Making Cents of It: The Benefits of Improving the Financial Literacy of Australian Children

A Report for Kids Get Money | 19 May 2025

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Key points:

- Despite rising levels of income and wealth in the Australian community, the issue of financial literacy remains highly relevant. Across Australia, around 37% of adult men and around 52% of adult women do not understand key basic financial literacy concepts such as interest rates, inflation and risk diversification. Substantial differences across age groups are also evident.
- While there is broad recognition of the importance of financial literacy, historically, the long-term benefits of improved financial literacy (especially in children), have not been well-quantified, hindering decision-makers ability to make informed decisions about the value of programs that enhance financial literacy.
- Frontier Economics assisted *Kids Get Money* in undertaking an evaluation of the benefits of improved childhood financial literacy. Specifically, this analysis focuses on identifying the wide array of benefits associated with enhancing financial literacy, and where feasible, illustratively evaluating *select* benefits of improved financial literacy. These include the avoided costs of hardship assistance scheme expenditure and avoided hospitalisations of older demographics and the associated avoided healthcare costs.
- Our analysis indicates that if financial literacy could be instantly increased to a score of 5 out of 5 for the 'Big Five' financial literacy questions, expenditure on the Commonwealth Government's *Financial Wellbeing and Capability* program could reduce by around **$1.04 million per year** and **$7.80 million** in present value terms (7% discount rate[1]) over a 10-year period.
- Our analysis indicates that if financial literacy could be instantly increased, the number of hospitalisations of Australians 65 years or older could fall by 900,000 per year over a 10 year period. This corresponds to a reduction in spending of between **~$9 billion** and **~$11.6 billion, each year** and **$76.27 billion** in present value terms (7% discount rate) over a 10-year period.
- In practice, there may be a delay between the timing of improvements in financial literacy (especially for programs targeting childhood financial literacy), and improvements in broader economic, social and environmental outcomes, such as reduced hospitalisation of older demographics. As such, these results should be interpreted as the ***potential* benefit** to the Australian community of improvements in financial literacy. As a result, they should not be taken as the results of a CBA, used in lieu of a separate CBA or as part of an input into another CBA.

[1] Consistent with Australian Government guidelines, such as the Infrastructure Australia *Guide to Economic Appraisal,* July 2021, https://www.infrastructureaustralia.gov.au/sites/default/files/2021-07/Assessment%20Framework%202021%20Guide%20to%20economic%20appraisal.pdf

Introduction

Despite Australia's rising levels of income and wealth, a lack of financial literacy remains a significant issue in the community. The *Household Income and Labour Dynamics* (HILDA) Survey paints a concerning picture of the current levels of financial literacy across Australia, with around 45% of adults in Australia being deemed financially illiterate (i.e. not able to correctly answer the 'Big-Three' questions [interest rates, inflation and risk diversification]). This corresponds to around 8.5 million people.

Further, there is a large gap in financial literacy between adult men and women, with around 63% of adult men and only 48% of adult women financially literate. Financial literacy is also lowest amongst individuals aged 15 to 24. Only 28% of teenage males and 15% of teenage females were able to correctly answer the 'Big-Three' questions.

Financial education in the school curriculum is limited

Amongst young Australians there is a strong connection between their place of residence, where they attend school, and their levels of financial literacy. In particular, those who live and attend school in rural and regional areas are more likely to have lower levels of financial literacy. Low socio-economic status has also been found to be associated with poorer educational outcomes and financial literacy.

While there has been movement towards including financial education in the school curriculum, progress has stalled. Since around 2011, financial literacy has been a part of Australia's curriculum up to year ten – but only as part of the broader *Mathematics* and *Humanities and Social Sciences* curriculum. That is, financial literacy is not included as a standalone subject. In Years 11 and 12, financial literacy is taught only in lower-level Mathematics subjects.

Non-government organisations involved in the financial literacy sector have found that there has been limited recent engagement across the education sector, and the National Strategy is not currently active. With respect to the Australian Curriculum, financial literacy is still not included as a standalone subject, learning area, general capability or cross-curriculum priority. As a result, there appears to be an ad hoc and inconsistent approach to how financial literacy is taught in schools.

Financial literacy can have far-reaching consequences

While childhood financial literacy is one of several determinants of the opportunities and successes an individual may enjoy, the *Household Income and Labour Dynamics* (HILDA) survey found that low financial literacy correlates with higher financial stress and poverty. In addition, a number of surveys and studies undertaken in Australia highlight that young people, elderly people, women, and Aboriginal and Torres Strait Islanders suffer both from lower financial literacy levels and poor economic and financial outcomes.

This can have significant, long-term implications, not just for the individual, but also the broader Australian community. The financial literacy of young persons – particularly those in the latter stage of secondary school – is critical as financial habits formed in school and early adulthood are likely to be prevalent into early adulthood and beyond. What is clear is that failure to invest in programs aimed at improving financial literacy equitably in children risks imposing significant economic and social costs, not just on the individual, but the broader Australian community.

Action to improve childhood financial literacy in Australia is critical

Despite recognition of the importance of financial literacy education for young Australians, it is clear that financial literacy levels for young Australians – and Australians more broadly – are concerningly low.

While it is broadly accepted that financial literacy is important, the long-term benefits of improved financial literacy (especially in children) have not been well-quantified, hindering decision-makers ability to make informed decisions about the value of programs that enhance financial literacy.

To enable decision-makers to make informed decisions about programs to improve financial literacy, it is critical to first understand the full value of improved financial literacy. This should include the longer-term, broader economic and social impacts of financial literacy.

Scope of this report

Against this background, Frontier Economics assisted Kids Get Money in improving our understanding of the benefits of improved childhood financial literacy. Our approach involved four broad steps:

- **Step 1:** Undertake a detailed review of Australian and international literature on the benefits of improved childhood financial literacy.
- **Step 2:** Identify the potential change in economic, social, environmental and equity outcomes of improved financial literacy in Australia.
- **Step 3:** Indicatively value selected benefits of improved financial literacy, drawing on illustrative examples.
- **Step 4:** Identify key takeaways from the analysis and areas for further research and analysis.

The benefits of improved financial literacy go beyond the individual

Various studies have found a link[2] between financial literacy and **changes in "real resource" economic and social outcomes**. Figure 1 details these identified benefits. While many of these benefits reflect benefits of improved financial literacy generally, rather than improved financial literacy in children, this only serves to highlight the benefit of early intervention.

For example, improving financial literacy can be a key tool to help mitigate and prevent negative outcomes for some of the most vulnerable members of society. Australia is currently experiencing an increasing wave in the level of homelessness among women over 55 and women retiring in poverty more generally. Better financial literacy outcomes including saving, investing and superannuation education at school could have significant impacts for women – providing them with the knowledge and skills to focus on financial independence and security from the start of their working life.

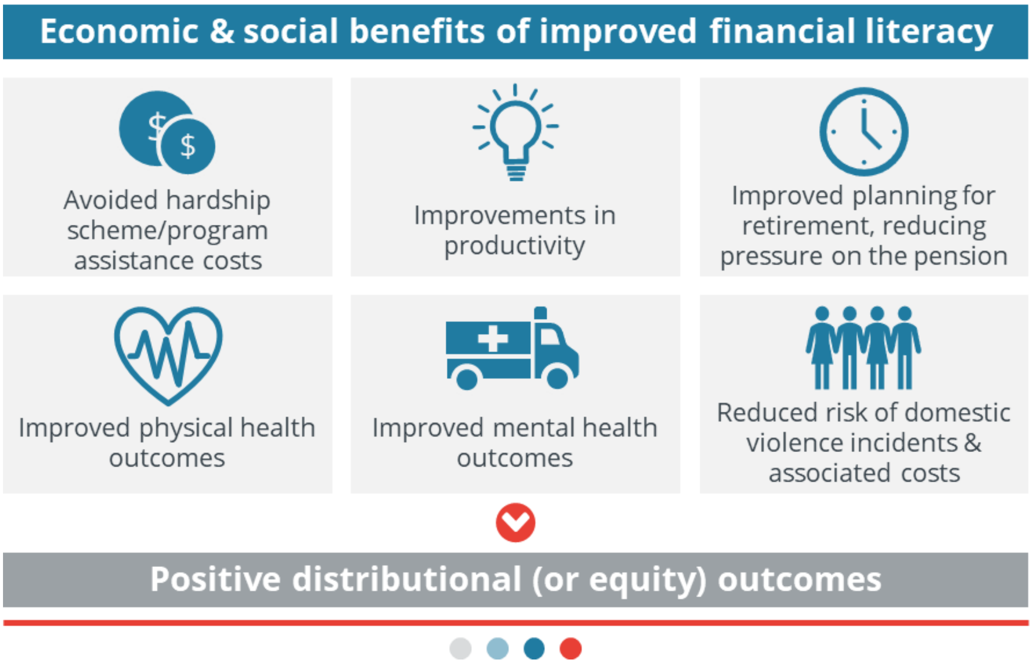
Importantly, some key benefits of financial literacy do not reflect "real resource outcomes" but rather, involve a "transfer" between parties (a change in "how the pie is divided, rather than the size of the pie"). These outcomes are collectively referred to as **positive distributional (or equity) impacts**. These positive distributional impacts include:

- Lower inequality.
- Higher consumption for different types of goods.
- Avoided or overcome financial exclusion.

[2] That is, for each benefit we identified, we established a clear causal link from improved financial literacy to changes in community outcomes.

These impacts are important to consider, given transfers have equity impacts and can be important for achieving other policy objectives.

Figure 1: The benefits of improved financial literacy



Source: Frontier Economics

The value of improved financial literacy can be significant

To help improve our understanding of the potential benefits of financial literacy we have sought to value selected benefits of improved financial literacy compared to a counterfactual of no change in financial literacy levels across Australia (i.e. it makes the case for further action to address financial literacy). These benefits include the:

- Avoided cost of hardship assistance scheme expenditure.
- Avoided hospitalisation of older demographics, and the associated healthcare cost savings.

In doing so, we have:

- Assumed the benefits relate to an instantaneous improvement in financial literacy
- Adopted a benefit transfer approach, which involves adopting a value based on existing analysis, studies or surveys in the literature.
- Made a number of assumptions based on the best available information and literature.

In practice, there may be a delay between the timing of improvements in financial literacy (especially for programs targeting childhood financial literacy), and improvements in broader economic, social and environmental outcomes, such as reduced hospitalisation of older demographics. As such, these results should be interpreted as the ***potential* benefit** to the Australian community of improvements in financial literacy. As a result, they should not be taken as the results of a CBA, used in lieu of a separate CBA or as part of an input into another CBA.

Valuing the avoided cost of hardship assistance scheme expenditure

Improved financial literacy is associated with improved financial decision-making, which in turn reduces the likelihood that an individual will need to access financial hardship assistance. Drawing on the findings of a 2022 study by *Boedker et al (2022)*[3], we have provided an indication of how the cost of the Commonwealth Government's *Financial Wellbeing and Capability* program could potentially be avoided given an 'instantaneous' improvement in financial literacy levels and consequent reduction in demand for the program.

The methodology employed to indicatively value the avoided cost is outlined in Figure 2.

Figure 2: Valuing expected avoided cost of hardship assistance

Source: Frontier Economics

An instantaneous increase in the financial literacy scores of all clients currently accessing the Commonwealth Government's *Financial Wellbeing and Capability* program could indicatively result in a decrease in expenditure on this program of around **$1.04 million per year**. Over a 10-year period this corresponds to an avoided cost benefit of around **$7.80 million** in present value terms (7% discount rate).

While the magnitude of this result may not seem significant in the context of overall spending associated with the *Financial Wellbeing and Capability* program, these are not immaterial avoided costs. In addition, these results only relate to one specific hardship assistance program.

It should also be noted that while this evaluation is based on academic literature and provides an estimate of avoided real resource cost, the example is illustrative only and should be interpreted as such.

Avoided hospitalisations of older demographics and the associated healthcare costs

Higher levels of financial literacy are associated with better financial outcomes and a decrease in the likelihood and/or severity of financial and economic stressors an individual may experience. In turn, fewer financial and economic stressors are associated with improved physical health outcomes, and consequently lower healthcare costs. Drawing on the findings James *et al (2018)*[4], we have provided an indication of how the costs associated with hospitalisations could potentially be avoided given an 'instantaneous' improvement in financial literacy levels.

The methodology employed to indicatively value the avoided cost is outlined in Figure 3.

[3] Boedker, C, Moy, N & Wu, C 2022, Financial Wellbeing and General Life Satisfaction in Australia, *The University of Newcastle*.

[4] James, BD, Wilson, RS, Shah, RC, Yu, L, Arvanitakis, Z, Bennett, DA & Boyle, PA 2018, 'Association of Financial Literacy with Hospitalization in Community-dwelling Older Adults', *Medical care*, vol. 56, no. 7, pp. 596–602.

Figure 3: Valuing expected avoided cost of hospitalisations

Source: Frontier Economics

An instantaneous increase in the financial literacy scores of Australians 65 years or older indicatively results in a reduction of hospital admissions for this cohort of around 900,000 admissions per year on an ongoing basis over a 10 year period. This corresponds to a reduction in spending each year of between **~$9 billion** and **~$11.6 billion** in real terms ($FY25). Over the 10-year modelling period this means in present value terms the indicative reduction in spending on hospitalisations is around **$76.27 billion** (7% discount rate).

To contextualise the size of this avoided cost, the indicative reduction in spending corresponds to 7% of the projected total spend on all hospitalisations over the 10-year modelling period. This is a large avoided cost (i.e. benefit). In addition, there are likely to be other benefits associated with improved physical health (and avoided healthcare costs) not captured in these indicative results/illustrative example.

What is also not captured in these headline results is that these benefits are accruing in part to individuals and groups that are some of the most vulnerable across society. For example, these avoided hospitalisation costs are likely accruing to older women who are suffering with osteoporosis or other musculoskeletal conditions. These conditions could have possibly been prevented or mitigated by knowledge, medication and proactive strategies to age well enabled by financial literacy linked higher lifetime financial wellbeing outcomes.

Finally however, as discussed above, it is important to note that in practice there may be a delay between the timing of improvements in financial literacy (especially for programs targeting childhood financial literacy), and improvements in broader economic, social and environmental outcomes, such as reduced hospitalisation of older demographics. In addition, while this evaluation is based on academic literature, the example is illustrative only and is developed in large part utilising a number of indicative assumptions. As such, these results should be interpreted as the ***potential* benefit** to the Australian community of improvements in financial literacy.

Conclusions

The research and analysis presented above points to 3 clear findings and conclusions:

- **For meaningful long-term outcomes, all children need access to financial literacy education.**
- **Failure to invest in programs aimed at improving financial literacy in children risks imposing significant economic and social costs, not just on the individual, but the broader Australian community.**
- **There are significant opportunities for further investigation of the benefits of financial literacy for children in Australia.**

For meaningful long-term outcomes, all children need access to financial literacy education

The results of surveys in the Australian context have highlighted young people, elderly people, women, and Aboriginal and Torres Strait Islanders suffer both from lower financial literacy levels and poor economic and financial outcomes. Improved financial literacy, in contrast, has a range of benefits, many of which go beyond the individual to also benefit the broader community.

