as budgeting, both awareness and attitudes serve as pathways, while for more complex financial activities such as opening a savings account, attitudes play a more prominent role. (Carpena and Zia, 2020)

The clear conclusion for supervisors is that they should not expect significant impacts from launching a simple financial education plan – whether themselves or encouraging or requiring financial service providers to launch similar schemes. Figure 2 suggests, for almost all financial actions (except for insurance), that better outcomes are obtained by combining financial education and counselling.

Figure 2: The impact of different interventions on 4 key financial actions



Outcomes: *Budgeting:* Made a budget in the last 6 months; *Savings:* Has a savings account; *Borrowing:* Borrowed for productive purpose (e.g., for business); *Insurance:* Bought life insurance in last 6 months

Classroom interventions for children

Teaching essential financial life skills to a new generation has obvious attractions. Children are in a learning setting already. It would clearly be beneficial if they left school and/or

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supervisors (and others) to increase effectiveness and reduce costs by not scaling interventions that did not pilot well.

university with the skills to navigate a complex and fast-changing financial landscape. However, while it is recommended that supervisors should support efforts in this area – as opposed to classroom-style mass interventions for the adult population – this must be done carefully and rigorously to avoid ineffective interventions and wasted resources. It is also important to remember that many education systems have issues dealing with basic literacy and numeracy as well as equipping children for a digital future. Many systems are under-resourced, and teachers are already over-stretched and often lacking in financial literacy themselves.

Taking a high-level overview of the area, the OECD (2019) recommends to:

- "Start financial education early and to design it in ways that take into account age and the cognitive, social and psychological development of children and young people.
- Design programmes that are sufficiently long and follow a structural approach, rather than very short one-off programmes.
- Create programmes that offer opportunities to learn by doing, are relevant to young people's lives, allow participants to experience the impact of their decisions; and
- Take into account young people's biases, attitudes and habits, as they have greater chances to support positive financial behaviour."

The value of classroom interventions is hotly debated. There are clearly many programs that have delivered little or no lasting value. However, here, as in other areas highlighted in this Note, there is useful evidence from well-designed interventions.[9]

Frisancho (2018) used a randomized control trial in 300 public schools in Peru to investigate the impact of interventions aimed at improving the financial knowledge and behaviours of students and teachers, for example the likelihood of saving, and saving formally through an institution. The study also importantly compared the costs of the intervention to the benefits. If the costs are very low, then even small positive impacts can be a useful part of an overall toolkit. The average cost per pupil of the intervention was only USD$6.60, helping to support positive cost benefit ratios. Frisancho concluded that "the evidence uncovers large and robust impacts on financial skills under delivery models that incorporate a mandatory course requirement. In turn, voluntary after-school programs yield meagre or null effects."

Supervisors should partner with organizations that are delivering related material, or support efforts to create such material. Supervisors can use their influence when National Financial Literacy Strategies are being developed to suggest such interventions. Although the impact has not been evaluated, one example of the practical steps that supervisors can take is the recent publication by the International Association of Pension Funds Supervisors (AIOS) of a set of children's stories focused on simple but important financial messages.[10]

Member financial statements and personalization

Personal statements are critical for transparency for all financial products. Many countries have required that providers increasingly deliver not just technical transparency but also functional transparency. Regulators typically place some requirements on provider personal statements – often in a standardized format, including common assumptions or avoiding long detailed notes that customers do not read or understand if they do. For example, to support a

[9] See Kaiser and others (2020).

[10] See http://www.aiosfp.org and the section 'Cuentos Infantiles' on the main home page. AIOS country members are: Chile, Colombia, Costa Rica, El Salvador, México, Panamá, Perú, República Dominicana, and Uruguay.

focus on the long-term outcome of the product, some countries have mandated disclosure on credit card statements and other loan agreements of the total cost of the product in the long run. The minimum content and the timing of delivery of a statement are usually specified in legislation or regulation. In most countries, financial services providers are mandated by law to send customers personal statements. The content and presentation of this type of material is hence something that supervisors can change and test to try to enhance positive behaviors.

