



Enhancing Financial Literacy

A strategic framework for improving the financial literacy
of MSMEs in forest and agriculture value chains

This study was conducted by Financial Access commissioned by Tropenbos International. TBI would like to thank the authors, Renee Corstens, Frederik van der Krog and Eelko Bronkhorst from Financial Access. We also extend our thanks to Bas Louman and Eveline Trines for their valuable comments, and Patricia Halladay for the final editing.

This publication has been produced by Tropenbos International in the framework of the innovative finance for sustainable landscapes priority of the CGIAR Research Program on Forests, Trees and Agroforestry (FTA).



FTA is the world's largest research for development program to enhance the role of forests, trees and agroforestry in sustainable development and food security and to address climate change. CIFOR leads FTA in partnership with Bioversity International, CATIE, CIRAD, INBAR, ICRAF and TBI.

The opinions and views expressed in this publication are the responsibility of the authors and do not necessarily reflect the opinions and views of Tropenbos International and CGIAR Research Program on Forests, Trees and Agroforestry (FTA)

Copyright: ©2020 Tropenbos International
Texts may be reproduced for non-commercial purposes, citing the source

Citation: Financial Access. 2020. Enhancing Financial Literacy. A strategic framework for improving the financial literacy of MSMEs in forest and agriculture value chains. Tropenbos International: Wageningen, the Netherlands.

Final editing: Patricia Halladay

Layout: Juanita Franco (Tropenbos International)

Photos: Page 2 Woman processing rubber from Lamang Satong village in Indonesia. Irpan Lamago (Tropenbos Indonesia); Page 4 Preparing a tree nursery in the pacific region Colombia. Tropenbos Colombia.



Tropenbos International
P.O.Box 232, 6700 AE
Wageningen, the Netherlands
e-mail: tropenbos@tropenbos.org
www.tropenbos.org



Contents

Preface	3
1. A conceptual approach to financial literacy	5
1.1. MSME performance and achieving a competitive advantage	5
1.2. Access to finance	7
1.3. Risk mitigation and other organizational decision making	8
2. Strategic Framework for Financial Literacy	9
2.1. Context for the framework	9
2.2. Structure of the financial literacy framework	10
2.2.1. The four core competencies	10
2.2.2. The three dimensions of financial literacy	10
2.2.3. MSME life cycle	10
2.3. Application of the framework	11
3. Financial literacy score	12
4. Designing a program	13
4.1. Set clear objectives and targets	13
4.2. Develop an action plan	13
4.3. Monitor and assess	14
5. Conclusion	15
References	16
Annex I – Useful Materials	18



Preface

Tropenbos International (TBI), in collaboration with various partners, has initiated several programs to strengthen the position of micro, small and medium enterprises (MSMEs). These programs are evolving in selected tropical landscapes and relate to selected agri-food and forest value chains. TBI recognizes that the performance of MSMEs in markets and socio-political arenas – and their ability to have a voice – is essential for achieving sustainable landscapes that are resilient to external shocks, such as changes in markets, policy or climate. To strengthen both the performance and voice of MSMEs they need to have access to resources, including finance.

In an ongoing study (Louman et al. forthcoming.¹), TBI and its partners identified lack of financial literacy as one of the main barriers to access to finance for MSMEs. They commissioned the financial services firm Financial Access² to review experiences and propose a strategy to strengthen the financial literacy of MSMEs in the landscapes and value chains where TBI and its partners work.

This report is the result of that review. It is meant to give guidance to organizations that work in tropical rural landscapes with similar objectives as TBI and its partners. The review defines a conceptual approach to financial literacy (Section 1) as the basis for a general strategy to strengthen financial literacy (Section 2). It is understood that financial literacy may take a range of forms, and that MSMEs in different landscapes and value chains will need to strengthen different aspects of financial literacy. A one-size-fits-all strategy will not work. The strategy proposed here should be seen as a framework to guide local adaptations (Section 2.3).

We hope that this document will help landscape initiatives in the tropics to develop their own strategies to strengthen the financial literacy of MSMEs with the potential to contribute significantly to sustainable development in their landscapes.

Tropenbos International
Wageningen, 20 March 2020

1 Louman, B., A. Meybeck, G. Mulder, M. Brady, L. Fremy, H. Savenije, V. Gitz and E. Trines, E. (2019). Scaling of innovative finance for sustainable landscapes. Draft occasional paper available for public consultation at: https://d1c2gz5q23tkk0.cloudfront.net/assets/uploads/2869729/asset/Scaling_of_innovative_financing_schemes_DRAFT_for_eDialogue_4_Nov_2019_.pdf?1572853228

2 www.facsglobal.com





1. A conceptual approach to financial literacy

This report provides guidance on how to create a strategic framework to increase financial literacy among micro, small and medium enterprises (MSMEs) in agricultural and forest value chains based in tropical landscapes. It looks at the various facets of the business environment that require financial literacy by business owners. This report uses the OECD/INFE definition of financial literacy: "the combination of awareness, knowledge, skills, attitudes and behaviour that a potential entrepreneur or an owner or manager of a micro, small or medium sized enterprise should have in order to make effective financial decisions to start a business, run a business, and ultimately ensure its sustainability and growth" (OECD/INFE 2018: 7). This definition is used because it is important to view the sustainability and growth of a micro, small, or medium sized enterprise as the result of the decisions made by the individuals in that enterprise. This approach helps tailor a literacy program to fit the multiple types of MSMEs that can be found in agricultural value chains.