However, despite recognition of the importance of financial literacy education for young Australians, it is clear that financial literacy levels for young Australians – and Australians more broadly – are concerningly low. This can have **significant, long-term implications**, not just for the individual, but also the broader Australian community. The financial literacy of young persons – particularly those in the latter stage of secondary school – is critical as financial habits formed in school and early adulthood are likely to be prevalent into early adulthood and beyond.

As noted, childhood financial literacy is not the sole determinant of opportunities and successes an individual may experience. However, the evidence and analysis collated suggests that to realise **meaningful long-term outcomes, all children need access to financial literacy education.**

Failure to invest in programs aimed at improving financial literacy in children risks imposing significant economic and social costs, not just on the individual, but the broader Australian community

Beyond the benefits that can accrue to the individual, financial literacy can also generate broader societal benefits and improve equity outcomes that break systematic and intergenerational constraints on individuals that stems from a lack of intergenerational transfer of financial literacy knowledge. Improving financial literacy can be a key tool to help mitigate and prevent negative outcomes for some of the most vulnerable members of society.

For example, Australia is currently experiencing increasing levels of homelessness among women over 55 and women retiring in poverty more generally. Better financial literacy education at schools could have significant impacts for women – providing them with the knowledge and skills to focus on financial independence and security from the start of their working life. This is just one example of a demographic where financial literacy education could mitigate or avoid significant economic and social costs. **Failure to invest in programs aimed at improving financial literacy risks imposing significant costs on the Australian community in the form of lost community benefits.**

There are opportunities for further investigation of the benefits of financial literacy for children in Australia

Our analysis shows there is strong domestic and international evidence for the benefits associated with financial literacy. However:

- The current approach to data collection prevents analysis of the impact of financial literacy education on outcomes at the individual level.
- There are opportunities to undertake Australia-specific studies of financial literacy benefits.
- There are opportunities for Australia to assert itself as a leader in this space, by developing and evaluating innovative education programs and investigating their spectrum of benefits.

These gaps provide an opportunity to further our understanding of the full spectrum (and magnitude) of financial literacy benefits and the value of specific financial literacy programs in Australia.

1 Introduction

Key points:

- Despite rising levels of income and wealth in the Australian community, the issue of financial literacy remains highly relevant. Across Australia, around 37% of adult men and around 52% of adult women do not understand key basic financial literacy concepts such as interest rates, inflation and risk diversification. Substantial differences across age groups are also evident.
- While there is broad recognition of the importance of financial literacy, historically, the long-term benefits of improved financial literacy (especially in children), have not been well-quantified, hindering decision-makers ability to make informed decisions about the value of programs that enhance financial literacy.
- Frontier Economics assisted *Kids Get Money* in undertaking an evaluation of the benefits of improved childhood financial literacy. Specifically, this analysis focuses on identifying the wide array of benefits associated with improving financial literacy, and where feasible, evaluating the benefits of improved financial literacy.
- Importantly, our analysis has not sought to value all benefits of financial literacy. Rather, given data and time constraints, we have focused on those likely to be most material and where data is readily available. Should information become available to enable the quantification and valuation of other economic and social benefits of financial literacy, this will likely strengthen the case for decisive action.

1.1 Introduction

Despite rising levels of income and wealth in the Australian community, the issue of financial literacy remains highly relevant. Across Australia, around 37% of adult men and around 52% of adult women do not understand key basic financial literacy concepts such as interest rates, inflation and risk diversification[5]. Substantial differences across age groups are also evident – financial literacy is lowest among individuals aged 15 to 24.[6]

While childhood financial literacy is one of several determinants of opportunities and successes an individual may enjoy, the HILDA survey finds low financial literacy correlates with higher financial stress and poverty — individuals with limited financial knowledge are twice as likely to experience financial insecurity compared to those with high financial literacy levels.

While there is broad recognition of the importance of financial literacy, historically, the long-term benefits of improved financial literacy (especially in children), have not been well-quantified, hindering decision-makers ability to make informed decisions about the value of programs that enhance financial literacy.

5 Preston, A 2020, Financial Literacy in Australia: Insights from HILDA Data, *University of Western Australia & UWA Public Policy Institute*, *https://api.research-repository.uwa.edu.au/ws/portalfiles/portal/73668586/Financial_Literacy_in_Australia.pdf*

6 Melbourne Institute Applied Economic and Social Research, *The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 20*, 2022, p. 63, https://melbourneinstitute.unimelb.edu.au/__data/assets/pdf_file/0011/4382057/HILDA_Statistical_Report_2022.pdf

To make more informed decisions about the nature and extent of any programs to improve financial literacy, it is critical to understand all the costs and benefits that arise from action, or conversely, inaction. This should include the longer-term, broader economic and social impacts of financial literacy. Converting the full range of impacts imposed on the community into dollar values can help decision makers compare the value of programs to improve financial literacy.

When the broad range of social and economic benefits of financial literacy are not considered, or monetised, there is a risk that these impacts will be ignored. This can lead to suboptimal investment in improving financial literacy.

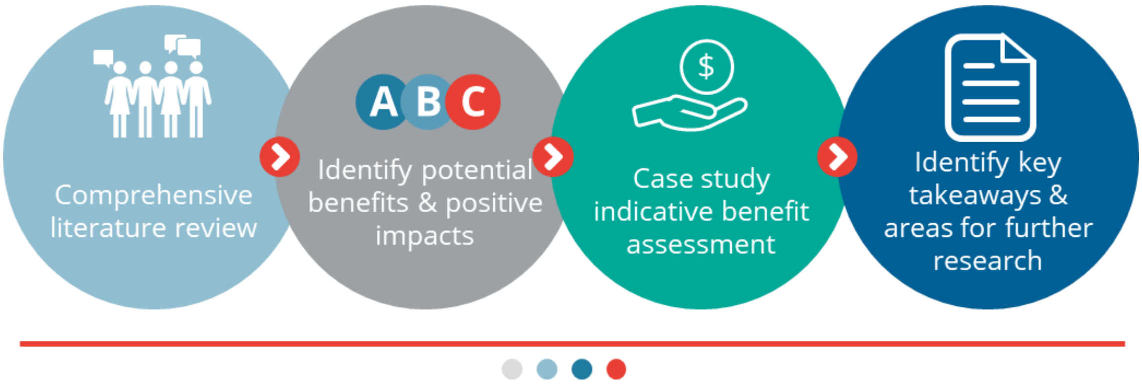
Against this background, Frontier Economics assisted *Kids Get Money* in undertaking an evaluation of the benefits of improved childhood financial literacy. Specifically, this analysis focuses on identifying the wide array of benefits associated with improving financial literacy, and where feasible, evaluating the benefits of improved financial literacy.

1.2 Understanding the benefits of financial literacy requires an economic framework

As shown in Figure 4, our approach involved four broad steps:

- **Step 1:** Undertake a detailed review of Australian and international literature on the benefits of improved childhood financial literacy (see Appendix A).
- **Step 2:** Identify the potential change in economic, social, environmental and equity outcomes arising from improved childhood financial literacy in Australia, drawing on the available literature and the principles of cost benefit analysis (CBA). This includes:
  - **Market impacts,** where the prices of goods or services are observable in markets so that a monetary or financial value can be readily attributed to the cost or benefit.
  - **Non-market impacts,** where a price cannot be observed, and other methods need to be used to derive a monetary value.
- **Step 3:** Indicatively value selected benefits of improved financial literacy, drawing on illustrative examples. To meet this project's brief, we have adopted a benefit transfer approach, which involves adopting a value based on existing analysis, studies or surveys (rather than undertaking primary research).
- **Step 4:** Identify key takeaways from the analysis and areas for further research and analysis.

Figure 4: Overview of our approach



Source: Frontier Economics

Importantly, this study:

- Assumes that financial literacy levels across Australia remain relatively unchanged (i.e. it makes the case for further action to address financial literacy).
- *Does not* consider any potential costs associated with improving children's financial literacy or financial literacy in the population more broadly, not the specific outcomes of *Kids Get Money*.
- *Has not* sought to value all benefits of financial literacy. Rather, given data and time constraints, we have focused on those likely to be most material and where data is readily available.

Should information become available to enable the quantification and valuation of other economic and social benefits of financial literacy, this will likely strengthen the case for decisive action.

1.3 Report structure

The remainder of this report is structured as follows:

- Section 2 discusses the concept of financial literacy, why it's important and the current state of financial literacy in Australia.
- Section 3 summarises the economic social benefits of improving financial literacy, as well as the other positive impacts associated with improved financial literacy.
- Section 4 details the results of two illustrative examples that provide an indicative insight into how selected benefits of improved financial literacy can be quantified and monetised.
- Section 5 discussed key takeaways from the analysis and areas for further research and analysis.
- Appendix A is a reference list detailing the key pieces of literature reviewed.
- Appendix B details the approach, inputs and assumptions utilised in indicatively valuing the selected benefits analysed in Section 4.

2 Context & background: Financial literacy in Australia

Key points:

- Despite rising levels of income and wealth in the Australian community, the issue of financial literacy remains highly relevant. For example, when assessed using the criteria of correctly answering all of the 'Big Three' questions (interest rates, inflation, risk diversification), the HILDA survey results found that around 45% of adults in Australia are financially illiterate. This corresponds to around 8.5 million people.
- While childhood financial literacy is one of several determinants of opportunities and successes an individual may enjoy, the HILDA survey finds low financial literacy correlates with higher financial stress and poverty — individuals with limited financial knowledge are twice as likely to experience financial insecurity compared to those with high financial literacy levels.
- Improved financial literacy, in contrast, has a range of economic and social benefits, many of which go beyond the individual, to benefit the broader Australian community.
- While there has been a movement towards improving financial literacy in children, recent developments appear to have stalled. Financial literacy is still not included as a standalone subject in the Australian curriculum, and programs to improve financial literacy in children outside of the Australian curriculum have focused on the establishment of *MoneySmart.*
- Given the importance of financial literacy, failure to invest in programs aimed at improving financial literacy in children risks imposing significant economic and social costs, not just on the individual, but the broader Australian community.

2.1 Financial literacy in Australia

The 2022 Australian Government's *National Financial Capability Strategy* defines financial literacy as an:

> *"individual's awareness and understanding of money and financial concepts, products and services, and their own financial situation … examples of financial knowledge include understanding financial concepts such as inflation, interest and risk, as well as knowing where to get advice and support".*[7]

Similarly, the Organisation for Economic Cooperation and Development (OECD) defines financial literacy as the

> *"knowledge and understanding of financial concepts and risks, as well as the skills and attitudes to apply such knowledge and understanding in order to make effective decisions across a range of*

[7] Australian Government, *National Financial Capability Strategy*, February 2022, p.2, https://files.moneysmart.gov.au/media/vyfbpg4x/national-financial-capability-strategy-2022.pdf

financial contexts, to improve the financial well-being of individuals and society, and to enable participation in economic life".[8]

As discussed above, despite rising levels of income and wealth in the Australian community, the issue of financial literacy remains highly relevant. The *Household Income and Labour Dynamics* (HILDA) Survey paints a concerning picture of the current levels of financial literacy across Australia. For example, when assessed using the criteria of correctly answering all of the 'Big Three' questions (interest rates, inflation, diversification), the HILDA survey results found that around 45% of adults in Australia are financially illiterate[9]. This corresponds to around 8.5 million people.[10]

Substantial differences across genders and age groups are also evident:

- **There is a large gap in financial literacy between adult men and women -** Around 63% of adult men and 48% of adult women are financially literate.[11]
- **Literacy is lowest amongst individuals aged 15 to 24 -** 28% of teenage males and 15% of teenage females were able to correctly answer the 'Big-Three' questions.
- **There appears to be an inverse "U-shape" relationship between age and financial literacy levels -** financial literacy levels are lower among younger demographics, improve over the course of middle age (with the peak in Australia estimated to be around 50 years of age), before declining again for older demographics.[12] Potential drivers of the "U-shape" decline for older demographics have been partially attributed to declining cognitive ability, reasoning and confidence.

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8 Organisation for Economic Cooperation and Development, *PISA 2022 Financial Literacy Assessment Framework*, 2023. p 112, https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/08/pisa-2022-assessment-and-analytical-framework_a124aec8/dfe0bf9c-en.pdf

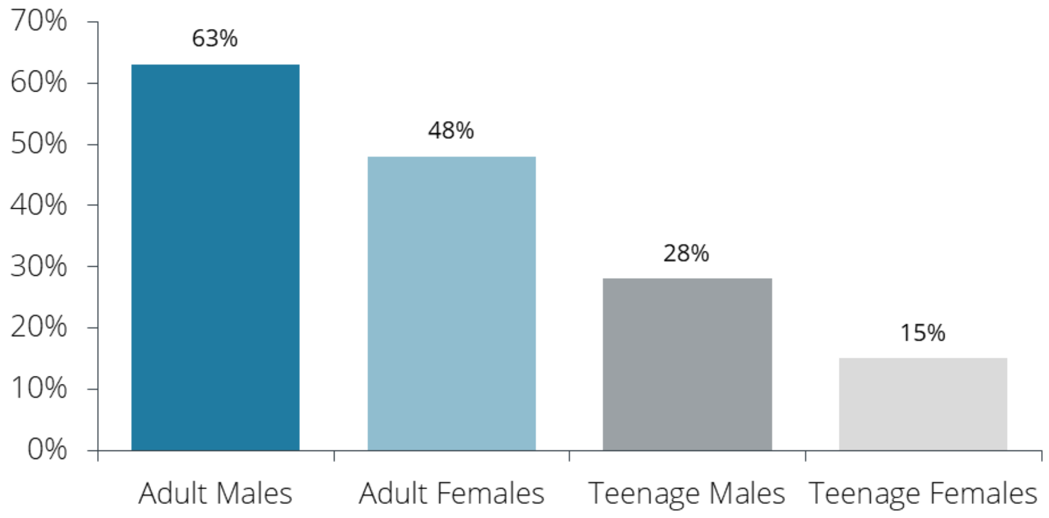
9 The HILDA survey measured financial literacy utilising five simple questions on the following concepts to gauge whether an individual understands, and can apply, these concepts: interest rates, inflation, diversification, risk and money illusion. However, interest rates, inflation and diversification are commonly considered the 'Big-Three' questions.

10 Preston, A 2020, Financial Literacy in Australia, p.2.

11 Preston, A 2020, Financial Literacy in Australia, p.4.

12 Preston, AC & Wright, RE 2019, 'Understanding the Gender Gap in Financial Literacy: Evidence from Australia', *The Economic record*, vol. 95, no. S1, pp. 1–29. https://onlinelibrary.wiley.com/doi/epdf/10.1111/1475-4932.12472; Preston, A 2020, Financial Literacy in Australia; Worthington AC & West, T 2021, 'Financial Literacy and Financial Education in Australia and New Zaland', in Nicolini, G & Cude, BJ (ed.) *The Routledge Handbook of Financial Literacy* 1st edn, Routledge, United Kingdom.