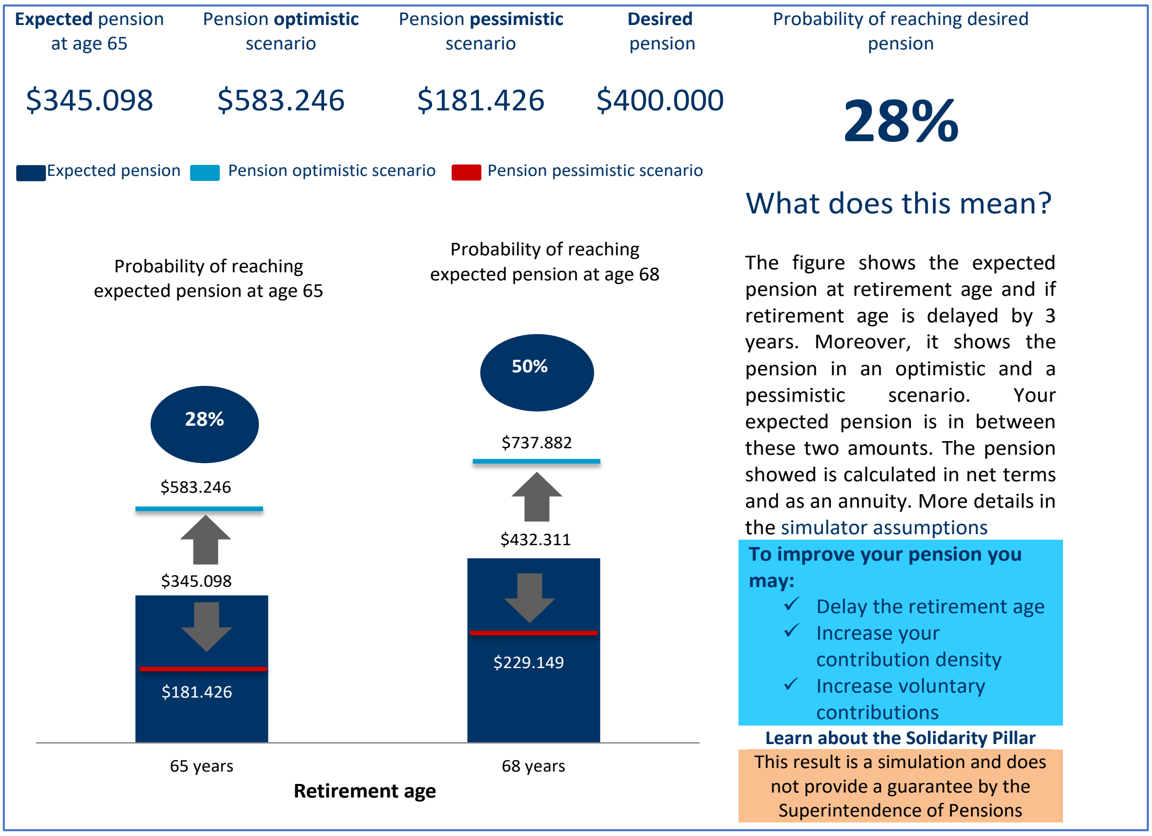
In the case of pensions, personal statements can be required to contain forward looking pension projections to help members to make effective decisions on their savings. This occurs in countries like Chile, Mexico, and Netherlands. Some countries build annual financial literacy campaigns around the annual delivery of key statements (for example the Orange letter in Sweden and the Green letter in Macedonia in relation to pensions).

One example of the type of information given to members to incentivize savings came from statements for pension fund managers in Chile. They must include the movements in the members' individual accounts (mandatory and voluntary) specifying the total accumulated balance, fees paid, and fund returns, among other things. Once a year, the statement must also include a personal pension projection, which is an estimate of the amount of pension that the member would obtain when they retire. Information sent to members depends on their age and the goal is to encourage savings in pension schemes. Members up to 35 years old receive general information on how the contributions made earlier in life have a larger effect on the pension level compared to later contributions. Older individuals receive a pension projection depending on how close they are to the legal retirement age. Middle-aged individuals receive two projections, to compare the effect on pensions of making zero versus complete future contributions. Women above age 50 and men above age 55 receive information to compare the pension projection of retiring at the legal retirement age versus postponing retirement by three years.