To help understand the OECD/INFE definition of financial literacy, this section discusses the way in which financial literacy affects three facets of organizational sustainability:

- 1.1 MSME performance and achieving a competitive advantage;
- 1.2 access to finance; and
- 1.3 risk mitigation and other organizational decision making.

Each of these facets provides a platform to discuss the outcomes of financial literacy on MSMEs in emerging markets.

1.1. MSME performance and achieving a competitive advantage

MSME performance is a key driver of growth and prosperity throughout the world's nations, especially for emerging markets. Achieving good performance

requires knowledge, skill, attitude and experience with several goals: increasing profits; increasing sales; capturing market share; reducing staff turnover; reducing internal and external conflicts; and maximizing wealth (Jacobs 2001; Eniola and Entebang 2014).

One of the pillars of business literature is Barney's (1991) concept of the resource-based view (RBV) in achieving a competitive advantage. This concept sees resources as anything that might be thought of as a strength of a given firm, and comprises both tangible and intangible assets.

Tangible assets include financial capital and physical capital. According to the resource-based view, financial literacy also encompasses the intangible resources that firms must have or obtain to achieve a competitive advantage. It are these intangible assets — the ways that owners manage the firm — that are key to this report.

The knowledge-based view is an extension of the RBV theory. It states that financial literacy is a knowledge resource and as such is one of the determinants for the sustainability of MSMEs (Jappelli and Padula 2013; Lusardi, Mitchell and Curto 2010; Ye and Kulathunga 2019). According to this view, the successful management of the firm is dependent on the financial literacy and other abilities of the individuals in the firm.

Lack of financial literacy has been shown to cause poor financial management practices and lead to frequent financial mistakes (Lusardi and Mitchell 2014). Table 1 summarizes a few key studies that indicate how financial literacy affects firm performance.

Table 1: Overview of impacts of financial literacy on MSME performance

Conclusion	Author(s)
Financial literacy is important to the survival of MSMEs in both developed and developing economies	Wise 2013; Ye and Kulathunga 2019
Financial literacy is needed to cope with rapid economic changes	Huston 2010
Individuals with strong financial literacy are more likely to invest in complex assets and more likely to be successful	Widdowson and Hailwood 2007
Financial literacy has been shown to be an important factor in wealth accumulation, and in firm performance	Behrman et al. 2012
Financial literacy has become one of the most important driving forces in organizational decision-making	Allgood and Walstad 2016
Financial literacy can help firms implement sound financial management by strengthening the relationship between access to finance and firm growth	Adomako, Danso and Ofori Damoah 2016

MSMEs have a multitude of organizational aspects, such as product development, networking and knowledge potential, cost based-advantages, marketing, and product differentiation. These require different mixes of strategic resources, competitive capabilities, and human resources in order to achieve competitive advantage and performance outcomes (Morgan, Kaleka and Katsikeas 2004 and Sulaiman 2014; see also Figure 1). Particularly in the resource-based view, the ability to obtain additional resources (such as financial information) is key to achieving financial literacy and to the strategic and financial performance of an organization.

The literature on the topic of intangible resources and financial literacy distinguishes between the attainment

of knowledge and the awareness of how to apply this knowledge. Management of day-to-day activities relies on the ability to see, analyze, discuss and manage various conditions that affect the well-being of the individual or the organization (Lusardi and Tufano 2009; Rahmandoust et al. 2011; Vitt et al. 2000). Therefore, for financial literacy to have a positive effect on a firm's performance, attaining financial knowledge needs to be coupled with the awareness of how such knowledge can be applied (Lusardi and Tufano 2009). It is the effective application of financial knowledge and ability that allows MSMEs to profit through "wise planning, resource allocation, and financial service demands as to derive maximum utility" (Eniola and Entebang 2016, p. 37).

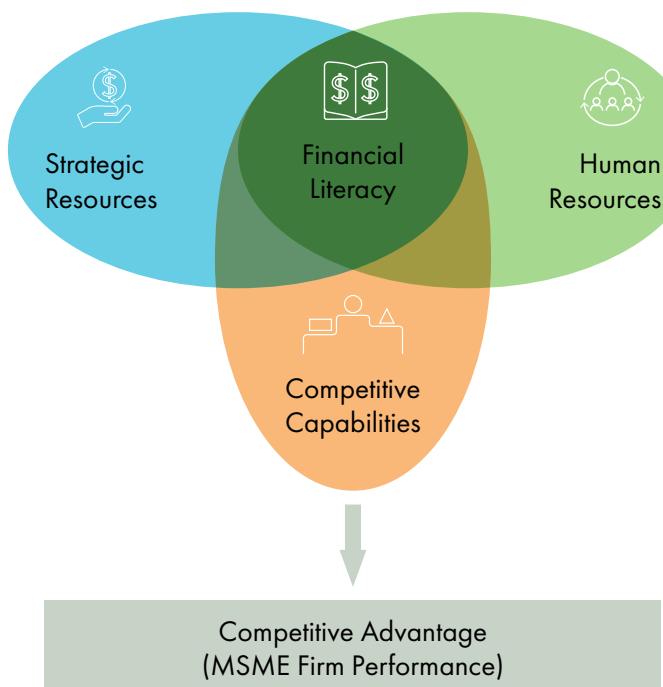


Figure 1. Overview of Financial Literacy and Competitive Advantage

Note: Adapted from Sulaiman (2014)

1.2. Access to finance

MSMEs' sustainability is influenced by their ability to obtain finance from traditional and non-traditional lending institutions (Irwin and Scott 2010; Khan et al. 2019; Ye and Kulathunga 2019). This is especially true in emerging markets, where underdeveloped financial markets and weak financial instruments lead to an inefficient allocation of financial resources among business organizations (Gambetta et al. 2019). Access to finance has been shown to be key in the sustainability of MSMEs in emerging markets due to its ability to make market entry easier, increase entrepreneurial activities, boost capacity for innovation and improve risk management skills (Yang et al. 2019).