Figure 5: Findings of the HILDA survey – proportion of respondents answering the 'Big-Three' questions correctly



Source: Frontier Economics based on information provided by Preston, A 2020, Financial Literacy in Australia: Insights from HILDA Data, University of Western Australia & UWA Public Policy Institute

Amongst young Australians, where individuals live and attend school is strongly related to levels of financial literacy. In particular, living and attending school in rural and regional areas, are negatively related to levels of financial literacy.[13] Low socio-economic status has also been found to be associated with poorer educational outcomes and financial literacy.[14]

Low financial literacy amongst young people is especially concerning, given, as noted by Preston:

> *"…the range of financial decisions that young people are increasingly required to make, including decisions about investing in education, saving, credit cards etc."[15].*

There are also significant differences in financial literacy when disaggregated by other socioeconomic characteristics such as birthplace, marital status, education and employment (see Table 1).

[13] Ali, P, Anderson, M, McRae, C & Ramsay, I 2016, 'The financial literacy of young people: Socio-economic status, language background, and the rural-urban chasm', *Australian and international journal of rural education*, vol. 26, no. 1, pp. 53–65, https://ssrn.com/abstract=2778372; Ali, P, Anderson, M, McRae, C & Ramsay, I 2014, 'The financial literacy of young Australians: An empirical study and implications for consumer protection and ASIC's National Financial Literacy Strategy', *Company and Securities Law Journal*, Vol. 32, No. 5, pp. 347, https://ssrn.com/abstract=2490154

[14] Ali, P et al. 2016, 'The financial literacy of young people', p. 53–65.

[15] Preston, A 2020, Financial Literacy in Australia, p.8.

Table 1: Financial literacy varies by characteristics

Characteristic	Men	Women
Married	69.1%	53.8%
Never married	50.0%	34.9%
Australian born	63.5%	49.1%
Migrant from a non-English speaking background	55.4%	40.5%
High school or less	48.2%	38.3%
Tertiary qualified	81.8%	65.2%
Employed	65.7%	51.9%
Not in the labour market	58.5%	42.5%

Source: Preston, A 2020, Financial Literacy in Australia: Insights from HILDA Data, University of Western Australia & UWA Public Policy Institute

2.2 Financial literacy can have long term implications beyond the individual

While childhood financial literacy is one of several determinants of opportunities and successes an individual may enjoy, the HILDA survey finds low financial literacy correlates with higher financial stress and poverty.

In addition, the results of surveys in the Australian context have highlighted a number of groups that suffer both from lower financial literacy levels and poor economic and financial outcomes.[16] These groups (young people, elderly people, women, and Aboriginal and Torres Strait Islanders) are identified widely across the literature, as well as in the Commonwealth Government's own strategy for priority areas of focus for improving financial literacy and capability.[17]

Improved financial literacy, in contrast, has a range of benefits, many of which go beyond the individual. For example, as discussed in more detail in Section 3, financial literacy has been proven to be a key determinant in individuals and households' ability to make sound financial decisions, which in turn, is linked with[18]:

- Improved financial wellbeing.

16 Preston, A 2020, Financial Literacy in Australia: Insights from HILDA Data, *University of Western Australia & UWA Public Policy Institute*; ANZ, *ANZ Survey of Adult Financial Literacy in Australia*, May 2015; Melbourne Institute Applied Economic & Social Research 2016, *The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 16*, https://melbourneinstitute.unimelb.edu.au/__data/assets/pdf_file/0009/2874177/HILDA-report_Low-Res_10.10.18.pdf; Fornero, E, Lo Prete, A & Oggero, N 2021, 'Now More Than Ever: Why financial literacy is a key element of post-COVID-19 recovery', in Nicolini, G & Cude, BJ (ed.) *The Routledge Handbook of Financial Literacy* 1st edn, Routledge, United Kingdom

17 Australian Government, *National Financial Capability Strategy*, February 2022.

18 Lusardi, A 2019, 'Financial literacy and the need for financial education: Evidence and implications', *Schweizerische Zeitschrift fur Volkswirtschaft und Statistik*, vol. 155, no. 1, pp. 1–8, https://doi.org/10.1186/s41937-019-0027-5; Walstad, W & Allgood S 2021, 'The Likely Influence of Financial Literacy on Financial Behaviours', in Nicolini, G & Cude, BJ (ed.) *The Routledge Handbook of Financial Literacy* 1st edn, Routledge, United Kingdom.

- Greater participation in economic life.
- Effective retirement planning.
- Effective planning for future financial contingencies.

Financially literate individuals are also more likely to have a proactive approach to their current financial situation, maximise their savings, minimise their financial risk and generally make efficient financial decisions.[19]

As discussed in Section 3, financial literacy can also lead to a range of benefits for the broader community, including:

- Improve allocative efficiency across the economy, thereby improving the health of the economy more broadly.
- Reduce the likelihood that an individual or household will be reliant on publicly funded hardship assistance or welfare.
- Improve social and financial inclusion, including potentially reducing entrenched economic inequality.
- Improve individuals physical and mental health (thereby avoiding healthcare costs in addition to improving quality of life).
- Potentially lower levels of domestic and intimate partner violence, as well as financial abuse.

2.3 Financial education in the school curriculum is limited

However, in the early 2000s, the Australian Securities & Investments Commission's (ASIC) 2003 *Financial Literacy in Schools Consultation Paper* noted that no jurisdiction in Australia had a formal course of study relating to financial literacy, or a systematic approach to its teaching.[20]

While there has been movement towards including financial education in the school curriculum, progress has stalled. For example, in 2005, the *National Consumer and Financial Literacy Framework* was established to:

- Provide a rationale for consumer and financial education in schools.
- Describe essential capabilities that will support lifelong learning.
- Provide guidance on how education may be structured for Foundation–Year 10.[21]

Subsequently ASIC released the inaugural *National Financial Literacy Strategy* which noted the "*need to educate the next generation, particularly through the formal education system*".[22] A key

[19] Ali, P et al. 2014, The financial literacy of young Australians, p. 338; Mitchell, OS & Lusardi, A 2015, 'Financial Literacy and Economic Outcomes: Evidence and Policy Implications', *The journal of retirement*, vol. 3, no. 1, pp. 107–114, https://pmc.ncbi.nlm.nih.gov/articles/PMC5445906/pdf/nihms857740.pdf; Goyal, K & Kumar, S 2021, 'Financial literacy: A systematic review and bibliometric analysis', *International journal of consumer studies*, vol. 45, no. 1, pp. 80–105; https://doi.org/10.1111/ijcs.12605; Tahir, MS, & Ahmed, AD 2021, 'Australians' Financial Wellbeing and Household Debt: A Panel Analysis', *Journal of Risk and Financial Management* vol. 14: 513, https://doi.org/10.3390/jrfm14110513

[20] Australian Securities & Investments Commission, *Consultation Paper 45: Financial literacy in schools*, June 2003, p. 7, https://download.asic.gov.au/media/1924489/what-do-you-want-to-do-with-fin-lit-schools-dp.pdf

[21] Ministerial Council for Education, Early Childhood Development and Youth Affairs, *National Consumer and Financial Literacy Framework*, September 2011, https://files.eric.ed.gov/fulltext/ED528784.pdf

[22] ASIC, *National Financial Literacy Strategy 2014-17* as cited in Ecstra Foundation, *Review to Inform a Better and Fairer Education System – Consultation*, August 2023, https://www.education.gov.au/system/files/consultations/Ecstra%20Foundation.pdf

feature of the 2022 *National Financial Capability Strategy* was the identification of target cohorts for the development of financial capability,[23] specifically:

- Young Australians.
- Women.
- People in or near retirement.
- Aboriginal and Torres Strait Islander peoples.

Importantly, central to the strategy is a sequential approach to improving financial literacy across the four target groups, starting with young Australians (see Box 1). This approach is consistent with the broader literature that highlights the importance of improving financial literacy in younger demographics (see Section 2.5).

Box 1: *MoneySmart* and other Commonwealth Government initiatives

The educational tool *MoneySmart* is the main vehicle through which the *Strategy* aims to target young Australians. While initially set up for children and teenagers, it has been subsequently been expanded to adults and teachers. It includes a wide array of financial and money related material, including:

- Banking and budgeting.
- Loans, credit and debt.
- Investing and planning.
- Super and retirement.
- Insurance.
- Scams and online safety.
- Community resources.

Beyond M*oneySmart,* the Commonwealth Government also has a range of other online, free resources relating to finance and money management:

- ***MoneySmart* for teachers** – These are free resources, including activities and e-books, aimed at teachers to support them teaching young people about money in the classroom.
- **Tax, Super + You** – This teaching resource is targeted at secondary school students and teachers, focusing on the value of the tax and superannuation systems. It is a complete learning management system (including interactive videos, quizzes and assessments) mapped to the Australian Curriculum.
- **Paying It Forward –** This teaching resource is targeted at primary school teachers and aims to help them educate young people about tax and superannuation by focusing on developing civic values and the financial wellbeing of students.
- **Teacher professional development** – This is an accredited online professional development course for primary school teachers to help them educate students about the value of the tax and superannuation systems and their role within these systems.

[23] Australian Government, *National Financial Capability Strategy*, February 2022.

Source: ASIC, MoneySmart, n.d.; Australian Government, National Financial Capability Strategy, 2022, p.19.

Following these strategies, financial literacy was formally included as part of Australia's curriculum up to year ten around 2011, albeit as part of the broader *Mathematics* and *Humanities and Social Sciences* Curriculum. That is, financial literacy was not included as a standalone subject.

The most recent iteration of the Australian Curriculum – *Version 9* – still does not include financial literacy as a standalone subject[24]. Instead, '*consumer and financial literacy*' features across the Mathematics, Humanities and Social Sciences, and Digital Technologies subjects in Foundation to Year 10[25]. That is, financial literacy features only as a 'curriculum connection', meaning the onus is on teachers to integrate financial literacy concepts into Mathematics, Humanities and Social Sciences and/or Digital Technologies lessons. Concerningly, it is clear that in the Year 11 and 12 curriculums, it is possible for students to miss out consumer and financial literacy education entirely, depending on their subject selections.

2.4 Actions to improve financial literacy in children appear to have stalled

However, despite financial literacy remaining a critical issue, non-government organisations working within and around the financial literacy sector – such as the Ecestra Foundation – have noted that:

> *"there appears to have been limited recent engagement across the education sector and the National Strategy is not currently active"*[26].

Specifically, there appears to have been no developments regarding the other three target cohorts, nor any further action to improve financial literacy among young Australians, beyond the establishment of *MoneySmar*t.

As noted, with respect to the Australian Curriculum financial literacy is still not included as a standalone subject, learning area, general capability or cross-curriculum priority[27]. As a result, there appears to be an ad hoc and inconsistent approach to how financial literacy is taught in schools.

For example, a study by de Zwaan and West across 2 metropolitan and 2 rural schools in Queensland found that most students had little or no knowledge and/or understanding of personal finance, and the majority of what students in year 10-12 know about financial literacy

24 Australian Curriculum, *Version 9.0, The Australian Curriculum*, n.d., https://v9.australiancurriculum.edu.au/

25 Australian Curriculum, *Understand this Curriculum connection: Consumer and financial literacy*, n.d., https://v9.australiancurriculum.edu.au/curriculum-information/understand-this-curriculum-connection/consumer-and-financial-literacy

26 SVA Consulting 2024, *International approaches to progressing financial capability*, A report for the Ecstra Foundation, https://static1.squarespace.com/static/5c6ce1c3bfba3e62849d77f8/t/6673b92e3a5adf21ef2fa851/1718860081115/SVA+report+FinCap+Landscape+20240619.pdf

27 Australian Curriculum, *Understand this Curriculum connection: Consumer and financial literacy*, n.d.

has been learnt from home, mathematics or business studies (an optional course).[28] The study also noted that:

- For many students, maths is not the most effective curriculum area for learning about personal finance.
- Stories and context are important for learning.
- Home life is important in the accumulation of financial literacy knowledge.[29]

What is clear is that relying on teacher dependent self-service, non-explicit key learning areas is currently not working – particularly when considered in the broader context of stressed education systems and an overloaded curriculum. Further to this, it is also clear that the current approach to financial literacy education and actions to improve financial literacy is likely failing the nearly 823,000 children currently living under the standard poverty line[30], particularly given the accumulation of financial literacy knowledge these children are obtaining in their home life is on average sub-standard. For meaningful long-term outcomes, all children need access to effective financial literacy education.

2.5 Action to improve childhood financial literacy in Australia is critical

Despite the recognition of the importance of financial literacy education for young Australians, it is clear that financial literacy levels for young Australians – and Australians more broadly – are concerningly low.

As discussed above, this can have significant, long-term implications, not just for the individual, but also the broader Australian community. The financial literacy of young persons – particularly those in the latter stage of secondary school – is critical as financial habits formed in school and early adulthood are likely to be prevalent into early adulthood and beyond.[31]

While childhood financial literacy is one of several determinants of opportunities and successes an individual may enjoy, what is clear is that failure to invest in programs aimed at improving financial literacy equitably in children risks imposing significant economic and social costs, not just on the individual, but the broader Australian community.

28 de Zwaan, L & West, T 2022, F*inancial Literacy of young Australians: What they know, what they don't know, and what we can do to help*, Financial Basics Foundation & Suncorp, p. 2 https://financialbasics.org.au/wp-content/uploads/2023/01/FBF-Financial-Literacy-of-Young-Australians-March-2022.pdf

29 Ibid.

30 Valuing Children Initiative, *The Child Poverty in Australia 2024 Report*, August 2024, https://valuingchildreninitiative.com.au/news/child-poverty-in-australia-2024-report

31 See for example: Shim, S, Barber, BL, Card, NA, Xiao, JJ & Serido, J 2010, 'Financial Socialization of First-year College Students: The Roles of Parents, Work, and Education', Journal of youth and adolescence, vol. 39, no. 12, pp. 1457–1470, https://doi.org/10.1007/s10964-009-9432-x; Coda Moscarola, F & Kalwij, A 2021, 'The Effectiveness of a Formal Financial Education Program at Primary Schools and the Role of Informal Financial Education', *Evaluation review*, vol. 45, no. 3–4, pp. 107–133, https://pubmed.ncbi.nlm.nih.gov/34617486/; Gerrans, P 2021, 'Undergraduate student financial education interventions: Medium term evidence of retention, decay, and confidence in financial literacy', *Pacific-Basin finance journal*, vol. 67, pp. 101552-, https://doi.org/10.1016/j.pacfin.2021.101552

3 The benefits of improved financial literacy

Key points:

- To make more informed decisions about the nature and extent of any programs to improve financial literacy, it is critical to understand all the costs and benefits that arise from action, or conversely, inaction. This should include the longer-term, broader economic and social impacts of financial literacy.
- There are a range of economic and social benefits of improved financial literacy, many of which go beyond the individual, to benefit the broader Australian society.
- Some key benefits of financial literacy do not reflect changes in "real resource outcomes" but rather, a "transfer" between parties. That is, a change in how outcomes are distributed across the community (or a change in "how the pie is divided, rather than the size of the pie"). These impacts are still nonetheless important to consider, given transfers have equity impacts and can be important for achieving other policy objectives (for example, improving outcomes for a specific group of individuals).

3.1 The benefits of improved financial literacy

To make more informed decisions about the nature and extent of any programs to improve financial literacy, it is critical to understand all the costs and benefits that arise from action, or conversely, inaction. This should include the longer-term, broader economic and social impacts of financial literacy.