After introducing the personalized pension projection, the Chilean regulator decided to develop a pension simulator with information on pension risk in addition to expected pensions. The pension simulator is an online interactive tool developed by the regulator to improve knowledge and raise awareness about pensions. It delivers an expected future pension, which may not be easily estimated or obtained by members. Members can easily use the tool to observe the effect on the estimated pension of changing different parameters: postpone retirement, increase contributions density, increase voluntary savings, and change the investment strategy, among others[11] (see Figure 3). The pension simulator is available on the regulator's website. Pension providers can develop their own pension projections satisfying a set of minimum criteria and assumptions defined by regulation. They can also provide a link to the pension simulator on the regulator's website.

[11] See Sane and Price (2018) for an open source model for use and adaptation by supervisors.

Figure 3: Projection Tool in Chile simulator outputs



Note: This is an English translation of the original simulator results.

Source: Pension Regulator, Chile

Building on the improved projection tools for general use, the Chilean regulator wanted to test whether personalized retirement savings information tailored to each individual's financial situation could be an effective way to increase knowledge and encourage individuals to make decisions that lead to increased pension payouts. To perform the evaluation, the regulator partnered with J-Pal researchers. Fuentes and others (2020) performed a field experiment (randomized control trial) in which a first group of randomly selected individuals received a personalized online pension projection (treatment group), and a second group (control group) received publicly available generic information.

The results indicate that the personalized information increases voluntary contributions without crowding out other savings. Voluntary savings increase by 12.6% following the 12-month period after the intervention. Overall, the effect begins to disappear after the ninth month after the intervention. Also, a "news" effect was identified; optimistic individuals, who overestimated their pension, significantly increased their voluntary contributions over the same period (17%).

Transparency and disclosure requirements need to be in place to help individuals understand the nature of such projections. They are a guide to help individuals take their own decisions about savings, not a promise from the regulator about future returns. Also, the main assumptions and methodology used should be clearly documented. Supervisors should guide supervised entities about the level of transparency and disclaimer requirements that should be in place when offering projections and calculator tools. Requiring provider projections to have common assumptions or preventing the use of overly-optimistic assumptions should be considered.

The main takeaways for supervisors here are that individuals need to have the right information in advance to make decisions on savings to improve their pension outcomes. Forecasting the potential impact of additional savings on retirement income is challenging, particularly for individuals with limited financial literacy. Delivering customized information may have a significant impact on savings and retirement behavior. Mechanisms must be in place to ensure that these decisions have permanent and not only short-term effects, such as the introduction of nudges and reminder emails, and the facilitation of making additional voluntary savings, including through digital channels. The precise way of doing this should not be taken as a cut and paste from the examples here – but supervisors (and financial providers) should follow the approach to design and test improvements.

Projections and calculator tools might be also available for other financial products, where similar transparency, disclosure, and disclaimer requirements should be required by supervisors. Delivery of customized information or financial education initiatives to improve individuals' outcomes can also be applied to different financial products. In the next section, some examples on strategies to increase savings and reduce household debt are presented.

Bank accounts and credit cards

Improving financial education and access to bank accounts may increase savings, allowing individuals to satisfy present financial needs and save for their future. Jamison and others (2018) evaluated whether offering saving accounts and financial education to young individuals in Uganda could increase long-term savings. They tested three treatments: offer only financial education, offer only a saving account, and offer both financial education and a saving account. One year after the intervention, the three treatment groups experienced an increase in income[12] and savings. An evaluation made three years after the intervention indicates that only those receiving financial education and a saving account still had higher bank savings and income compared to the other groups.

Giving access to bank accounts without improving financial literacy may have no impact on welfare. This is the case of the study performed by Dupas and others (2018). They conducted a randomized evaluation in three countries – Uganda, Malawi, and Chile – to test the impact of free bank accounts on total savings, and on the ownership and use of basic bank accounts. They also measured the effect on other variables such as education and investments on business. Researchers partnered with local banks to remove fees to aid access to the bank accounts. Overall, offering free bank accounts had no impact on savings and other variables, indicating that policies focusing only on expanding coverage of banking accounts may not have meaningful effects on improving savings and welfare.