The research on financial literacy's impact on access to finance for MSMEs has developed broadly. Using the resource-based view, Adomako, Danso and Ofori Damoah (2015: 13) showed that "financial literacy can help firms to implement sound financial management by strengthening the relationship between access to finance and firm growth." See Figure 2. RBV theory, as mentioned in 1.1, views access to finance as a tangible capital resource.

Ye and Kulathunga (2019) evaluate financial literacy's impact on access to finance by means of the pecking order theory. The pecking order theory refers to the approach that many companies and organizations take in prioritizing their sources for finance, usually preferring to recur to internal funds before

entering into external debt, or (lastly) allowing external equity (Myers's (1984)).

MSMEs in emerging markets will likely lack the internal funds necessary for growth and will require access to external finance. This lack of internal financing, in addition to weak financial instruments and a lack of financial literacy, means that these MSMEs will have difficulty reaching sustainability. Ye and Kulathunga's findings (2019: Table 5, page 13) show that "financial literacy has a positive impact on access to finance." They furthermore state that their findings are consistent with those of Carbo-Valverde, Rodriguez-Fernandez and Udell (2016) that financial literacy is positively related to awareness of various sources of finance and to the ability to identify appropriate sources of finance. Adomako, Danso and Ofori Damoah (2016) believe that the positive connection between financial literacy and access to finance and firm growth is due to the fact that financial literacy enables managers of MSMEs to acquire and exploit new financial knowledge. This enables their firms to improve the efficiency and quality of their financial services.

It is important to remember that it is not the MSMEs who have financial literacy but the individuals within those MSMEs. Therefore, to gain better access to finance and qualify for external debt or profitable equity deals, financial literacy must be acquired by all actors within the MSME.

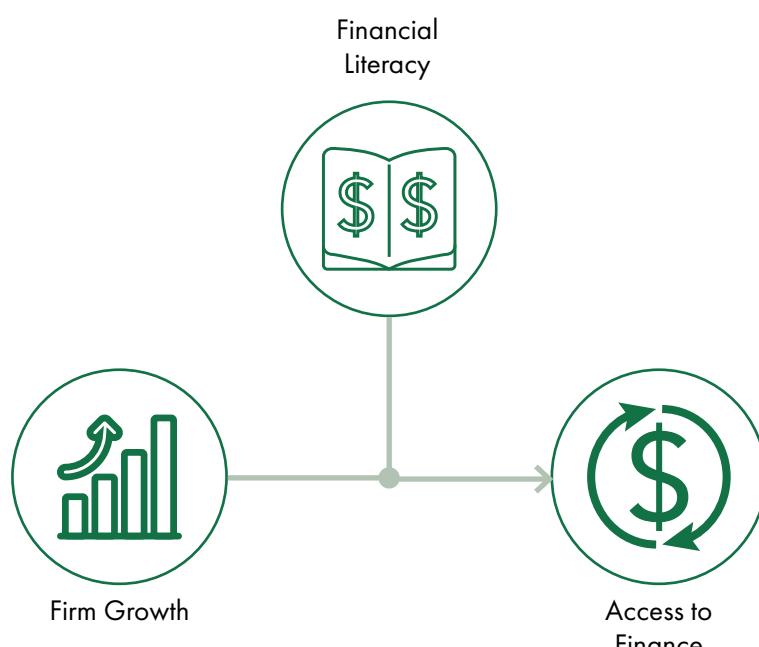


Figure 2. Financial Literacy and Access to Finance

Note: adapted from Adomako, Danso and Ofori Damoah 2016

1.3. Risk mitigation and other organizational decision making

Financial literacy also encompasses the awareness, skills, attitudes and behaviours of a business owner. Attitudes and behaviours have a big impact on organizational strategy and decision-making. MSMEs in emerging markets operate in a volatile economic market, and owners and managers must efficiently analyze and interpret key events in order to manage their risk. The mitigation of financial risk by MSMEs is integral to their sustainability and growth. Rauch and Frese (2000) have shown that financial risk attitude — in other words, a willingness to manage risks — has been measured as a positive psychological personality trait of entrepreneurs. Table 2 summarizes some of the literature on risk management.

Ye and Kulathunga (2019: 6) suggest that the indirect effects of financial literacy can be explained by the dual process theory: "thoughts are affected by both cognitive processes and intuition." Intuition is considered to include views, judgements, understandings and beliefs that cannot be empirically verified or rationally justified. The dual process theory also states that individuals who use intuition are highly influenced by their emotions (Chan and Park 2013). In contrast, cognitive processes are said to depend on the mental abilities involved in acquiring, transforming, evaluating, elaborating, storing and using knowledge. This is important to financial literacy because the knowledge and intangible resources considered by the RBV theory might not solely explain why certain decision-making processes take place. The use of intuition means that previous experiences and/or other events can play a significant role in the decision-making process and in risk management.