As discussed above, various studies have found a link[32] between financial literacy and **changes in "real resource" economic and social outcomes**, for example:

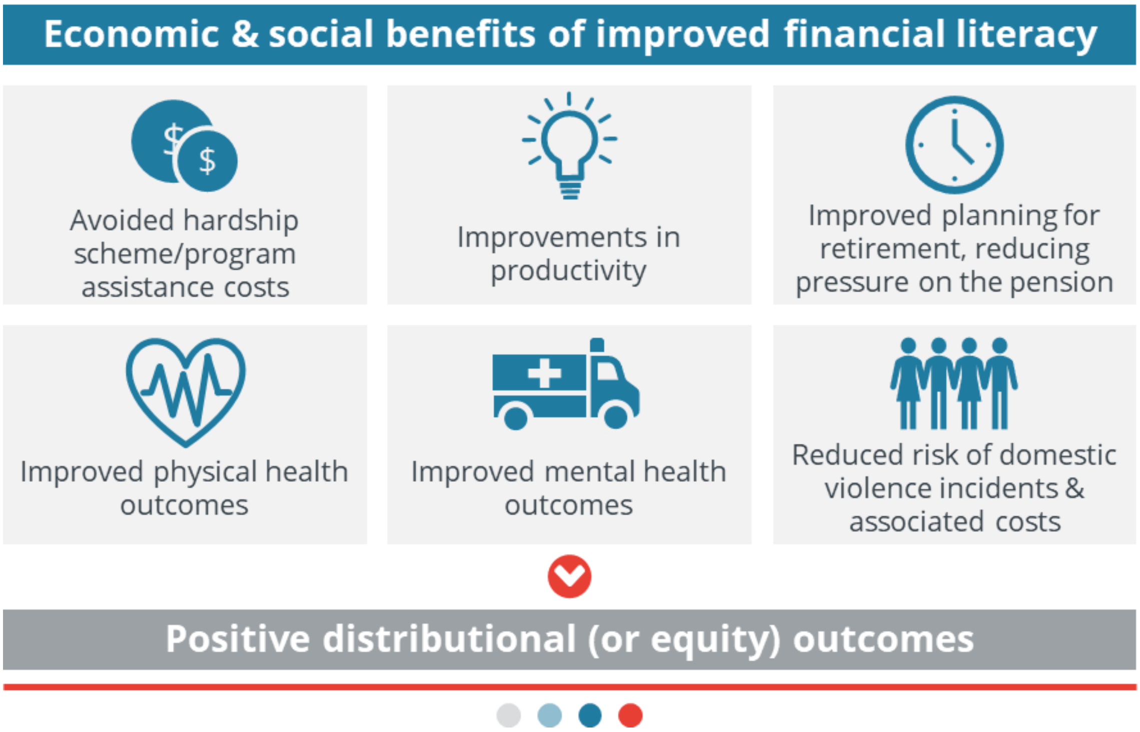
- Avoided costs of hardship schemes / programs, as financially literate people are less likely to require access to hardship schemes or programs, reducing the cost of providing these services.
- Improvements in productivity.
- Improved retirement planning (and associated reduced pressure on the Australian pension system).
- Improved physical health outcomes.
- Improved mental health outcomes.
- Reduced risk of incidents of domestic violence (and associated economic and healthcare costs).

Importantly, some key benefits of financial literacy do not reflect "real resource outcomes" but rather, involve a "transfer" between parties. That is, a change in how outcomes are distributed

[32] That is, for each benefit we identified, we established a clear causal link from improved financial literacy to changes in community outcomes.

across the community (or a change in "how the pie is divided, rather than the size of the pie"). These outcomes are collectively referred to as **positive distributional (or equity) impacts** – distinct from economic and social benefits that reflect real resource outcome improvements. These impacts are still nonetheless important to consider, given transfers have equity impacts and can be important for achieving other policy objectives (for example, improving outcomes for a specific group of individuals).

Figure 6: The benefits of improved financial literacy



Source: Frontier Economics

While many of these benefits reflect benefits of improved financial literacy generally, rather than improved financial literacy in children, we believe that this only serves to highlight the benefit of early intervention.

Each benefit is discussed briefly below.

3.1.1 Economic and social benefits of improved financial literacy

Avoided costs of providing hardship schemes / programs

There are a range of programs provided by the Commonwealth Government, State and Territory Governments and Non-Government Organisations aimed at providing financial support to individuals experiencing financial hardship.

Higher levels of financial literacy are associated with improved financial decision-making and is strongly correlated with a greater ability to cope with emergency expenses and weather income shocks. As shown in Box 2, this in turn reduces the likelihood that an individual will need to access financial hardship assistance (and potentially the severity of the financial hardship experienced).[33] The lower likelihood of needing to access hardship assistance programs reduces the costs of providing assistance (including administering the programs).

Figure 7: The link between financial literacy and hardship assistance costs

Source: Frontier Economics

Box 2: The link between financial literacy and financial hardship

A 2022 study by *Boedker et al*. tested the impact on 'financial wellbeing' and 'general life satisfaction' of key determinants such as:

- Financial literacy.
- Financial planning behaviours (e.g. has a household budget, has long-term financial goals etc.).
- Other broader financial behaviours (e.g. has credit card, direct debit expenses and investment etc.).
- Levels of financial autonomy and financial satisfaction.

The study also sought to investigate the determinants of financial hardship[34] while controlling for a range of demographic variables (such as age, sex, education, health status, income, employment, marriage and family status and housing arrangement). It found that "*the higher a person's financial literacy, the less likely the person was to experience financial hardship*"[35].

Another study undertaken by *Bourova et al*. in 2018 examined the impacts of financial literacy and confidence, on the severity of financial hardship[36]. Their analysis concluded that while there was no link between low levels of financial literacy and the number of types of debts respondents in their study sample had, there was a relationship between

[33] Ali, P et al. 2014, *The financial literacy of young Australians*, p. 338; Mitchell, OS & Lusardi, A 2015, 'Financial Literacy and Economic Outcomes: Evidence and Policy Implications', *The journal of retirement*, vol. 3, no. 1, pp. 107–114; Goyal, K & Kumar, S 2021, 'Financial literacy: A systematic review and bibliometric analysis', *International journal of consumer studies*, vol. 45, no. 1, pp. 80–105; Tahir, MS, & Ahmed, AD 2021, 'Australians' Financial Wellbeing and Household Debt: A Panel Analysis', *Journal of Risk and Financial Management* vol. 14: 513.

[34] Measured both as having applied for financial hardship assistance and having received financial hardship assistance.

[35] The study found that financial literacy had a statistically significant negative relationship at the 1% level with both the likelihood that an individual applies for, or receives, financial hardship assistance. See Boedker, C, Moy, N & Wu, C 2022, Financial Wellbeing and General Life Satisfaction in Australia, *The University of Newcastle*, p. 26, https://www.newcastle.edu.au/__data/assets/pdf_file/0009/816039/2022-1041-Greater-Bank-report-v241.pdf

[36] Bourova, E, Anderson, M, Ramsay, I & Ali, P 2018, 'Impacts of Financial Literacy and Confidence on the Severity of Financial Hardship in Australia', *Australasian accounting, business & finance journal,* vol. 12, no. 4, pp. 4–24, https://www.proquest.com/docview/2209560439?accountid=14757&sourcetype=Scholarly%20Journals

low financial literacy and the severity of financial hardship.[37] In particular, the study noted that as the number of “consequences of default” (such as harassment or threatening behaviour by a debt collector, utility (water, electricity, gas) disconnection, legal action to enforce a debt and bankruptcy) increased, financial literacy levels fell significantly.

Source: Boedker, C, Moy, N & Wu, C 2022, Financial Wellbeing and General Life Satisfaction in Australia, The University of Newcastle; Bourova, E, Anderson, M, Ramsay, I & Ali, P 2018, ‘Impacts of Financial Literacy and Confidence on the Severity of Financial Hardship in Australia’, Australasian accounting, business & finance journal, vol. 12, no. 4, pp. 4–24.

Improvements in productivity

As discussed above, higher levels of financial literacy are associated with improved financial decision-making. As shown in Figure 8, improved decision making, in turn, is associated with higher ‘workplace satisfaction’, which, is likely to lead to improved productivity through:

- Reducing financial related stress and distractions.[38]
- Reducing absenteeism.[39]
- Improving employee engagement and morale.[40]
- Reducing turnover rates.[41]

For example, a recent study by *Dwi Lestari et al*. (2024) concluded that financial literacy programs have a positive impact on organisational performance by improving employees’ financial behaviours and workplace satisfaction, which in turn contributed to enhanced productivity and reduced absenteeism.[42]

A number of other studies have also found that mitigating financial stress is a major factor in avoiding reduced productivity and increased absenteeism, highlighting the potential for financial literacy education to reduce the likelihood of financial stress occurring and ultimately, avoiding these negative productivity impacts.

37 As measured by the number of consequences of default experienced by respondents.

38 Clark, R, Lusardi, A & Mitchell, OS 2017, ‘Employee Financial Literacy And Retirement Plan Behavior: A Case Study’, *Economic inquiry*, vol. 55, no. 1, pp. 248–259, https://onlinelibrary.wiley.com/doi/epdf/10.1111/ecin.12389

39 Garman, ET, et al. 1996, ‘The Negative Impact of Employee Poor Personal Financial Behaviors on Employers’, pp. 157, https://www.proquest.com/scholarly-journals/negative-impact-employee-poor-personal-financial/docview/1362246859/se-2; Kaiser, T & Menkhoff, L 2020, ‘Financial education in schools: A meta-analysis of experimental studies’, p.101930-, https://doi.org/10.1016/j.econedurev.2019.101930; Clark, R, Lusardi, A & Mitchell, OS 2017, ‘Employee Financial Literacy and Retirement Plan Behavior: A Case Study’, pp. 248–259.

40 Clark, R, Lusardi, A & Mitchell, OS 2017, Employee Financial Literacy and Retirement Plan Behavior: A Case Study”, pp. 248–259.

41 Ibid; Hira, TK & Loibl, C 2005, ‘Understanding the impact of employer-provided financial education on workplace satisfaction’, *The Journal of consumer affairs*, vol. 39, no. 1, pp. 173–194, https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1745-6606.2005.00008.x

42 Setyani Dwi Lestari, S, Muhdaliha, E, Maulana Firdaus, P, Suhendra, ES & Brabo, NA 2024, ‘Financial Literacy at Work: Enhancing Organizational Performance through Employee Training Investments’, *Atestasi: Jurnal Ilmiah Akuntansl*, vol.7 no.1, pp. 721 – 741, https://doi.org/10.57178/atestasi.v7i2.865

Figure 8: The link between financial literacy and productivity outcomes

Source: Frontier Economics

Improved retirement planning (and associated reduced pressure on the Australian pension system)

Australia's superannuation system is a defined-contribution plan system, meaning that, to a large extent, saving and investment decisions can be driven by the individual's choices. Financial literacy can affect superannuation (and ultimately retirement outcomes) through decisions such as choice of fund, portfolio allocations, the purchase of health and life insurance products, contribution rates and drawdown decisions. As a result, as shown in Figure 9, improved financial literacy can also be related to higher levels of, and more effective, retirement planning, reduced superannuation gap, and, as a result, reduced pressure on the Australian pension system.

A number of Australian based studies have demonstrated the positive association between higher financial literacy, retirement planning and/or improved superannuation planning. [43] For example, an Australian based study in 2023 found that 8.5% of the gender gap in pension savings may be attributed to the gender gap in financial literacy and that consequently policies aimed at improving the financial literacy of women should help improve living standards for women in retirement.[44]

These findings are also supported by a number of international studies which have shown that individual with higher financial literacy knowledge plan for retirement, and invest in more sophisticated assets, generating higher expected returns on retirement saving along with lower non-systematic risk[45]. For example, a 2014 study found that answering just one additional financial question correctly is associated with a 3–4 percentage point greater probability of planning for retirement in the United States, Japan, Canada, and Germany[46].

[43] See for example: Xue, R, Gepp, A, O'Neill, TJ, Stern, S & Vanstone, BJ 2020, 'Financial well-being amongst elderly Australians: the role of consumption patterns and financial literacy', *Accounting and finance (Parkville)*, vol. 60, no. 4, pp. 4361–4386, https://onlinelibrary.wiley.com/doi/epdf/10.1111/acfi.12545; Agnew, J, Bateman, H & Thorp, S 2013, 'Financial Literacy and Retirement Planning in Australia', *Numeracy : advancing education in quantitative literacy*, vol. 6, no. 2, pp. 7, http://dx.doi.org/10.5038/1936-4660.6.2.7; Earl, JK, Gerrans, P, Asher, A & Woodside, J 2015, 'Financial literacy, financial judgement, and retirement self-efficacy of older trustees of self-managed superannuation funds', *Australian journal of management*, vol. 40, no. 3, pp. 435–458, https://doi.org/10.1177/0312896215572155

[44] Preston, A & Wright, RE 2023, 'Gender, Financial Literacy and Pension Savings', *The Economic record*, vol. 99, no. 324, pp. 58–83, https://onlinelibrary.wiley.com/doi/epdf/10.1111/1475-4932.12708

[45] Mitchell, OS & Lusardi, A 2015, 'Financial Literacy and Economic Outcomes: Evidence and Policy Implications', *The journal of retirement*, vol. 3, no. 1, pp. 107–114.

[46] Clark, RL, Lusardi, A & Mitchell, OS 2014, 'Financial Knowledge and 401(k) Investment Performance', *NBER Working Paper Series*, pp. 20137-, https://www.proquest.com/docview/1687916822?_oafollow=false&accountid=14757&pq-origsite=primo&sourcetype=Working%20Papers

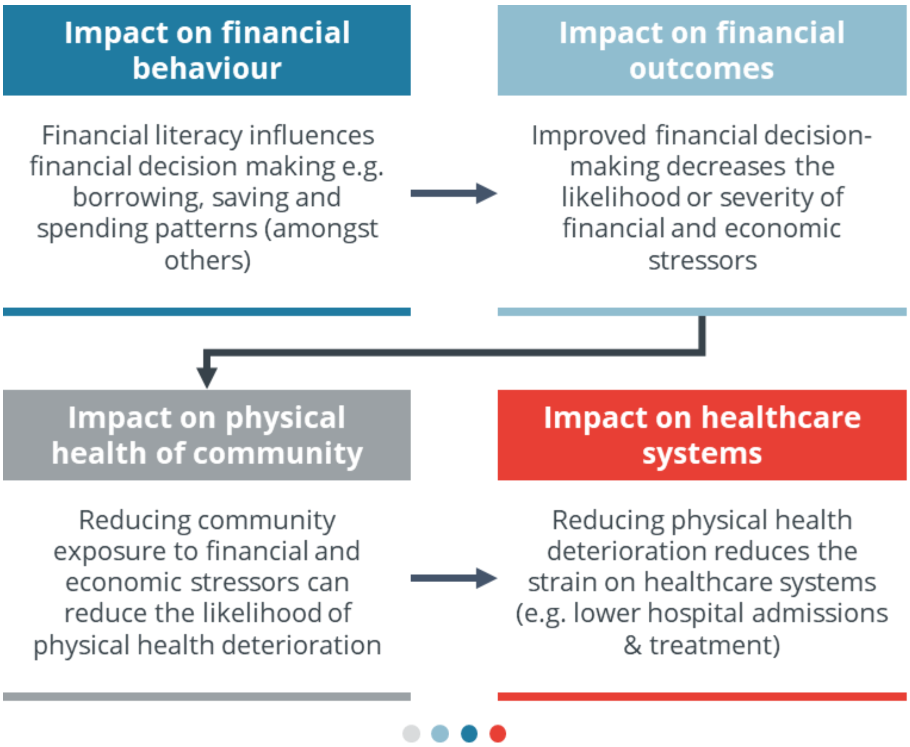
Figure 9: The link between financial literacy, improved retirement planning and reduced pressure on the Australian pension system

Source: Frontier Economics

Improved physical health outcomes

As discussed above, higher levels of financial literacy are associated with improved financial decision-making and reduced likelihood and/or severity of financial stressors. Implicit within this is that improved financial decision-making is also associated with improved access to health education, investment in proactive health maintenance and interventions and investments in private medical insurance. As shown in Figure 10, reduced financial and economic stressors in turn, can lead to improved physical health outcomes, which, ultimately, reduces the strain placed on the Australian healthcare sector (in the form of reduced admissions and treatment costs).