Research on borrowing and household debt using financial interventions can be useful to understand how to design effective debt reduction programs when these are needed for borrowers who are over-stretched. Behavioral biases such us inertia, short-term views, and an inability to achieve a financial target negatively affect savings, welfare, and debt reduction. Some studies suggest that introducing consumer attention mechanisms can change the behavioral patterns of individuals. Introducing debt payment reminder notifications by email, and goal settings with realistic repayment plans can potentially help individuals to reduce household debt (Karlan and Zinman (2012), Lusardi and others (2010)).

The Financial Conduct Authority (Adams and others 2018) analyzed and tested different types of disclosures in trials of three UK lenders. The goal was to find effective ways to increase

[12] This refers to labor income and income from investment returns on savings.

credit card payments. One focus of the analysis was on the group of individuals paying their credit cards through automatic minimum payments. Overall, they found no impact of introducing disclosures on members' credit card statements. The treatment reduces the percentage of individuals paying only the minimum payment and reduces credit card debt, but only transitorily. The introduction of fees information does not significantly affect the behavior of the group. The introduction of repay reminders in the form of "time to repay" nudges[13] had a higher effect on responses. It seems liquidity constraints were not an issue for individuals persistently paying the minimum payment of their credit card debt, but rather that they were just incapable of understanding or estimating how long their debt would take to be repaid if they continued paying only the minimum amount.

Supervisors should again take the message that simply delivering information as a financial literacy intervention is not likely to be effective. Transparency is a necessary but not sufficient condition for beneficial outcomes. This is in some sense obvious since all the necessary information is available now for anyone with internet access. However, if they knew where to look and were motivated to do so and then act on the information, there would not be a problem in the first place. So, supervisors should develop proactive assistance that can provide unbiased advice about what is required to improve the individual's situation. However, it may be very challenging to get individuals to understand the key issues and improve their financial literacy and decision making. Hence, the ease of access to credit card debt, the unsolicited increases in credit limits, and the ability to take out multiple cards that can create an escalating debt problem may need policy action to introduce tighter and safer customer journeys.

In this regard, product design and policy action are complementary measures to financial education interventions. Supervisors have applied recommendations from behavioral economics and choice architecture on product design and the introduction of effective policies such as the use of default options, commitment devices, auctions to assigned members to low cost providers, and automatic enrollment, among others. The main advantage of choice architecture is not restricting the number of choices for those individuals capable of making their own informed decisions, but nudging those not capable of doing it by themselves, in the right direction.

Choosing an annuity

In the insurance and pension market, there are few decisions as complex or daunting to members as choosing an annuity – a product that will pay them an income until death. There can be dozens if not hundreds of different options – whether to choose a level, rising, or inflation protected payment, whether to include cover for a spouse, whether to include a guarantee period, and so on.

To illustrate the impact of combining a simplified regulatory design with clear messaging and accessible consumer tools, the example of Singapore's Central Provident Fund (CPF) is instructive. When constructing the lifetime payout option 'CPF Life' the CPF reviewed member preferences and noted (as have many other providers before them) that there was a potentially conflicted range of requirements. People obviously wanted a decent income, but they also wanted a payment that would protect against rising costs (which requires a lower starting point to compensate for higher payments later), and they wanted to leave money to their families. Clearly having a high payment that rises over time and leaves spare money for a bequest is challenging.