Table 2: Effect of financial risk attitude on performance

Conclusion	Author(s)
Financial risk attitude allows a firm to identify the opportunities and risks that are associated with business and financial decisions	Willebrands, Lammers and Hartog 2012
Financial risk attitude influences the financial decision-making process of organizations	Gärling et al. 2009
Greater financial literacy makes it easier for a firm to take advantage of increased financial market competition because financially literate firms have better financial knowledge and risk management skills	Widdowson and Hailwood 2007
Financial risk attitude has a positive effect on MSME sustainability	Ye and Kulathunga 2019
Financial risk attitude improves performance, because it enables firms to identify opportunities and risks	Willebrands, Lammers and Hartog 2012
Financial risk attitude is an important predictor of MSME performance	Earle and Sakova 2000



2. Strategic Framework for Financial Literacy

2.1. Context for the framework

The purpose of this report is to provide a strategic framework for civil society organizations (CSOs) and other practitioners to enhance the financial literacy of MSMEs in the agriculture and forest value chains.

This report builds on the OECD/INFE Core Competencies Framework on Financial Literacy for MSMEs (OECD/INFE 2018; see Figure 3). That approach provides a strong foundation to support the development of financial education initiatives targeting MSMEs; and assessment structures for measuring the financial literacy of MSMEs. The OECD/INFE frame-

work was designed for MSMEs with a maximum of 100 employees and for potential entrepreneurs.

It is important to stress that the context and local conditions will be different in each country. For instance, the adoption and relevance of digital financial services differ per country and value chain. In addition, financial structures and financing needs differ according to the stage and age of an MSME. Some elements, such as credit reporting, might be specific to the national context. Therefore, it is strongly recommended that tailored approaches be developed for each country and landscape, using the proposed framework in this study as guidance.

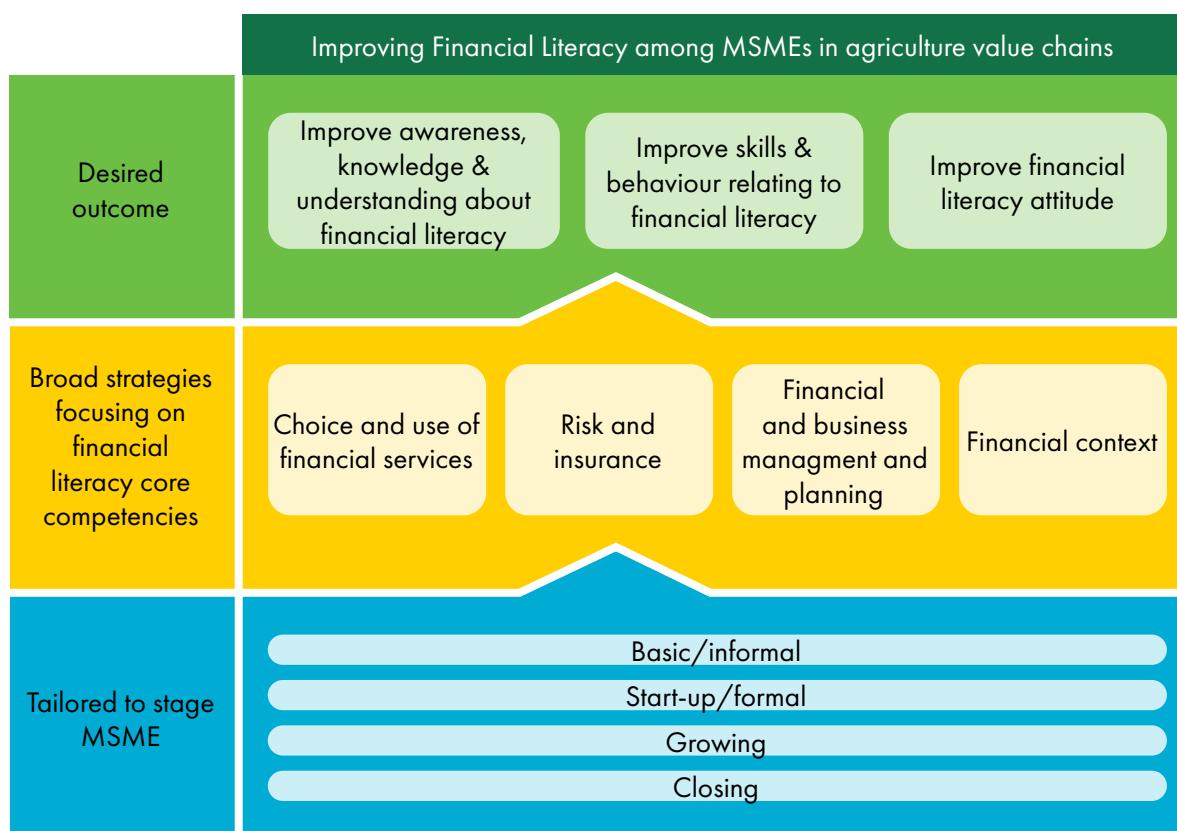


Figure 3. provides an overview of improving financial literacy adapted from OECD/INFE 2018.

Note: Adapted from OECD/INFE (2018).

2.2. Structure of the financial literacy framework

This flexible framework to enhance financial literacy consists of three main components:

1. four core competencies;
2. three dimensions of financial literacy; and
3. the life cycle of the MSME.

These three components correspond with the definition of financial literacy and organizational characteristics discussed above.

2.2.1. The four core competencies

The first component of the framework comprises the four core competencies of financial literacy: (i) choice and use of financial services; (ii) financial and business management and planning; (iii) risk and insurance; and (iv) financial context.

In order to improve financial literacy for MSMEs these four core competencies are required. Each of the competencies can be divided into several key topics (see Table 3). These competencies and topics do not have a specific order and are not cumulative. The owner/manager of an MSME may be knowledgeable in one competency, but lack experience in another competency.