Figure 10: The link between financial literacy and physical health outcomes



Source: Frontier Economics

In particular, while there is a gap in the Australian literature investigating the link between financial literacy and physical health outcomes, internationally a number of studies have begun to investigate the relationship.

In 2018, a United States based study found that:

"higher financial literacy is related to a lower risk of hospitalization in older persons without dementia, after adjusting for cognitive, health, functional, and socioeconomic factors …

… [and the] ability to understand and utilize financial concepts may represent a potentially modifiable risk factor for hospitalization in later life"[47].

Notably, this conclusion stemmed from the finding that when financial literacy levels were split into 'conceptual knowledge' and more general 'numeracy' knowledge sub-scales, conceptual knowledge was the key driver of the outcomes.

Similarly, when investigating the associations of health and financial literacy with mortality in old age, a 2020 study in the United States found that both lower financial and health literacy, respectively, were associated with higher mortality rates and that these associations persisted after controlling for income and health status[48].

Financial literacy has also been found to have physical health benefits beyond health outcomes in old age. For example, a 2020 study of students at a regional university in the United States found that financial literacy is positively associated with increased participation in preventative healthcare. [49]

Given preventative healthcare in Australia is comparatively less utilised, to the extent that these findings translate to the Australian context, these conclusions demonstrate the potential for improvements in financial literacy to reduce burdens on healthcare systems and improve physical health outcomes across the community more broadly.

Improved mental health outcomes

There is a wealth of literature documenting the relationship between socioeconomic status, poor financial and economic outcomes, poverty and mental health outcomes, such as depression[50]. Importantly, studies have also found that this relationship is bidirectional [51]. In other words:

- As discussed above, poor financial literacy has been found to lead to poorer mental health outcomes. For example, a 2024 study by Vittengl in the United States found that lower

47 James, BD, Wilson, RS, Shah, RC, Yu, L, Arvanitakis, Z, Bennett, DA & Boyle, PA 2018, 'Association of Financial Literacy with Hospitalization in Community-dwelling Older Adults', *Medical care*, vol. 56, no. 7, pp. 596–602, https://oce.ovid.com/article/00005650-201807000-00008/HTML

48 Stewart, CC, Yu, L, Lamar, M, Wilson, RS, Bennett, DA & Boyle, PA 2020, 'Associations of health and financial literacy with mortality in advanced age', *Aging clinical and experimental research*, vol. 32, no. 5, pp. 951–957, https://doi.org/10.1007/s40520-019-01259-7

49 The study utilised logistic regression analysis and found that financial literacy is statistically and economically significant in explaining preventative healthcare participation. See: Chan, KC, Snavely, J, Daugherty, Z "Dylan" & Nickell, J 2020, 'The Effect of Financial Literacy on Preventive Healthcare Usage', *Journal of financial education*, vol. 46, no. 1, pp. 115–126, https://www.jstor.org/stable/48630139

50 Korous, KM, Bradley, RH, Luthar, SS, Li, L, Levy, R, Cahill, KM & Rogers, CR 2022, 'Socioeconomic status and depressive symptoms: An individual-participant data meta-analysis on range restriction and measurement in the United States', *Journal of affective disorders*, vol. 314, pp. 50–58, https://doi.org/10.1016/j.jad.2022.06.090; Kivimäki, M, Batty, GD, Pentti, J, Shipley, MJ, Sipilä, PN, Nyberg, ST, Suominen, SB, Oksanen, T, Stenholm, S, Virtanen, M, Marmot, MG, Singh-Manoux, A, Brunner, EJ, Lindbohm, JV, Ferrie, JE & Vahtera, J 2020, 'Association between socioeconomic status and the development of mental and physical health conditions in adulthood: a multi-cohort study', *The Lancet. Public health*, vol. 5, no. 3, pp. e140–e149, https://doi.org/10.1016/ Ridley, M, Rao, G, Schilbach, F & Patel, V 2020, 'Poverty, depression, and anxiety: Causal evidence and mechanisms', *Science (American Association for the Advancement of Science)*, vol. 370, no. 6522. https://doi.org/10.1126/science.aay0214; Kessler, RC 2012, 'The Costs of Depression', *The Psychiatric clinics of North America*, vol. 35, no. 1, pp. 1–14, https://doi.org/10.1016/j.psc.2011.11.005

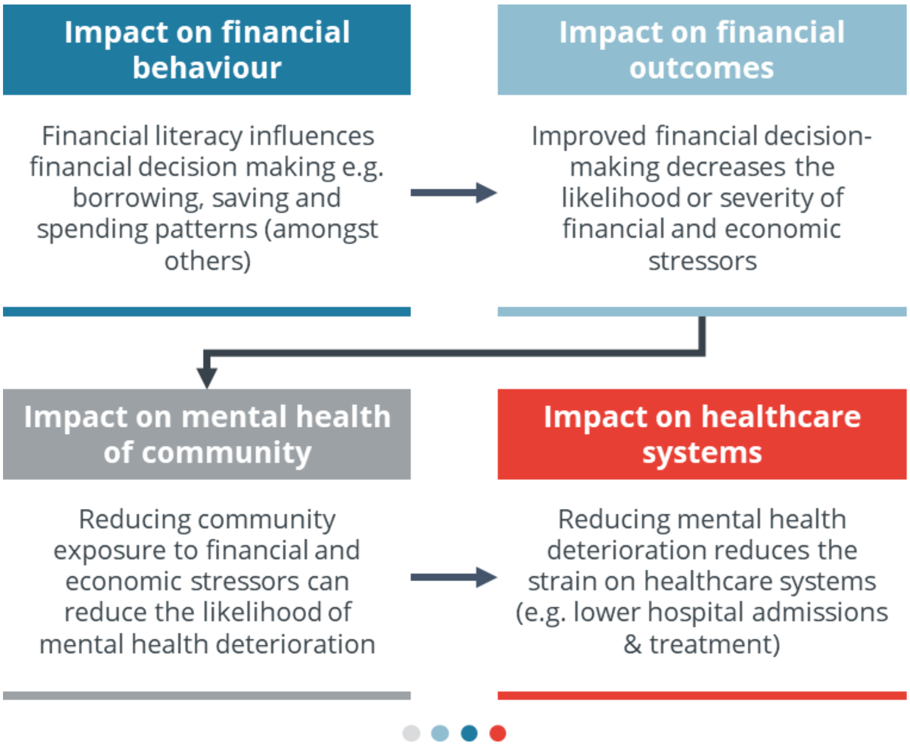
51 Korous, KM, et al. 2022, 'Socioeconomic status and depressive symptoms', pp. 50–58;

financial literacy levels correlated significantly with more depressive symptoms and lower life satisfaction.[52]

- Poorer mental health outcomes have been found to lead to poor financial literacy. For example, depression is often associated with forms of cognitive functioning impairments, including in relation to the retention and utilisation of financial knowledge.[53]

Similar to the impact on physical health outcomes discussed above, improved financial literacy can also lead to improvements in mental health outcomes. As discussed above, higher levels of financial literacy are associated with improved financial decision-making and reduced likelihood and/or severity of financial stressors. Reducing exposure to financial and economics stressors reduces the likelihood of mental health deterioration, which in turn, reduces the strain on healthcare systems (due to lower incidences of mental health related treatments). Improved financial literacy is also associated with improved access to education regarding mental health and associated with higher investment in, and access to, proactive mental health maintenance and interventions.

Figure 11: The link between financial literacy and mental health outcomes



Source: Frontier Economics

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52 Vittengl, JR 2024, 'Low household income, financial literacy, or financial health: Which is the strongest risk factor and outcome of depressive symptomatology?', *Journal of affective disorders*, vol. 344, pp. 18–24, https://doi.org/10.1016/j.jad.2023.10.019

53 Giannouli, V, Stamovlasis, D & Tsolaki, M 2022, 'Longitudinal Study of Depression on Amnestic Mild Cognitive Impairment and Financial Capacity', *Clinical gerontologist*, vol. 45, no. 3, pp. 708–714, https://doi.org/10.1080/07317115.2021.2017377; Hastings, JS, Madrian, BC & Skimmyhorn, WL 2013, 'Financial Literacy, Financial Education, and Economic Outcomes', *Annual review of economics*, vol. 5, no. 1, pp. 347–373, https://doi.org/10.1146/annurev-economics-082312-125807; Ishii, R, Ohyama, T & Endo, H 2023, 'Moderating effect of financial literacy on the relationship between socioeconomic status and depression', *Journal of workplace behavioral health*, vol. 38, no. 1, pp. 36–51, https://doi.org/10.1080/15555240.2022.2147940

For example, a 2015 study by Li et al. found that better financial literacy was significantly associated with no or low depressive symptoms.[54] In addition, Ishii et al. found that the link between socioeconomic status and depression was weaker amongst Japanese with high financial literacy than among those with low financial literacy.[55] Together, these studies demonstrate that higher financial literacy (and the improved financial outcomes they can contribute to) are associated with improved mental health outcomes.

Avoided incidents of domestic violence (and associated economic and healthcare costs)

As shown in Figure 12, financial literacy (or exposure to financial education more broadly) has been shown to improve financial awareness and confidence.[56] Improved financial awareness and confidence, in turn, are associated with:

- Improved awareness for victims of domestic violence or financial abuse – particularly women – of their "options".
- Lower incidences of financial abuse[57].

In turn, this greater awareness of outside options and lower incidence of financial abuse has been associated with lower rates of domestic violence[58]. This in and of itself is a significant finding. However, when considered in light of the large, broad set of costs that are associated with domestic violence, it is an even more significant finding.

For example, analysis undertaken by *Deloitte Access Economics* on behalf of The *Commonwealth Bank* in 2022 found that around 1 in 30 women and 1 in 50 men suffered from financial abuse in 2020 alone, and that this abuse translated into productivity, mental health and deadweight loss costs to the broader community of over $5 billion in 2020[59]. Focusing specifically on violence against women, KPMG estimated that in 2015-16 in Australia the total costs of violence against women were $22 billion. Of this $22 billion, $1.4 billion was attributed to the impact of violence on the private and public healthcare systems and $1.9 billion to the production and business sector impacts (e.g. absenteeism)[60].

54 Li, Y, Lee, C, Proctor, BT, Somerville, C. & Dugan, E 2015. The association between financial literacy and depression in older adults: findings from the health and retirement study. *Gerontologist* vol. 55, 430, https://doi.org/10.1093/geront/gnv187.15

55 Ishii, R, Ohyama, T & Endo, H 2023, 'Moderating effect of financial literacy on the relationship between socioeconomic status and depression', *Journal of workplace behavioral health*, vol. 38, no. 1, pp. 36–51.

56 Stylianou, AM, Counselman-Carpenter, E & Redcay, A 2019, 'Developing a Financial Literacy Program with Survivors of Intimate Partner Violence: The Voices of Survivors', Social work (New York), vol. 64, no. 4, pp. 311–320, doi: 10.1093/sw/swz034; El Saadi, J 2023, "The Role of Financial Literacy in Gender-based Violence: Developing Financial Freedom and Confidence for Women", Major Papers vol. 274, https://scholar.uwindsor.ca/major-papers/274

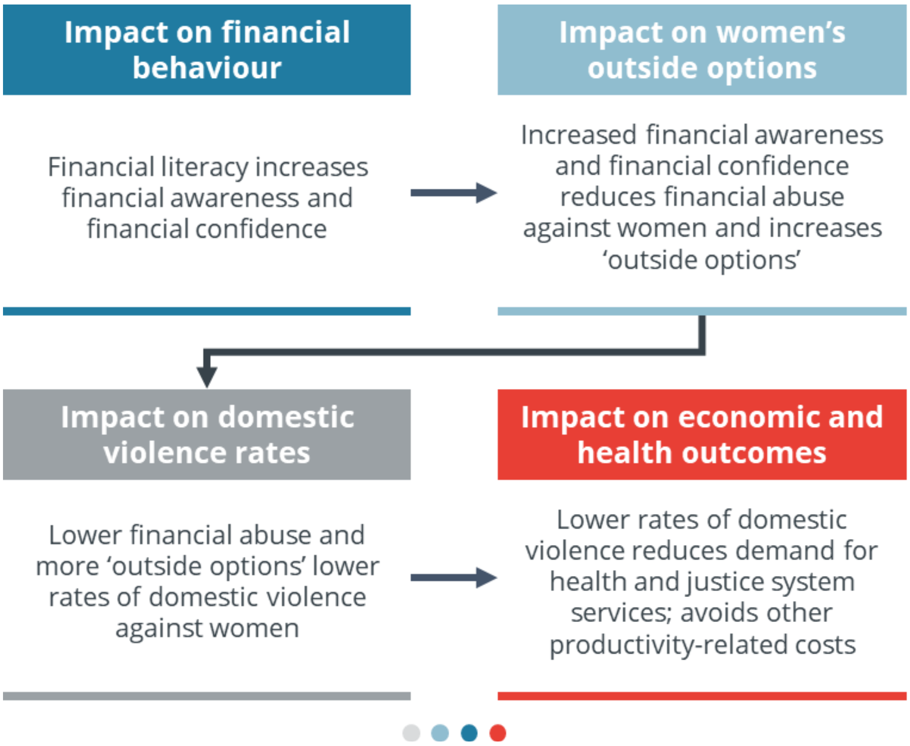
57 Ngo, PTH, Moncayo, P & Viriyavejkul, A, Can Financial Education Reduce Domestic Violence?, May 2023, http://dx.doi.org/10.2139/ssrn.3809469; Stylianou, AM et al. 2019, 'Developing a Financial Literacy Program with Survivors of Intimate Partner Violence, pp. 311–320.

58 Ngo, PTH, et al. 2023, 'Can Financial Education Reduce Domestic Violence?'; El Saadi, J 2023, 'The Role of Financial Literacy in Gender-based Violence'.