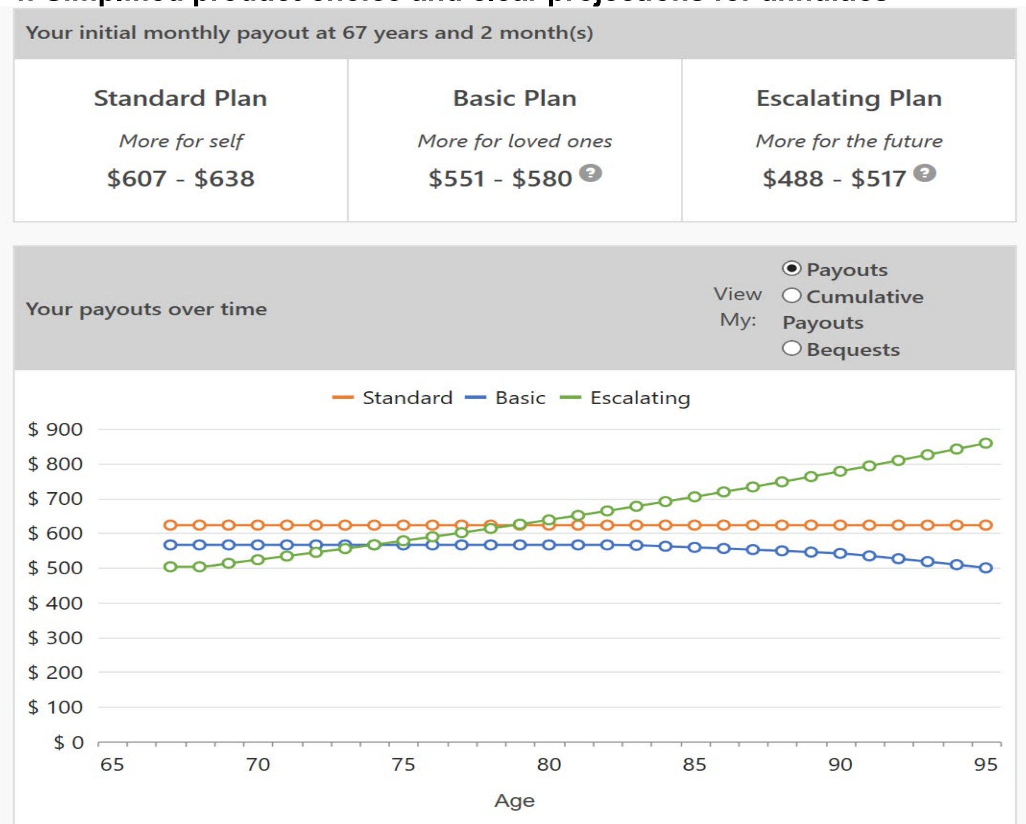
[13] The treatments were designed using nudges with messages such us "a quicker way to repay your balance," "set your goal to repay your credit card years faster," and "clear your balance faster."

A typical insurance market 'solves' this issue by offering a huge range of choices but then hits the problem that consumers cannot understand the options and are blinded by the range. To avoid this approach, the CPF focused on three key product features to design a limited product range with each feature as a core focus that would allow people to choose which would be the most important for them. So, the standard plan would have a flat profile but a higher monthly payout and a lower bequest until the person is over 80, at which point there would be no bequest. The basic plan was also basically flat with a small decline if someone lives over 90 but started at a lower level to increase the bequest relative to other options – and to continue paying a bequest when the others cease to do so over the age of 80. Finally, the escalating plan would start lower than the standard and basic plans but rise over time. The standard plan is the default.

The CPF then provided a simple calculator so that members can see a simple picture of the different payouts by inputting a few simple details – as well as providing some simple answers to frequently asked questions on the overall process and the options. Figure 4 shows the comparison of the payout options, which play a critical part in supporting members to exercise a choice linked to personal preferences in a simplified way and with a sensible default option tailored to country circumstances.

This is much easier to understand than, for example, the approach where there are a huge range of options. The options available in the UK market that have to be embedded in the UK Money Advice Service (MAS) Calculator require about 10 times as many answers on individual circumstances. The calculator is excellent and the MAS service admirable, but the behavioural economics literature makes clear that navigating so many options will leave many consumers confused and unable to make a clear choice. This is an example of how better education will find it difficult to fix an overly complex policy framework.

Figure 4: Simplified product choice and clear projections for annuities



Source: CPF Singapore

The Chilean pension system also provides another good example for supervisors of supporting well-designed financial literacy interventions. The regulation in Chile establishes four payout options: programmed withdrawal, immediate annuity, a combination of both, and a deferred annuity with temporary income. This is a difficult choice, and most members end up paying a fee to pension advisors or sales agents to make a decision. Paying a fee for advice can be sensible, but the size of the fee is typically large in this and other markets relative to the account balance of an ordinary person. So, a service that can deliver added value may end up costing more than the value added. Moreover, the payment of a fee may be matched by incentive payments from providers to the advisers to choose their product rather than the one that is best for the consumer. This can lead to conflicts of interest for advisers – and is one reason, for example, why the UK FCA has banned commission payments for financial advisers in many situations. Many countries, from Chile to India, have seen persistent problems with products sold through sales agents for the producer's interest, not the consumer's.