2.2.2. The three dimensions of financial literacy

The second component of the framework comprises the three dimensions of financial literacy:

- awareness, knowledge and understanding;
- skills and behaviour; and
- attitudes.

These dimensions are very useful in computing a financial literacy score. The financial literacy score is elaborated in Section 3.

2.2.3. MSME life cycle

The third component of the framework is the stage in the life cycle of the MSME. There are four stages: (i) basic/informal; (ii) starting/becoming formal; (iii) growing; and (iv) closing.

In the design of financial literacy programs, it is important to be aware of this aspect of the MSME, since the required level of financial literacy and the specific needs may differ at each stage:

- **Basic/informal:** this includes basic competencies that business owners and managers of MSMEs should have for very small business operating in the informal sector. MSMEs in this sector often lack access to formal financial services.
- **Start-up/becoming formal:** specific competencies are required when business owners and managers want to set up the business formally.
- **Growing:** these competencies are needed beyond the start-up phase and help the MSME to grow. For instance, this can include the hiring process for new employees.
- **Closing:** the competencies required to close the business, including activities related to sale, liquidation, succession or even bankruptcy.

Please note that the four core competencies (see 2.2.1) are often relevant throughout the whole life cycle of an MSME. However, understanding what stage an MSME is at will provide guidance to identify its specific needs in the targeted value chain. In landscapes in emerging markets it is expected that many MSMEs will be in the basic/informal or start-up/

Table 3: Topics of core competencies

Core competency	Topics
Choice and use of financial services	<ul style="list-style-type: none"> • Basic payment and deposit services • Financing the business
Financial and business management and planning	<ul style="list-style-type: none"> • Registration, taxes and other legal requirements • Keeping records and accounting • Short-term* financial management • Planning beyond the short term
Risk and insurance	<ul style="list-style-type: none"> • Personal risk and insurance • Business risk and insurance
Financial context	<ul style="list-style-type: none"> • External influences • Financial protection for MSMEs • Financial information, education, advice

Source: OECD/INFE 2018. * The length of the term can be adapted to the specific country and supply chain context.

becoming formal stage. Therefore, programs should be designed to provide tailor-made content that is relevant to their specific needs. For instance, information on financing a business will be relevant for MSMEs that are in the stage of formally setting up the business, since it will help them be aware of the various financing options, understand the decision-making process of financial institutions, and know what they can do to improve their creditworthiness.

2.3. Application of the framework

The OECD/INFE (2018) report provides a detailed overview of the required level of knowledge, skills and attitude for each area of competency and each stage of development of the MSME.

One of the relevant competencies for MSMEs in agriculture and forest value chains in emerging markets is financial and business management and planning, particularly short-term financial management. It is important for MSMEs to understand basic financial management and cash flows.

For MSMEs in the basic/informal stage, it is necessary to understand the difference between personal and business financing and keep these two separated throughout the life time of the business. Next, once the difference between business and personal finance is understood by MSMEs in the start-up/formal phase, awareness of factors that influence cash flow, such as loan repayments, are very relevant. Hence, interventions should take into account these competencies, keeping in mind the stage of development and the desired change in awareness, behaviour and attitude.

To design a financial literacy strategy in a particular landscape and/or value chain, MSMEs can be grouped in terms of competencies, based on their stage of development and level of financial literacy.

Table 4 summarizes an example of the skills required for a specific topic within one of the four core competencies for the two development stages most likely to be encountered among MSMEs in emerging markets. The same approach can be used for every competency and topic.

Table 4: Example of a specific topic within a core competency for the two stages of development most likely to be encountered among MSMEs in emerging markets

Core Competency: Financial and business management and planning			
Topic within the core competency: Short-term financial management			
Stage of development	Dimension of financial literacy		
	Awareness, knowledge and understanding	Skills and behaviour	Attitudes
Basic/informal	Understanding why personal and business finance should be separated and the potential risks if this is not done properly	Making a distinction between personal and business finances	Having the determination and self-control to keep personal and business finance separate
Start-up/formal	Understanding the factors that have an impact on cash flow, such as loan repayments	Being able to apply ratios and comparisons with industry ratios for monitoring and managing the business	Staying focused, organized and determined; for example, to make payments on time

Note: adapted from OECD/INFE 2018



3. Financial literacy score

A financial literacy score for each MSME can be calculated based on the three components of the framework (see Section 2.2).

Understanding the financial literacy of an MSME can help to identify how best to design interventions. A useful method is the survey that was jointly developed by OECD/INFE to measure the financial literacy of owners of MSMEs (OECD/INFE 2019).

The survey was developed through an iterative process and included testing in seven volunteering countries in 2018 and 2019. The survey was designed for owners or managers of an MSME, not the MSME as a whole. The questions were developed around the four competencies and three dimensions of financial literacy. The survey questions can be adapted to the specific context in order to be fully relevant.

The outcome of the survey is a financial literacy score, which is based on the answers from the respondents. The financial literacy score is specific to business issues rather than personal ones.

The financial literacy score is helpful to understand the current status of financial literacy and the potential

impact of interventions. The score is generated by summing up the number of correct responses to the survey questions. These are expressed as a percentage of the maximum possible score. This results in a score that is transparent, replicable and comparable. The overall score gives a good indication of financial literacy within the landscape or MSME; however, strategies to improve financial literacy also need to consider the scores for each individual competency in order to be most effective.