59 Deloitte Access Economics 2022, *The cost of financial abuse in Australia*, A report prepared for Commonwealth Bank, https://www.commbank.com.au/content/dam/caas/newsroom/docs/Cost%20of%20financial%20abuse%20in%20Australia.pdf

60 KPMG 2016, *The cost of violence against women and their children in Australia,* Report prepared for the Department of Social Services,, https://australianwomenshealth.org/wp-content/uploads/2024/03/the_cost_of_violence_against_women_and_their_children_in_australia_-_summary_report_may_2016.pdf

Figure 12: The link between financial literacy, domestic violence and community economic and health outcomes



Source: Frontier Economics

Reduced risk of default

A number of reports have established that higher financial literacy levels are associated with lower levels of credit card debt and lower incidence of high cost borrowing, such as payday loans, pawn shops, auto title loans, and refund anticipation loans[61]. For example, a number of studies have shown that low financial literacy individuals are likely to pay higher fees, incur higher transaction costs and to report higher cost mortgages and excessive debts[62]. Similarly, Australian studies have found a link between improved financial wellbeing and reduced severity of loan default incidence[63].

3.2 Other positive distributional or equity impacts associated with improved financial literacy

As discussed above, some key benefits of financial literacy do not reflect in "real resource outcomes" but rather, involve a "transfer" between parties. These outcomes are collectively referred to as positive distributional (or equity) impacts. These impacts are still nonetheless

61 Lusardi, A & Tufano, P 2015, 'Debt literacy, financial experiences, and overindebtedness', Journal of pension economics & finance, vol. 14, no. 4, pp. 332–368, DOI:10.1017/S1474747215000232; de Bassa Scheresberg, Carlo, Lusardi, Annamaria. Gen Y Personal Finances. A Crisis of Confidence and Capability. Global Financial Literacy Excellence Center; 2014. Working Paper, https://gflec.org/wp-content/uploads/2015/01/a738b9_b453bb8368e248f1bc546bb257ad0d2e.pdf

62 Mottola, G 2013, 'In Our Best Interest: Women, Financial Literacy, and Credit Card Behavior', *Numeracy : advancing education in quantitative literacy*, vol. 6, no. 2, pp. 4-, https://digitalcommons.usf.edu/numeracy/vol6/iss2/art4/; Lusardi, A & Tufano, P 2015, 'Debt literacy, financial experiences, and overindebtedness', Journal of pension economics & finance, vol. 14, no. 4, pp. 332–368

63 Bourova, E, Anderson, M, Ramsay, I & Ali, P 2018, 'Impacts of Financial Literacy and Confidence on the Severity of Financial Hardship in Australia', *Australasian accounting, business & finance journal,* vol. 12, no. 4, pp. 4–24.

important to consider given transfers have equity impacts and can be important for achieving other policy objectives (for example, improving outcomes for a specific group of individuals).

A number of international studies have examined the association between inequality and levels of financial literacy (or gaps in financial literacy) more broadly. For example:

- In 2017 Lusardi et al. found that financial knowledge is a key determinant of wealth inequality and financial knowledge drives 30–40% of retirement wealth inequality[64].
- Lo Prete's 2018 study further re-enforced these findings, concluding that income inequality grew less in countries where basic economic and financial knowledge was higher, and that this was attributable to people's ability to use financial markets, not the increased provision of financial services[65].

This indicates that financial literacy could potentially be a valuable tool in efforts to break systematic and intergenerational constraints on individuals that stem from the lack of intergenerational transfer of financial literacy knowledge.

In addition, both Australian and international studies have established that higher financial literacy is associated with positive effects on the level of consumptions for different types of goods. For example:

- An Australian study found that financial literacy significantly improves financial wellbeing and strengthens the positive effects of higher non-essential consumption among elderly Australians.[66]
- A 2021, Dutch study found an association between financial literacy and the level of food consumption for all household types as well as a positive association between financial literacy and non-durable consumption levels for men in couples and under the age of 65.[67]

Finally, by developing financial literacy – and by extension confidence, knowledge and skills to manage financial products and services – individuals are likely to be better able to avoid or overcome financial exclusion[68]. Exclusion from mainstream financial products and services such as general insurance, transaction account and moderate credit (i.e. financial exclusion) negatively impacts a person's financial security[69].

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64 Lusardi, A, Michaud, P-C & Mitchell, OS 2017, 'Optimal Financial Knowledge and Wealth Inequality', *The Journal of political economy*, vol. 125, no. 2, pp. 431–477.

65 Lo Prete, A 2018, 'Inequality and the finance you know: does economic literacy matter?', *Economia politica (Bologna, Italy)*, vol. 35, no. 1, pp. 183–205, https://doi.org/10.1007/s40888-018-0097-3

66 Xue, R, et al. 2020, 'Financial well-being amongst elderly Australians', pp. 4361–4386.

67 The study developed a theoretical model that predicted a positive relationship between consumption levels and financial literacy and tested this empirically utilising a representative sample of Dutch households and individuals. See: Dinkova, M, Kalwij, A & Alessie, R 2021, 'Know More, Spend More? The Impact of Financial Literacy on Household Consumption', *De Economist (Netherlands)*, vol. 169, no. 4, pp. 469–498, https://link.springer.com/article/10.1007/s10645-021-09391-4

68 Ali, P, Anderson, M, McRae, C & Ramsay, I 2014, 'The financial literacy of young Australians: An empirical study and implications for consumer protection and ASIC's National Financial Literacy Strategy', *Company and Securities Law Journal*, Vol. 32, No. 5, p. 336; Fornero, E, Lo Prete, A & Oggero, N 2021, 'Now More Than Ever: Why financial literacy is a key element of post-COVID-19 recovery', in Nicolini, G & Cude, BJ (ed.) *The Routledge Handbook of Financial Literacy* 1st edn, Routledge, United Kingdom.

69 Connolly C, Georgouras M, Hems L & Wolfson L 2011, 'Measuring Financial Exclusion in Australia', *Centre for Social Impact for National Australia Bank*.

4 Value of improved financial literacy

Key points:

- As many of the benefits of financial literacy are "non-market" (that is, they do not have an established monetary value) this requires a framework for converting changes in economic, social and environmental outcomes to a dollar figure.
- To meet this project's brief, we have sought to value *select* benefits of improved financial literacy compared to a counterfactual of no change in financial literacy levels across Australia (i.e. it makes the case for further action to address financial literacy). These include the avoided costs of hardship assistance scheme expenditure and avoided hospitalisations of older demographics and the associated avoided healthcare costs.
- Our analysis indicates that if financial literacy could be instantly increased to a score of 5 out of 5 for the 'Big Five' financial literacy questions, expenditure on the Commonwealth Government's *Financial Wellbeing and Capability* program could reduce by around **$1.04 million per year** and **$7.80 million** in present value terms (7% discount rate[70]) over a 10-year period.
- Our analysis indicates that if financial literacy could be instantly increased, the number of hospitalisations of Australians 65 years or older could reduce by 900,000 per year over a 10 year period. This corresponds to a reduction in spending of between **~$9 billion** and **~$11.6 billion, each year** and **$76.27 billion** in present value terms (7% discount rate) over a 10-year period.
- In practice, there may be a delay between the timing of improvements in financial literacy (especially for programs targeting childhood financial literacy), and improvements in broader economic, social and environmental outcomes, such as reduced hospitalisation of older demographics. As such, these results should be interpreted as the ***potential* benefit** to the Australian community of improvements in financial literacy. As a result, they should not be taken as the results of a CBA, used in lieu of a separate CBA or as part of an input into another CBA.

4.1 Approach to valuing selected benefits of improved financial literacy

The aim of economic evaluation is to value different impacts measured in different ways in consistent monetary terms. This enables a holistic comparison of a range of economic, social and environmental impacts and outcomes.

70 Consistent with Australian Government guidelines, such as the Infrastructure Australia *Guide to Economic Appraisal,* July 2021, https://www.infrastructureaustralia.gov.au/sites/default/files/2021-07/Assessment%20Framework%202021%20Guide%20to%20economic%20appraisal.pdf

As many of the benefits of financial literacy are "non-market" (that is, they do not have an established monetary value) this requires a framework for converting changes in economic, social and environmental outcomes to a dollar figure.

To meet this project's brief, we have:

- Sought to value select benefits of improved financial literacy compared to a counterfactual of no change in financial literacy levels across Australia (i.e. it makes the case for further action to address financial literacy). Namely the benefits of the:
  - Avoided cost of hardship assistance scheme expenditure.
  - Avoided hospitalisation of older demographics, and the associated healthcare cost savings.
- Adopted a benefit transfer approach, which involves adopting a value based on existing analysis, studies or surveys, rather than undertaking primary research(see Box 3).
- Made a number of assumptions based on the best available information and literature (see Appendix B).

In practice, there may be a delay between the timing of improvements in financial literacy (especially for programs targeting childhood financial literacy), and improvements in broader economic, social and environmental outcomes, such as reduced hospitalisation of older demographics. As such, these results should be interpreted as the ***potential* benefit** to the Australian community of improvements in financial literacy. As a result, they should not be taken as the results of a CBA, used in lieu of a separate CBA or as part of an input into another CBA.

Further detail on our valuation approach and the findings of our analysis is provided below.

Box 3: Applying benefit transfer to value key benefits of improvements in financial literacy

Benefit transfer involves using values estimated in a source study and transferring these for use in the case of interest. For this approach to be valid, the following conditions need to be satisfied:

- The source study should be rigorous and valid.
- The context and conditions pertaining in the case of interest should be similar to those occurring in the source study.
- The demographic and economic characteristics of any sampled population sampled in the source study should be similar to those in the target study.
- The extent of the changes being investigated should be similar.

An advantage of this approach is that it does not require original empirical study (scientific, survey, econometric, or other) and can be rapidly applied. However, the applicability will be limited to outcomes where the original research is robust, and the study sites are sufficiently similar. For example, while Australian literature would be preferred, due to a gap in the empirical literature, we have had to rely on international studies in some cases.

Source: Frontier Economics

4.2 Valuing the avoided cost of hardship assistance scheme expenditure – an example

As discussed above, improved financial literacy is associated with improved financial decision-making, which in turn reduces the likelihood that an individual will need to access financial hardship assistance.

Drawing on the findings of the 2022 study by *Boedker et al* discussed in Box 2[71] (alongside other key assumptions detailed in Appendix B), we have provided an indication of how the cost of the Commonwealth Government's *Financial Wellbeing and Capability* program (Box 4) *could potentially* be avoided given an improvement in financial literacy levels.

Box 4: Commonwealth Government Financial Wellbeing and Capability program

The Financial Wellbeing and Capability Activity is an Australia Government program that funds community organisations to support eligible individuals and families in financial crises by:

- Providing tools for vulnerable people and those most at risk of financial, social exclusion and disadvantage.
- Helping people deal with their debt.
- Empowering people to look after their money and become financially resilient and independent.
- Providing food relief to increase access to cost-effective supply of food for emergency relief organisations.
- Providing services to help with managing money, such as financial counselling, financial education and assistance applying for products (such as no interest loans).

Services are free, voluntary and confidential.

Emergency relief for immediate financial and/or material help is available.

Source: Australian Government Department of Social Services, About the Financial Wellbeing and Capability Activity, February 2025

Based on the best available information:

- We have assumed the cost of program is, on average, $220-245 per recipient over the next ten years, as:
  - Expenditure on the program is assumed to remain constant in real terms at $150 million per annum over the next ten years.[72]

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71 The study found that financial literacy had a statistically significant negative relationship at the 1% level with both the likelihood that an individual applies for, or receives, financial hardship assistance. See Boedker, C, Moy, N & Wu, C 2022, Financial Wellbeing and General Life Satisfaction in Australia, *The University of Newcastle*.

72 Australian Government Department of Social Services, *Financial Wellbeing and Capability Activity Grant Opportunities*, October 2024, https://www.dss.gov.au/news/financial-wellbeing-and-capability-activity-grant-opportunities and based on the additional funding commitment detailed in the 2024-25 Budget Paper No. 2. Australian Government, *Budget 2024-25: Budget Measures Budget Paper No. 2,* May 2024, p.169, https://budget.gov.au/content/bp2/download/bp2_2024-25.pdf

  - Demand (the number of people accessing program services in the absence of any improvement in the current level of financial literacy) is based on adjusted FY22 data. [73]
- The change in the number of recipients of hardship assistance is based on:
  - Analysis of the results of the *Boedker et al* study which shows that an individual that shifts from a financial literacy score of 0 out of 5 to 5 out of 5 is ~2.93% less likely to receive financial hardship assistance on average.
  - The HILDA Wave 16 survey distribution of financial literacy scores across the population.
  - An assumption that financial literacy could be improved such that all hardship assistance recipients increase their financial literacy score instantly to 5 out of 5.

The methodology adopted to indicatively value the avoided cost of hardship assistance scheme expenditure is detailed in Figure 13.

Figure 13: Valuing expected avoided cost of hardship assistance

Source: Frontier Economics

Further detail on the inputs, assumptions and calculations underpinning this illustrative valuation are detailed in Appendix B.

4.2.1 The value of avoided hardship assistance could be significant

Our analysis suggests that if financial literacy could be instantly increased (to 5 out of 5), expenditure on the Commonwealth Government's Financial Wellbeing and Capability program could decrease by around **$1.04 million** per year and **$7.80 million** in present value terms (7% discount rate) over a 10-year period[74].

It's important to note that these results only relate to one specific hardship assistance program. We would expect that improvements in financial literacy could reduce expenditure on other hardship programs,[75], in addition to expenditure on the Commonwealth Government's *Financial Wellbeing and Capability* program. As such, if financial literacy could be instantly increased (to 5 out of 5), this avoided cost (benefit) is likely to be even larger.

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73 Australian Government Department of Social Services, *Financial Wellbeing and Capability – Financial, Provider and Client Tables*, November 2022, https://www.aph.gov.au/-/media/Estimates/ca/bud2223_2/Social_Services/03_TabledDoc_DSS_FinancialWellbeingAndCapability.pdf?la=en&hash=9B206D43215A2E364FEF02D5EBB6A76E687B7C00

The number of clients is adjusted up to FY25 in line with an estimated population growth rate of 1.74%, and projected forward utilising an estimated population growth rate of 1.20% (Australian Bureau of Statistics, Population Projections: Australia, November 2023)

74 A 10-year modelling period was utilised for conservativeness.

75 The Commonwealth Government and State, Territory, Local Governments also administer a number of other hardship assistance programs.

Although this example is illustrative (rather than evaluating the improvements in financial literacy from a potential program), it demonstrates the potentially significant benefits of improvements in financial literacy, especially if improvements in financial literacy were experienced across Australia.

These results suggest there is likely to be value in improving our understanding of how financial literacy education programs aimed at children (and across the broader population) could lead to reduced reliance on financial hardship programs.

4.3 Valuing the avoided cost of hospitalisations of older demographics and associated healthcare costs – an example

As detailed above, improved financial literacy is associated with improved financial decision making, [76] which in turn, reduces the severity of an individual's financial and economic stressors. Fewer financial and economic stressors is associated with improved physical health outcomes, and consequently lower healthcare costs.