The Centre for Experimental Social Sciences from Oxford University partnered with the Pension Regulator and the Market Financial Commission of Chile to conduct an online experimental evaluation in which participants decided over different annuity offers (Duch and others 2020). Pension values were changed from an inflation-indexed unit[14] to the domestic currency (pesos), the information displayed was reduced and made easier to understand, and an additional measure was introduced capturing the annual difference in the pension amount with respect to the best offer. One would expect that consumers would simply choose the offer that pays the most. But this is not the case – consumers can default to the provider name of which they have heard and even fail to understand the real implications of the information presented.[15] During the last two years, effective selection of offers indicates that only 35% of individuals choose the highest payout annuity.

The authors' hypothesis is that sub-optimal decisions are mainly driven by the type of information and the way in which the information is displayed. The main 'treatment' in the experiment referred to the metric used, and the type of information displayed in the pension offers certificate. The main results indicate that eliminating confusing information, measuring pension values in pesos, and showing the annual monetary loss with respect to the highest offer, have the highest impact on offer selection (Figure 5). This treatment effect increased the percentage of the sample selecting the highest offer to almost 60% from 25% in the control group. When considering the first three offers, 84% of those in this treatment group selected one of the three first offers compared to 41% in the control group. Other treatments such as using pesos as the unit of measure without changing the type of information displayed, introducing the present value of total pension payments, and changing tables to graphics, had lower or minimal impact.

The twin message here for supervisors is to try new and more sophisticated ways to develop interventions, but to do this in a realistic way and hence work on the choices available and the choice 'architecture' actively as well.

[14] Pension values in the offer certificate are expressed in Unidad de Fomento (UF), a unit of account indexed to prices.
[15] This type of behavior was also seen in the UK annuity market. Consumers very often took an annuity from the provider of the accumulation saving product despite the existence of best-buy tables and an 'Open Market Option' for other providers that would clearly provide significantly enhanced annuities. The behavior can be difficult to understand – but that is precisely why low financial literacy is such a barrier to getting better outcomes.

Figure 5: Simplified design for payout options to aid member education and choice
(The chart shows different providers, the monthly pension and the annual loss compared to the best option).

Inmediate Annuity			
Option	Company name	Monthly pension in pesos	Annual loss
1	company 1	331.902	
2	company 2	331.086	-9.792
3	company 3	330.814	-13.056
4	company 4	328.910	-35.904
5	company 5	324.557	-88.140
6	company 6	321.564	-124.056
7	company 7	320.748	-133.848
8	company 8	319.660	-146.904
9	company 9	311.499	-244.836

Note: This is an English translated version of the original table used in the evaluation.

Source: Pension Regulator, Chile

The roles of supervisors and financial institutions

To satisfy a minimum level of transparency and knowledge, supervisors should provide all relevant information about the description of the systems they supervise. This should include the description of products, types of benefits, the main risks faced by consumers, and a set of statistics and reports. The material is certainly for consumers but should not be oriented to only them. It should be useful for academics, the media, and international organizations, among others, who can help explain, investigate, and improve the system. Practical information on the different procedures to obtain benefits or services provided by the system is also valuable for consumers and members. Likewise, supervisors should ensure that providers make such information accessible on their products.

Supervisors should focus on how to reach people as well as the messages and information to deliver to them. So, they need to develop their ability to target consumers directly to deliver simple bite-sized messages that will improve financial literacy in a specific and useful way. One example – yet to be evaluated – is messaging during the COVID-19 pandemic about scams, for example targeted to members of funded pension plans to avoid offers on pension transfers or to users of online banking to be wary of calls supposedly from the authorities.

Supervisors can mandate that the providers of financial products and services should provide financial literacy materials as well as meeting commonly mandated transparency requirements. Many providers will already have literacy materials and provide projection tools to help consumers make choices about different products. This Note recommends that supervisors need to be proactive and take a leading role. The supervisor should collaborate with respected providers for many of the recommendations in this Note – for example developing partnerships for robust testing of interventions. But supervisors need to do more than just collaborate and recommend. Once there is clear evidence of what will work in a particular market or product segment, the supervisor should issue guidance (or regulation if needed) to require financial services providers to follow the approach. For example, in relation to projections, they should require the use of common assumptions to prevent misleading or overly-optimistic projections. Member statement regulations should incorporate the lessons identified in some of the examples highlighted above.