Table 5 summarizes how the survey questions cover the main components of the current financial literacy framework. The overall financial literacy score is based on the sum of the knowledge, attitude and behaviour scores. The sum of the three dimensions is expected to range from 0 to 23 points, and the overall financial literacy score is expressed as a percentage of the maximum score. Financial behaviour (column 2) counts for almost half of the score (11 of 23); financial knowledge (column 3) counts for about one-third (8 of 23); and financial attitude (column 4) counts for the remaining score (4 of 23). A full overview of the questionnaire and suggested analysis can be found in OECD/INFE (2019).

Table 5: OECD/INFE survey instrument structure

Competencies	Behaviour	Knowledge	Attitude	Total
Basic payment and deposit services	2	–	–	2
Financing the business	1	2	1	4
Registration, taxes and other legal requirements	–	–	–	–
Keeping records and accounting	1	1	–	2
Short-term financial management	1	2	–	3
Planning beyond the short term	2	1	2	5
Risk and insurance	2	1	1	4
External influences	1	1	–	2
Financial protection for MSMEs	1	–	–	1
Financial information, education and advice	–	–	–	–
Total	11	8	4	23



4. Designing a program

The framework and financial literacy score will form the basis for designing programs that are tailored to the specific needs of the MSME.

The steps to take in designing a program are based on the components in the Financial Inclusion Strategies Reference Framework of the World Bank (Pearce and Ortega 2012). Even though that approach primarily focuses on financial inclusion, financial literacy is an important part of achieving financial inclusion, and therefore part of the World Bank approach is used to identify the steps to take.

The framework of the World Bank (Pearce and Ortega 2012: 7) includes six key components for the development of a successful financial inclusion program:

- i. stock-taking (data and diagnostics);
- ii. targets/objectives;
- iii. strategy design or modification;
- iv. public sector actions;
- v. private-sector actions; and
- vi. progress monitoring.

Component i (stocktaking, data and diagnostics) refers to a baseline assessment and needs identification. These are already incorporated in this financial literacy framework and therefore are not further elaborated here.

Components ii (targets and objectives) and iii (strategy design or modification) are relevant to financial literacy, because they help to set the goals and the design of the strategy. Components iv and v are less relevant to a financial literacy strategy, since they focus more on enhancing an overall financial inclusion strategy. (Although financial inclusion is an important element that CSOs should include in their programs, it is not part of the scope of work of this report.) Component vi (monitoring progress), will help to measure and maintain success and adapt the strategy if needed.

4.1. Set clear objectives and targets

The financial literacy score will identify the current level of financial literacy of the MSMEs in the agriculture and forest value chains. The framework will help to identify the needs of the MSME. Together, the score and framework are important in setting objectives and targets for the financial literacy strategy. The objectives and targets should be set within a certain timeline.

These objectives and targets can be set with involvement from the private sector. Some companies are actively promoting the Sustainable Development Goals in their business strategy, realizing the important role of MSMEs in agriculture supply chains as critical drivers of economic growth and prosperity. CSOs could therefore engage with financial service providers to co-design training in savings and financial products; this would also help them to reach an untapped market. In Indonesia, for instance, Mastercard and Commonwealth Bank work together to promote financial literacy and inclusion programs to women who own businesses.

These are some examples of financial literacy target indicators:

- number of business owners who completed the financial literacy training;
- percentage increase in the level of financial knowledge of business owners; and
- number of business owners who can distinguish between personal and business finances.

4.2. Develop an action plan

A clear action plan, or modification of an existing strategy, is required to identify roles and responsibilities and align activities to reach objectives and targets. It is also important to identify a coordinating mechanism or institutional structure to ensure that the plan or strategy is implemented effectively.

Financial literacy interventions might not always be necessary throughout the project cycle of CSOs' programs. The need for financial literacy is highly dependent on the specific activities and needs of MSMEs. In the case of replanting, for example, farmers will have a long-term financing need. Better financial planning and cash flow assessment are required for this task compared with a short-term loan to purchase fertilizer or seeds.

Based on the model from BRAC and World Vision (2017), the sequence of financial literacy intervention can be divided into three phases: (i) pre-program preparation; (ii) training in the graduation model;³ and (iii) post-program activities. Pre-program preparation includes a needs assessment and intervention design (the OECD/INFE 2019 survey discussed in Section 3 provides the main inputs for this phase).

Any financial literacy program should be developed with the four core competencies of financial literacy in mind: choice and use of financial services, financial and business management and planning, risk and insurance, and financial context. Training topics

should derive from the needs assessment and desired outcomes should be determined through the financial literacy score and framework application.

Potential training topics include cash flow management and accounting. The training could be conducted individually or within a group. The training can be reinforced by providing advice and coaching during MSME visits and demonstration projects, such as basic cash flow management (GIZ 2017). The post-program activities can create linkages to other entities, such as financial service providers.

4.3. Monitor and assess

The specific targets and objectives for financial literacy, as well as the effectiveness of service delivery, should be monitored and assessed. Other aspects, such as training, and business associated risk should be monitored and assessed as well. This will help to set up a feedback mechanism to revise the strategy if needed.

3 The goal is to "graduate" households from extreme poverty to sustainable pathways (BRAC and World Vision 2017: 10).



5. Conclusion

This framework is proposed as a way to enhance financial literacy in the programs of Tropenbos across agriculture and forest value chains and countries.

Financial literacy affects three aspects of organizational sustainability. First, it plays a significant role in the ability of a MSME to attain the resources required to create a competitive advantage. Second, higher levels of financial literacy among all players in the value chain will help them gain better access to finance and qualify for profitable equity deals. Third, financial literacy can affect a business owner's or manager's risk attitude, allowing him or her to be able to identify the opportunities and risks that are associated with business and financial decisions, hence improving a MSME's sustainability.