Drawing on the findings of a 2018 study by *James et al.* discussed in Section 3.1.1[77] (alongside other key assumptions detailed in Appendix B), we have provided an indication of how the costs associated with hospitalisations *could potentially* be avoided given an improvement in financial literacy levels.

below provides background regarding the current level of demand for hospitals in Australia and the current levels of expenditure on hospitalisation.

Based on the best available information, we have assumed:

- Financial literacy instantaneously increases across Australia to scores of 5 out of 5 for the 'Big 5' questions.
- The average cost of hospitalisation increases from ~$9,836 in 2024-25 to ~$12,496 over the next ten years. This is based on historical experiences shown in Box 5:
  - Expenditure is assumed to grow at the historical average (~4.05% between 2013-14 and 2022-23) over the next ten years.
  - The level of admissions is assumed to grow at the historical average rate (~1.32% between 2019-20 and 2022-23) over the next 10 years.
- The number of hospitalisations for persons aged 65 and over falls by around 900,000 admissions per year on an ongoing basis over a 10 year period, based on:
  - Analysis of the results of the *James et al* study which found that higher financial literacy levels is associated with a reduction in the risk of hospitalisation (i.e. it has a highly

[76] Ali, P et al. 2014, *The financial literacy of young Australians*, p. 338; Mitchell, OS & Lusardi, A 2015, 'Financial Literacy and Economic Outcomes: Evidence and Policy Implications', *The journal of retirement*, vol. 3, no. 1, pp. 107–114; Goyal, K & Kumar, S 2021, 'Financial literacy: A systematic review and bibliometric analysis', *International journal of consumer studies*, vol. 45, no. 1, pp. 80–105; Tahir, MS, & Ahmed, AD 2021, 'Australians' Financial Wellbeing and Household Debt: A Panel Analysis', *Journal of Risk and Financial Management* vol. 14: 513.

[77] The study found that higher financial literacy levels had a highly significant relationship with a reduced risk of hospitalisation while controlling for a number of demographic, socioeconomic, health, lifestyle and cognitive variables across a sample of 388 older persons (aged 66-100) in the United States. See James, BD, Wilson, RS, Shah, RC, Yu, L, Arvanitakis, Z, Bennett, DA & Boyle, PA 2018, 'Association of Financial Literacy with Hospitalization in Community-dwelling Older Adults', *Medical care*, vol. 56, no. 7, pp. 596–602.

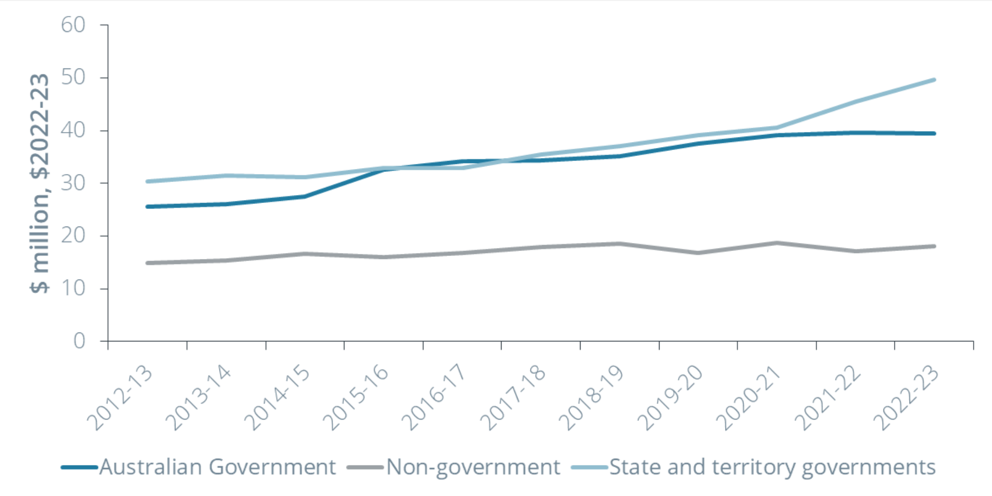
significant relationship).[78] Specifically, an increase in financial literacy scores of 1 could reduce the risk of hospitalisation by around 27.7% (see Appendix B for further detail).

- The HILDA Wave 16 survey distribution of financial literacy scores across the population.
- An assumption that financial literacy could be improved such that all hardship assistance recipients increase their financial literacy score instantly to 5 out of 5.

Box 5: Current levels of hospital admissions and expenditure on hospitals

During 2022–23, an estimated $107.1 billion ($FY23) was spent on Australia's public and private hospitals, with $49.7 billion (46.4%) funded by state and territory governments and $39.4 billion (36.8%) by the Australian Government. The remaining $18.0 billion (16.8%) came from non-government sources[79]. Between, 2013-14 and 2022-23, total spending has increased year-on-year by just over 4% in real terms.

Figure 14: Spending on hospitals, by source of funds, 2012–13 to 2022–23 ($2022-23)



Source: Frontier Economics analysis of AIHW, Health expenditure Australia 2022-23: Hospitals, November 2024.

Within 2022-23, this estimated $107.1 billion ($FY23) was spent on over 12 million admissions across the country[80]. Around 44% of these hospital admissions were for persons aged 65 and over[81]. This equates to around 5.3 million hospitalisations in 2022-23 alone.

Source: AIHW, Health expenditure Australia 2022-23: Hospitals; November 2024; AIHW, Admitted patients, November 20-24; Frontier Economics analysis of AIHW data

The methodology adopted to indicatively value the avoided cost of avoided cost of hospitalisations of older demographics and associated healthcare costs is detailed in Figure 15.

[78] The key regression produced a risk ratio of 0.9 with a P-score of <0.001. In the context of the paper, this represents a 10% reduction in risk of hospitalisation as financial literacy score increases by 1, noting that the financial literacy score variable in the paper ranged from 1 to 23. Risk ratios can be understood as the ratio of the rate in a 'treated' or 'exposed' group (in this context hospitalised) to the rate in an 'untreated' or 'unexposed' group (in this context unhospitalised).

[79] Australian Institute of Health Welfare (AIHW), *Health expenditure Australia 2022-23: Hospitals*, November 2024, https://www.aihw.gov.au/reports/health-welfare-expenditure/health-expenditure-australia-2022-23/contents/trends-by-area-of-spending/hospitals

[80] AIHW, *Admitted patients*, November 2024, https://www.aihw.gov.au/reports-data/myhospitals/sectors/admitted-patients

[81] AIHW, *Admitted patients*, November 2024.

Figure 15: Valuing expected avoided cost of hospitalisations

Source: Frontier Economics

Further detail on the inputs, assumptions and calculations underpinning this illustrative evaluation are detailed in Appendix B.

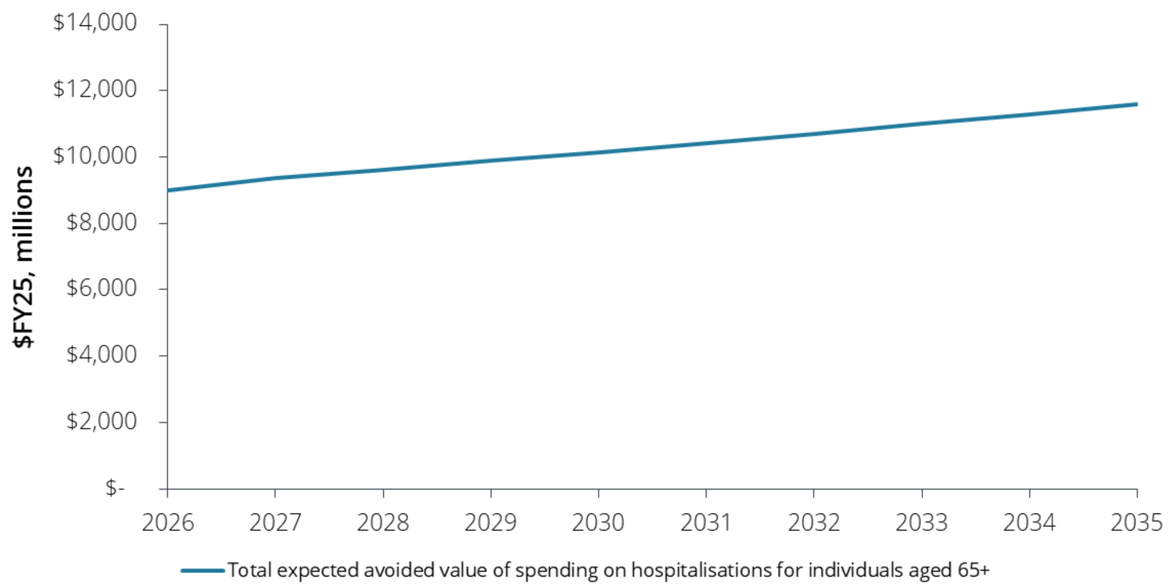
4.3.1 The value of avoided hospital admissions could be significant

Our analysis indicates that if financial literacy could be instantly increased, the number of hospitalisations of Australians 65 years or older could reduce by 900,000 per year over a 10 year period. As shown in Figure 16, this corresponds to a reduction in spending of between **~$9 billion** and **~$11.6 billion** each year, and **$76.27 billion** in present value terms (7% discount rate) over a 10-year period[82]. This corresponds to 7% of the projected total spend on all hospitalisations over the 10-year modelling period.

In addition, given the *James et al.* (2018) study focused only on hospitalisations, there are likely to be other benefits associated with improved physical health (and avoided healthcare costs) not captured in this example.

These results suggest there is likely to be value in improving our understanding of how financial literacy education programs aimed at children (and across the broader population) could lead to reduced risk of hospital admission (and therefore, costs of treatment).

Figure 16: Indicative reduction in hospitalisation costs per annum



Source: Frontier Economics analysis

[82] A 10-year modelling period was utilised for conservativeness.

As discussed above, in practice, there may be a delay between the timing of improvements in financial literacy (especially for programs targeting childhood financial literacy), and improvements in broader economic, social and environmental outcomes, such as reduced hospitalisation of older demographics. In addition, while this evaluation is based on academic literature, the example is illustrative only and is developed in large part utilising a number of indicative assumptions. As such, these results should be interpreted as the ***potential*** **benefit** to the Australian community of improvements in financial literacy.

Although this example is illustrative (rather than evaluating the improvements in financial literacy from a potential program), it demonstrates the potentially significant benefits of improvements in financial literacy, especially if improvements in financial literacy were experienced across Australia.

5 Conclusions

This section summarises the key findings and conclusions of this report and highlights a range of recommendations to improve our understanding of the benefits of financial literacy.

Key points:

- For meaningful long-term outcomes, all children need access to financial literacy education.
- Failure to invest in programs aimed at improving financial literacy in children risks imposing significant economic and social costs, not just on the individual, but the broader Australian community.
- There are significant opportunities for further investigation of the benefits of financial literacy for children in Australia.

For meaningful long-term outcomes, all children need access to financial literacy education

While childhood financial literacy is one of several determinants of opportunities and successes an individual may enjoy, the HILDA survey finds low financial literacy correlates with higher financial stress and poverty. In addition, the results of surveys in the Australian context have highlighted young people, elderly people, women, and Aboriginal and Torres Strait Islanders suffer both from lower financial literacy levels and poor economic and financial outcomes.

Improved financial literacy, in contrast, has a range of benefits, many of which go beyond the individual. For example, as discussed in more detail in Section 3, financial literacy has been proven to be a key determinant in individuals and households' ability to make sound financial decisions, which in turn, is linked with improved financial wellbeing, greater participation in economic life, effective retirement planning and effective planning for future financial contingencies. Financial literacy can also lead to a range of benefits for the broader community, including reducing the likelihood that an individual or household will be reliant on publicly funded hardship assistance or welfare, improving social and financial inclusion and improving individuals physical and mental health (amongst others).

However, despite recognition of the importance of financial literacy education for young Australians, it is clear that financial literacy levels for young Australians – and Australians more broadly – are concerningly low. This can have **significant, long-term implications**, not just for the individual, but also the broader Australian community. The financial literacy of young persons – particularly those in the latter stage of secondary school – is critical as financial habits formed in school and early adulthood are likely to be prevalent into early adulthood and beyond.

As noted, childhood financial literacy is not the sole determinant of opportunities and successes an individual may experience. However, the evidence and analysis collated in this report indicates that to realise **meaningful long-term outcomes, all children need access to financial literacy education.**

Failure to invest improving financial literacy risks imposing far-reaching economic and social costs on the Australian community

Financial literacy can also generate broader societal benefits as well as improve equity outcomes that break systematic and intergenerational constraints on individuals that stems from the lack of intergenerational transfer of financial literacy knowledge. For example, higher productivity and lower reliance on the pension system arising from financial literacy, also benefits the broader Australian economy. Concurrently, income inequality and retirement wealth inequality have been shown to be lower in countries where basic economic and financial knowledge was higher, improving equity outcomes across society.

Improving financial literacy can be a key tool to help mitigate and prevent negative outcomes for some of the most vulnerable members of society. For example, Australia is currently experiencing increasing levels of homelessness among women over 55 and women retiring in poverty more generally. Better financial literacy outcomes including saving, investing and superannuation education at school could have significant impacts for women – providing them with the knowledge and skills to focus on financial independence and security from the start of their working life. This is just one example of a demographic where if financial literacy education was available and widely absorbed, this issue may have been mitigated or avoided.

Failure to invest in programs aimed at improving financial literacy risks imposing significant costs on the Australian community in the form of lost community benefits.

There are opportunities for further investigation of the benefits of financial literacy for children in Australia

Our analysis shows there is strong domestic and international evidence for the benefits associated with financial literacy. However, there are **opportunities for further investigation of the benefits of improving financial literacy for children in Australia**. For example:

- **The current approach to data collection prevents analysis of the impact of financial literacy education on outcomes at the individual level**. The *HILDA* Survey included financial literacy questions in one survey, but did not include them in subsequent surveys. This means that while we can analyse financial literacy levels cross-sectionally (i.e., at a given point in time), we cannot analyse the impacts of financial literacy education for a cohort of individuals over time. This limits the extent to which we can identify and analyse the type and extent of benefits associated with financial literacy education.
- **There are opportunities to undertake Australian-specific studies of the benefits of financial literacy**. For example, the discussion of the potential value of avoided hospitalisations is underpinned by a US study.
- **There are opportunities for Australia to assert itself as a leader in this space, by developing and evaluating innovative education programs**. This could include studies that aim to identify the ideal age-ranges and methods of delivery for financial literacy education of Australian school-age children, as well as the nature and magnitude of the benefits associated with these. Across the domestic and international literature, there is an opportunity to prioritise research into the most effective ways to educate children and to ensure the benefits of financial literacy associated with improving financial literacy in children are materialised.

These gaps provide an opportunity to further our understanding of the full spectrum (and magnitude) of financial literacy benefits and the value of specific financial literacy programs in Australia.

A Key literature

Reference List

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B Approach, inputs and assumptions of selected benefit valuation

B.1 Approach, inputs and assumptions – Valuing the avoided cost of hardship assistance scheme expenditure

The methodology adopted to indicatively value the avoided cost of hardship assistance scheme expenditure is detailed in Figure 17. The Commonwealth Government's *Financial Wellbeing and Capability* program is the focus of this illustrative example. Utilising the findings of a 2022 study by *Boedker et al* [83], as well as further extrapolation of these results and a range of assumptions, we indicatively estimate the potential avoided costs that may materialise due to lower demand for hardship assistance engendered by higher financial literacy levels.