For product disclosure, unless there is evidence to the contrary, the presumption should be that few, if any, consumers read the detailed text on agreements. So, the provider product development process that supervisors will scrutinize needs to be based on delivering good outcomes for consumers – embedding the 'Treat Customers Fairly' type of approach backed by robust enforcement where products or sales processes do not deliver.

In relation to many new financial services providers, supervisors should be open-minded but still sceptical in relation to new developments such as FinTech applications. FinTech can help to improve understanding and engagement – key parts of financial literacy (see Toronto Centre 2017, 2019). It can square the circle that individual treatment is beneficial but too expensive if using humans. For example, robo-advice may be very compelling and effective and may provide a way to uncover consumers' real needs in a way that does not need high levels of financial literacy – or can enhance literacy in the process of choosing the product in a structured and guided way. But if robo-advice is directing people to products that are not suitable or do not deliver good outcomes simply because they are profitable for providers, then the supervisor needs to respond with robust enforcement and/or regulation.

Although many FinTech innovations could be useful, it is important to ensure that worse risks are not created, such as problems with the financial sustainability of the FinTech or issues in relation to cyber risk. This highlights the constantly evolving challenge for financial literacy. Consumers who may be jaded with their experience of incumbent providers may well be open to the attractions of new entrants. Many may be a source of innovation and offer better value products and improved services. But the lure of the 'new' is also the way in which many predatory providers may exploit low financial literacy. Again, it is too much to expect literacy initiatives to prevent this, hence the need for strong regulation and supervision to work alongside (and ahead of) financial literacy programs.

Conclusion

This Note sets out how to improve the effectiveness of financial education interventions by supervisors. It suggests a number of key steps that should be followed as part of an overall risk-based approach, linked to a long-run strategic vision as well as short-term operational plans. Both are important so that short-term financial education to tackle a problem with structural roots is not repeated year after year when there are more effective (and cheaper) long-run solutions.

It is particularly important to have a clear view of what is possible, to avoid putting too much faith (and money) in initiatives unlikely to work, while ensuring active and intelligent use of financial literacy initiatives when appropriate. This is important, as explained by Carpena and Zia (2020), who highlight:

> Nevertheless, the merits of such [financial literacy] programs remain a hotly contested policy issue. On the one hand, critics maintain that financial education is a fallacy because it is neither economical nor effective, arguing instead for other forms of financial regulation such as retirement savings defaults and pro bono financial advisory services (e.g., Willis, 2011). On the other hand, many governments and organizations worldwide continue to champion financial education, as evidenced in the membership of hundreds of countries and public institutions in the International Gateway for Financial Education.

This Note adds a practical set of recommendations for supervisors to this debate. Seven recommendations aim to provide a roadmap to allow financial education and literacy initiatives to play their proper role as part of the overall supervisory toolkit:

1. Supervisors should decide on financial literacy initiatives only as part of an integrated (risk-based) supervisory assessment framework so that they only resource financial education and literacy if there is good reason to believe it will add value compared to other supervisory interventions.
2. Supervisors should prioritize interventions that build in a test-evaluate-adapt design so that they can gain a better idea of what works for them (and does not), in their specific country, market, target group, and time period.
3. Supervisors should proactively prioritize the development of partnerships and tools that will enable the test-evaluate-adapt approach.
4. Supervisors should prioritize interventions that are not standalone, but are targeted interventions combined with improvements in policy and design of a system.
5. Supervisors (and others) should avoid broad-based, generic financial education for adults in classroom settings, since this is rarely likely to be useful. Instead the focus should be on (tested and piloted) interventions that focus on making real decisions simpler to understand, easier to make, and (potentially) mediated by trusted (and unconflicted) intermediaries.
6. Classroom interventions for children – suitably developed and efficiently delivered – can have a positive cost-benefit impact and are worth exploring.
7. Supervisors should supplement a focus on information and disclosure by using their own regulatory powers, or working with the relevant ministry, to improve the overall design of banking, insurance, securities, and pensions. The aim should be simpler, safer, and better value products that work with the reality of low financial literacy that is likely to persist in the coming years even with the enhanced chances of success offered by the tools in this Note.

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