This framework is adapted from the OECD/INFE (2018). The four competencies of the current framework are (i) choice and use of financial services; (ii) financial and business management and planning; (iii) risk and insurance; and (iv) financial context.

These competencies are required throughout the life cycle of an MSME.

Applying the framework to literacy programs results in a range of outcomes that are important to sustain or improve financial literacy among MSME business owners and managers and potential entrepreneurs.

The current level of financial literacy and the impact of financial literacy programs can be measured with the support of a financial literacy survey (OECD/INFE 2019). The survey provides clear guidance on data collection and analysis (see Annex 1).

To increase financial literacy among MSMEs in agriculture and forest value chains, it is important to realize that the context and local conditions in each country will be different. Therefore, financial literacy programs have to be tailored to specific needs and requirements in order to achieve the desired results and impacts.

References

- Adomako, S., A. Danso and J. Ofori Damoah. "The moderating influence of financial literacy on the relationship between access to finance and firm growth in Ghana." *Ventur. Cap.* 18: 43–61, 2016.
- Allgood, S. and W.B. Walstad. "The effects of perceived and actual financial literacy on financial behaviors." *Econ. Inq.* 54: 675–697, 2016.
- Barney, J. "Firm resources and sustained competitive advantage." *J. Manag.* 17 (1): 99–120, 1991.
- Behrman, J.R., O.S. Mitchell, C.K. Soo and D. Bravo. "How financial literacy affects household wealth accumulation." *Am. Econ. Rev.* 102: 300–304, 2012.
- BRAC and World Vision. *Ultra Poor Graduation Handbook*. 2017.
- Chan, C.S.R. and H.D. Park. "The influence of dispositional affect and cognition on venture investment portfolio concentration." *J. Bus. Ventur.* 28: 397–412, 2013.
- Carbo-Valverde, S., F. Rodriguez-Fernandez and G.F. Udell. "Trade credit, the financial crisis, and SME access to finance." *J. Money Credit Bank.* 48: 113–143, 2016.
- Earle, J.S. and Z. Sakova. "Business start-ups or disguised unemployment? Evidence on the character of self employment from transition economies." *Labour Econ.* 7: 575–601, 2000.
- Eniola, A.A. and H. Entebang. "SME firms performance in Nigeria: Competitive advantage and its impact." *Int. J. Res. Stud. Manag.* 3: 75–86, 2014.
- Gambetta, N., P. Azadian, V. Hourcade and M.E. Reyes. "The financing framework for sustainable development in emerging economies: The case of Uruguay." *Sustainability* 11 (4): 1–24, 2019.
- Gärling, T., E. Kirchler, A. Lewis and F. Van Raaij. "Psychology, financial decision making, and financial crises." *Psychol. Sci. Public Interest* 10: 1–47, 2009.
- GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit). *Analysis of GIZ approaches to improve access to agricultural finance*. Eschborn: Deutsche Gesellschaft für Internationale Zusammenarbeit, 2017.
- GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit). *Experiences with the Farmer Business School (FBS) approach in Africa: Sector Network Rural Development Africa (SNRD)*, 2015.
- Huston, S.J. "Measuring financial literacy." *J. Consum. Aff.* 44: 296–316, 2010.
- Irwin, D. and J.M. Scott. "Barriers faced by SMEs in raising bank finance." *Int. J. Entrep. Behav. Res.* 16 (3): 245–259, 2010.
- Jacobs, A. *Financial Management IV (FMA 401-V): Study guide* 1. 3rd ed. Pretoria: Technikon, 2001.
- Jappelli, T. and M. Padula. "Investment in financial literacy and saving decisions." *J. Bank. Financ.* 37: 2779–279, 2013.
- Khan, N.U., S. Li, M.N. Saifdar and Z.U. Khan. "The Role of Entrepreneurial Strategy, Network Ties, Human and Financial Capital in New Venture Performance." *J. Risk Financ. Manag.* 12: 1–16, 2019.
- Lusardi, A. and O.S. Mitchell. "The economic importance of financial literacy: Theory and evidence." *J. Econ. Lit.* 52: 5–44, 2014.
- Lusardi, A. and P. Tufano. *Debt Literacy, Financial Experiences, and Overindebtedness*. NBER Working Paper, No. 14808, 2009.
- Lusardi, A., O.S. Mitchell and V. Curto. "Financial literacy among the young." *J. Consum. Aff.* 44: 358–380, 2010.
- Morgan, N.A., A. Kaleka and C.S. Katsikeas. "Antecedents of export venture performance: A theoretical model and empirical assessment." *Journal of Marketing* 68(1), 90–108, 2004.
- Myers, S.C. "The capital structure puzzle." *J. Financ.* 39: 574–592, 1984.
- OECD/INFE (Organisation for Economic Co-operation and Development/International Network on Financial Education). *OECD/INFE Survey Instrument to Measure the Financial Literacy of MSMEs*. 2019.
- OECD/INFE (Organisation for Economic Co-operation and Development/International Network on Financial Education). *Core Competencies Framework on Financial Literacy for MSMEs*. 2018. www.oecd.org/finance-financial-education/OECD-INFE-core-