Figure 17: Valuing expected avoided cost of hardship assistance

Source: Frontier Economics

Current expenditure

With respect to the *Financial Wellbeing and Capability* program, current expenditure on the *Financial Wellbeing and Capability* program is around $150 million per annum from 2025-26 onwards[84]. This is assumed to remain constant in real terms over the next 10 years, based on the additional funding committed in the 2024-25 Budget Paper No. 2[85].

Demand for the program (the number of people accessing services) is based on 2022 data published by the Department[86]. The number of clients is adjusted up to 2024-25 in line with an

83 Boedker, C, Moy, N & Wu, C 2022, Financial Wellbeing and General Life Satisfaction in Australia, *The University of Newcastle*.

84 Australian Government Department of Social Services, *Financial Wellbeing and Capability Activity Grant Opportunities*, October 2024, https://www.dss.gov.au/news/financial-wellbeing-and-capability-activity-grant-opportunities

85 Australian Government, *Budget 2024-25: Budget Measures Budget Paper No. 2,* May 2024, p.169, https://budget.gov.au/content/bp2/download/bp2_2024-25.pdf

86 Australian Government Department of Social Services, *Financial Wellbeing and Capability – Financial, Provider and Client Tables*, November 2022, https://www.aph.gov.au/-/media/Estimates/ca/bud2223_2/Social_Services/03_TabledDoc_DSS_FinancialWellbeingAndCapability.pdf?la=en&hash=9B206D43215A2E364FEF02D5EBB6A76E687B7C00

estimated population growth rate of 1.74%, and further project forward utilising an estimated population growth rate for the modelling period of 1.20%[87].

Consequently, the average expenditure per person over the modelling period is held constant in real terms under an indicative business-as-usual Base Case at around ~$249 in real terms ($FY25).

Approach to estimating indicative avoided costs

Our assumed reduction in demand for the program is premised on the outputs of the regression analysis undertake by *Boedker et al.* (2022). Specifically, *Boedker et al.* undertook analysis that examined the predicted impact of financial literacy on different outcomes, including the likelihood of receiving financial hardship assistance.

The measure of financial literacy utilised in the study consisted of a score of 0 to 5 based on correct answers to the 'Big 5' questions.

Boedker et al. utilised a probit regression that controlled for a number of economic, social, demographic characteristics, as well as financial planning and financial behaviour characteristics, so that the association between financial literacy and receiving financial hardship assistance could be isolated. The study found that financial literacy had a highly significant predicted negative impact on the probability of an individual receiving financial hardship assistance.

Utilising the coefficient for financial literacy from the regression and the calculation of latent scores (see Table 4), we were able to estimate that the difference an individual that shifts from a financial literacy score of 0 out of 5 to 5 out of 5 is ~2.93% less likely to receive financial hardship assistance on average, all else equal.

For simplicity, it was then assumed that the reduction in the likelihood of financial hardship assistance receipt decreases linearly for individuals with scores between 1 and 4 out of the 'Big 5' questions.

Table 2: Assumed reduction in the likelihood of receiving hardship assistance due to shifting to a 5 out of 5 financial literacy score

Change in financial literacy score	Reduction in likelihood of receiving hardship assistance
Change in likelihood of clients receiving hardship assistance – Score 0	2.93%
Change in likelihood of clients receiving hardship assistance – Score 1 or 2	2.07%
Change in likelihood of clients receiving hardship assistance – Score 3 or 4	0.90%
Change in likelihood of clients receiving hardship assistance – Score 5	- %

Source: Frontier Economics analysis of Boedker et al. (2022) & Frontier Economics assumptions

[87] Estimates of forecast increase in population growth over the respective periods were derived from Australian Bureau of Statistics, Population Projections: Australia, November 2023, https://www.abs.gov.au/statistics/people/population/population-projections-australia/latest-release

The change in the number of clients who will need to receive hardship is then estimated relying on the results of the HILDA Wave 16 survey[88] (see Table 3). Applying the HILDA distribution of financial literacy scores to the current number of clients, an assumed underlying financial literacy of hardship assistance scheme recipients was produced[89]. The change in the number of clients receiving assistance is then calculated by multiplying the estimated and assumed parameters in Table 2 by the number of clients corresponding to each score category.

Table 3: HILDA Wave 16 financial literacy distribution of correct responses all persons (%)

	None	1 or 2	3 or 4	All 5
All persons	2.3%	11.1%	44.0%	42.5%

Source: Melbourne Institute Applied Economic & Social Research 2016, The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 16, p. 118

Finally, to estimate the avoided expenditure on the Financial Wellbeing and Capability program, the average spend per client is multiplied by the change in the number of clients who will need to receive hardship in each year over the 10-year modelling period.

This calculation assumes all clients increase their financial literacy score to 5 instantaneously for indicative purposes.

It is also likely overstating the financial literacy levels of the hardship assistance scheme recipients, given it is highly likely the financial literacy levels of recipients, on average, would be lower than the broader population (i.e. the distribution published in the nationally representative HILDA survey that was utilised). This would notionally bias the results downward (i.e. the magnitude of the indicative benefit would likely be higher).

The full array of inputs and assumptions are detailed in **Table 4**.

Table 4: Valuing the avoided cost of hardship assistance scheme expenditure – Inputs and assumptions

Assumption	Input value	Source
Common inputs and assumption		
Modelling period	2025/26-2034/35	
Discount rate (%)	7%	Infrastructure Australia, *Guide to economic appraisal: Technical guide of the Assessment Framework*, July 2021.

88 Melbourne Institute Applied Economic & Social Research 2016, *The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 16*, p. 118

89 HILDA was utilised as there was no other data available by which to apportion hardship assistance recipients. Utilising the results of the HILDA survey potentially overstates the financial literacy levels across the recipients given receipt of financial hardship assistance is associated with lower levels of financial literacy.

Total forecast clients receiving financial hardship services		
Forecast increase in population growth over the period	2022 – 2025: 1.74% 2026 – 2035: 1.20%	Average of the annual growth in project population 2022-2025 and average of the annual growth in project population 2026-2035 Frontier Economics analysis of ABS, Population Projections, Australia, November 2023,
Estimated number of clients receiving financial hardship services	Department of Social Services (2022). Financial Wellbeing and Capability - Financial, Provider and Client Tables.	
Distribution of clients across different levels of financial literacy		
Financial literacy levels - Australia, all persons	None out of 5: 2.30% 1 or 2 out of 5: 11.10% 3 or 4 out of 5: 44.00% 5 out of 5: 42.50%	Melbourne Institute Applied Economic & Social Research (2018), The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 16.
Estimated reduction in the likelihood of receiving hardship assistance as a result of improved financial literacy		
Financial literacy coefficient	-0.0183	Boedker, C, Moy, N & Wu, C 2022, *Financial Wellbeing and General Life Satisfaction in Australia*, The University of Newcastle.
Survey respondents proportion 5/5 score	61.69%	Boedker, C, Moy, N & Wu, C 2022, *Financial Wellbeing and General Life Satisfaction in Australia*, The University of Newcastle.
Latent scores	Mean: -1.126391 No literacy: -1.115102 Full literacy: -1.133402	Frontier Economics analysis
Difference in score between no literacy and full literacy	0.39%	Frontier Economics analysis

Estimated reduction in likelihood of financial hardship receipt - % change, 0 score to 5 score	2.93%	Frontier Economics analysis
Estimated reduction in likelihood of financial hardship receipt - % change, other scores	1.5 score: 2.07% 3.5 score: 0.90% 5 score: -%	Assumption

B.2 Approach, inputs and assumptions – Avoided hospitalisations of older demographics and the associated healthcare costs

The methodology adopted to indicatively value the avoided cost of hardship assistance scheme expenditure is detailed in Figure 18. Expenditure on the hospitalisation of individuals aged 65 or over is the focus of this illustrative example. Utilising the findings of a 2018 study by *James et al* [90], as well as a number of assumptions, we indicatively estimate the potential avoided cost that may materialise due to lower hospital admission rates for individuals aged 65 and over engendered by higher financial literacy levels.

Figure 18: Valuing expected avoided cost of hospitalisations

Source: Frontier Economics

Current expenditure

Expenditure on hospitalisations is assumed to grow at the long-term average (~4.05% between 2013-14 and 2022-23) from current levels out to the end of the modelling period (2034-35). That is, by 2034-35, total expenditure on hospitals is $172.6 billion in real terms ($FY25).

In terms of admissions, the current level of admissions is also assumed to grow at the average rate observed in the historical data (~1.32% between 2019-20 and 2022-23). By the end of the modelling period, the estimated number of hospital admissions across all age groups is just under 14 million.

Together this translates into an average cost per hospital admission increasing from ~$9,836 in 2024-25 up to ~$12,496 by the end of the modelling period in real terms ($FY25).

90 James, BD, Wilson, RS, Shah, RC, Yu, L, Arvanitakis, Z, Bennett, DA & Boyle, PA 2018, 'Association of Financial Literacy with Hospitalization in Community-dwelling Older Adults', *Medical care*, vol. 56, no. 7, pp. 596–602.

Approach to estimating indicative avoided costs

Our assumed reduction in demand for the program is premised on the outputs of the regression analysis undertaken by *James et al.* (2018)[91].

The measure of financial literacy utilised in their sample consisted of a score of 1 to 23 based on a 23 question survey. The results of their regression analysis[92] produced a risk ratio coefficient showing a highly significant impact of financial literacy on hospitalisation[93].

Utilising the distribution of financial literacy scores for Australians 65 and over as reported in the HILDA Wave 16 survey[94] (see Table 5), a hospitalisation risk reduction rate was assumed[95] (see Table 7).

Table 5: **HILDA Wave 16 financial literacy distribution of correct responses persons aged 65 and over**

	None	1 or 2	3 or 4	All 5
All persons	4.8%	11.6%	44.0%	39.6%

Source: Melbourne Institute Applied Economic & Social Research 2016, The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 16, p. 118

To then calculate the indicative change in expenditure (avoided costs) for hospitalisations for Australians 65 and over, we consider the reduction in risk if all persons who did not score 5 out of 5 were to improve their literacy score to 5. For each type of person in Table 6 we find the implied improvement in the score, normalised by the standard deviation, and then calculate the risk reduction.

Table 6: **Impact of increasing financial literacy, by initial financial literacy score**

	None	1 or 2	3 or 4	All 5
Share	4.8%	11.6%	44.0%	39.6%
Normalised score increase	3.62	2.54	1.09	0

91 James, BD, Wilson, RS, Shah, RC, Yu, L, Arvanitakis, Z, Bennett, DA & Boyle, PA 2018, 'Association of Financial Literacy with Hospitalization in Community-dwelling Older Adults', *Medical care*, vol. 56, no. 7, pp. 596–602.

92 James et al. utilised a modified Poisson regression model which included control variables for a wide array of demographic, socioeconomic, health, lifestyle and cognitive measures.

93 The regression produced a risk ratio of 0.9 with a P-score of <0.001. In the context of the paper, this represents a 10% reduction in risk as financial literacy score increases by 1, noting that the financial literacy score variable in the paper ranged from 1 to 23. Risk ratios can be understood as the ratio of the rate in a 'treated' or 'exposed' group to the rate in an 'untreated' or 'unexposed' group.

94 Melbourne Institute Applied Economic & Social Research 2016, *The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 16*, p. 118.

95 This was done by calculating 1 minus the normalised risk ratio (0.65) to the power of the normalised increase in the financial literacy score. This was based on the finding in the paper that *"A 1 SD [standard deviation] higher financial literacy score [...] was associated with a 35% lower risk of hospitalization [...]"* – See James, BD et al. 2018, 'Association of Financial Literacy with Hospitalization in Community-dwelling Older Adults', pp. 599. The normalised increase in the score is the increase in the score divided by the standard deviation of the score. One standard deviation of the financial literacy score can be calculated as 1.38.

Risk reduction	78.5%	65.9%	37.0%	0.0%

Source: Frontier Economics analysis of James, BD et al. 2018, 'Association of Financial Literacy with Hospitalization in Community-dwelling Older Adults', pp. 596–602.

As a conservative estimate, we take the weighted average of the risk reductions in Table 6, obtaining 27.7%. This is conservative given individuals with no financial literacy probably account for more than 4.8% of hospital admissions.

The reduction in the number of hospital admissions for individuals 65 years or over due to improved financial literacy was then calculated by multiplying this assumed average risk reduction rate (27.7%) by the number of admissions assumed to have financial literacy scores lower than 5 out of 5.

To finally calculate the avoided expenditure in each year, the reduction in the number of hospital admissions for individuals 65 years or over indicatively due to improved financial literacy was then multiplied by the average estimated cost per admission in each year of the modelling period.

Table 7: **Avoided hospitalisations of older demographics and the associated healthcare costs – Inputs and assumptions**

Assumption	Input value	Source
Estimated number of hospital admissions		
Total hospital admissions - by age group	Australian Institute of Health Welfare (2023). *Health expenditure Australia 2022-23. Table 2.1. Separations, public and private hospitals, 2018-19 to 2022-23.* Australian Institute of Health Welfare (2023). *Health expenditure Australia 2022-23. Table 29. Separations and patient days, by age group and sex (a), all hospitals 2022-23.*	
Historical growth in total hospital admissions	2019/20-2022/23: 1.32%	Australian Institute of Health Welfare (2023). *Health expenditure Australia 2022-23. Table 2.1. Separations, public and private hospitals, 2018-19 to 2022-23.* Australian Institute of Health Welfare (2023). *Health expenditure Australia 2022-23. Table 29. Separations and patient days, by age group and sex (a), all hospitals 2022-23.*

Estimated value of public spending on hospitalisations		
Total spending on hospitals	2012/2013-2022/23: 4.05%	Australian Institute of Health Welfare (2023). *Health expenditure Australia 2022-23. Table 29. Spending on hospitals by source of funds, constant prices (a), annual growth rates, 2012-13 to 2022-23. Constant price health spending in 2022-23 prices*
Association of financial literacy with risk of hospitalisation		
Financial literacy scores, 2016, 65+	None out of 5: 4.80% 1 or 2 out of 5: 11.60% 3 or 4 out of 5: 44.00% 5 out of 5: 39.60%	Melbourne Institute Applied Economic & Social Research (2018), The Household, Income and Labour Dynamics in Australia Survey: Selected Findings from Waves 1 to 16.
Hospitalisation risk reduction, Risk ratio	Financial literacy risk ratio coefficient: 0.9 1 SD increase in financial literacy: 4.03 Risk reduction: 35%	James, BD, Wilson, RS, Shah, RC, Yu, L, Arvanitakis, Z, Bennett, DA & Boyle, PA 2018, 'Association of Financial Literacy With Hospitalization in Community-dwelling Older Adults', Medical care, vol. 56, no. 7, pp. 596–602.
Hospitalisation risk reduction, Average risk reduction	None out of 5: 78.52% 1 or 2 out of 5: 65.93% 3 or 4 out of 5: 36.96% 5 out of 5: -% Average risk reduction: 27.68%	Frontier Economics analysis

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