- competencies-framework-on-financial-literacy-for-MSMEs.pdf.
- Pearce, D. and C.R. Ortega. *Financial Inclusion Strategies: reference framework*. Washington, D.C.: World Bank, 2012.
- Rahmandoust, M., I. Shah, M. Norouzi, H. Hakimpoor and N. Khani. "Teaching financial literacy to entrepreneurs for sustainable development." *OIDA International Journal of Sustainable Development* 2(12): 61–66, 2011.
- Rauch, A. and M. Frese. "Psychological approaches to entrepreneurial success: A general model and an overview of findings." *Int. Rev. Ind. Organ. Psychol.* 15: 101–142, 2011.
- Sulaiman, N. *Clarifying the financial literacy dimensions for the performance of small and medium enterprises*. Paper presented at the Economic Forum of Entrepreneurship and International Business, London University Institute in Paris, Paris, France, 2014.
- Vitt, L.A., C. Anderson, J. Kent, D.M. Lyter, J.K. Siegenthaler and J. Ward. *Personal finance and the rush to competence: Financial literacy education in the U.S. A national field study*
- commissioned and supported by the Fannie Mae Foundation. Middleburg, Virginia: Institute for Socio-Financial Studies, 2000.
- Widdowson, D. and K. Hailwood. "Financial literacy and its role in promoting a sound financial system." *Reserv. Bank N. Z. Bull.* 70: 37–47, 2007.
- Willebrands, D., J. Lammers and J. Hartog. "A successful businessman is not a gambler. Risk attitude and business performance among small enterprises in Nigeria." *J. Econ. Psychol.* 33: 342–354, 2012.
- Wise, S. "The impact of financial literacy on new venture survival." *Int. J. Bus. Manag.* 8: 30–39, 2013.
- Yang, Y.; X. Chen, J. Gu and H. Fujita. "Alleviating Financing Constraints of SMEs through Supply Chain." *Sustainability* 11 (3): 1–19, 2019.
- Ye, J. and K. Kulathunga. "How does financial literacy promote sustainability in SMEs? A developing country perspective." *MDPI Sustainability Access Journal* 11(10): 1–21, 2019.

Annex I – Useful Materials

Ultra-Poor Graduation Handbook from World Vision and Brac (BRAC and World Vision 2017)

The handbook provides guidance on how to plan and implement the World Vision Ultra-Poor Graduation Project Model, which builds on the core principles of the graduation model (the goal of which is to “graduate” households from extreme poverty to sustainable pathways) and adapts it to existing World Vision programs and business processes. The handbook provides key insights on how to positively affect well-being objectives among the most vulnerable families and their children across the world. The handbook was developed in collaboration with BRAC and is informed by BRAC’s experience of operating and adapting the graduation model to various contexts for more than sixteen years.

Link: www.wvi.org/sites/default/files/WV%20Ultra-Poor%20Graduation%20Handbook.pdf

Experiences with the Farmer Business School (FBS) approach in Africa (GIZ 2015)

The Farmer Business School (FBS) is an approach developed by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) with the support of the Bill and Melinda Gates Foundation and member companies of World Cocoa Foundation. It increases the entrepreneurial skills of smallholder farmers. FBS focuses on improving farmers’ business skills as an important prerequisite for the adoption of improved techniques and investments in agricultural production. FBS aims to change the mind-set of farmers by making them aware of market opportunities and possibilities to improve productivity, family income and nutrition. The core of its modules is income-oriented decision-making based on cost-benefit analyses of various technologies for a lead crop and two other food crops, combined with development of a strategy to diversify income. Monitoring results and independent studies demonstrate the effectiveness and impact of FBS, and the increasing demand for training from farmers, as well as training evaluations by farmers, reveal how well FBS fits their needs.

Link: www.srnd-africa.net/wp-content/uploads/2017/04/GIZ_Studie-SNRD_EN_Webversion_150914.pdf

The OECD/INFE Core Competencies Framework on Financial Literacy for MSMEs (OECD/INFE 2018)

This framework on financial literacy for MSMEs and potential entrepreneurs was developed by OECD’s International Network on Financial Education. The framework is a policy tool that highlights a range of financial literacy outcomes. These outcomes may be important to sustain or improve the financial literacy of MSMEs owners and managers and potential entrepreneurs in their experience in starting, running, growing, or closing a business. The framework can be adjusted to the particular countries and value chains that Tropenbos is active in. It is the basis for the framework in this report.

Link: www.oecd.org/finance/financial-education/OECD-INFE-core-competencies-framework-on-financial-literacy-for-MSMEs.pdf

OECD/INFE Survey Instrument to Measure the Financial Literacy of MSMEs (OECD/INFE 2019)

This is a survey for measuring financial literacy among owners of MSMEs. It was developed by OECD’s International Network on Financial Education through an iterative process that included a pilot test in seven volunteering countries in 2018–19. This version was approved at the 11th meeting of the Technical Committee of the OECD/INFE in Capetown, South Africa, on 22 May 2019. The survey instrument is shared on the OECD website for institutions and researchers who wish to use it autonomously. The OECD Secretariat will seek opportunities to organise a coordinated international measurement exercise in the future. Institutions and researchers who plan to use this questionnaire should inform the OECD/INFE Secretariat at SecretariatINFE@oecd.org.

Link: www.oecd.org/financial/education/2019-survey-to-measure-msme-financial-literacy.pdf



Tropenbos International
P.O. Box 232
6700 AE Wageningen
the Netherlands
①: +31 317 702020
✉: tropenbos@tropenbos.org

-  www.tropenbos.org
-  facebook.com/TropenbosInternational
-  [@Tropenbos \(twitter.com/tropenbos\)](https://twitter.com/tropenbos)
-  linkedin.com/company/tropenbos-international
-  youtube.com/Tropenbos