CATHOLIC RELIEF SERVICES

Price Risk Management for Coffee Producers' Organizations in Latin America

ENDLINE REPORT

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Authors

Sarah Page | Technical Advisor for Agriculture and Livelihoods | Catholic Relief Services

Maria Veronica Gottret | Senior Technical Advisor for Agriculture and Livelihoods Research | Catholic Relief Services

Jorge Madrigal | Program Manager | Catholic Relief Services | Nicaragua

Cover photo by Sarah Page for CRS

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Acronyms

CPO	Coffee Producers' Organization
C-Price	Coffee C Futures Contract Price
CRS	Catholic Relief Services
PRM	Price Risk Management

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Executive Summary

Oikocredit, Fair Trade USA and Catholic Relief Services implemented a three-year project to support smallholder coffee farmers, organized in coffee producers' organizations (CPOs), to strengthen their price risk management skills to mitigate the effects of price volatility in their trading operations. This upgrading process strengthened their use of both physical and financial price risk instruments to manage price risk but placed most attention on building the CPO skills in financial strategies to manage price risk.

The current coffee trading practice is for CPO staff to manage the physical instruments and have external trading houses such as RC Stone and social lenders like Oikocredit and Root Capital, to provide CPOs with financial price risk management. This project was designed to enable 22 leading smallholder coffee CPOs in South and Central America to take on the responsibility of managing the financial price risk strategies themselves. Although the financial tools have been available for many years, most CPOs were reluctant to take on this role, because they lacked the specialized knowledge and experience within the cooperative leadership and the board to use them effectively and also the CPO's lacked the necessary financing to purchase the trading options or price insurance mechanisms.

The project addressed these challenges at the CPO level in four ways by (i) strengthening the organizational, financial and managerial knowledge and practices of staff and board members, (ii) developing a PRM toolkit to build the knowledge and confidence of CPO staff in finance-based price risk management strategies; (iii) facilitating peer to peer learning; and (iv) training CPO staff in the use of financial mechanisms for price risk management.

Changes in these skills and practices of the managers and board members were assessed at baseline and endline using a specific analysis which assessed (i) competencies, (ii) organizational practices and (iii) financial performance. A critical assumption in the project theory of change was that coffee CPOs required effective governance mechanisms in place to successfully implement the full range of PRM strategies. This aspect was assessed as an additional (iv) governance study.

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KEY FINDINGS

Competency gains: The analysis showed that competency levels of project participants, including managers and board members, improved substantially. The percentage of management team who reached the highest level or were scored as "Fully Competent" increased from 8% to 40%, and the percentage of board members reaching "Fully Competent" increased from 19% to 53%. The strongest competencies for management team members at endline were "Information Monitoring" followed by the "Strategic Implementation of PRM." Although some gains were made in the "PRM with Financial Strategies Competency," 53% of respondents are still only at a basic level.

Organizational gains: Improvements in organizational practices for PRM were less robust. Organizational practice scores did not exceed 3.0 on a 5.0 scale. However, the degree that CPOs are effectively managing PRM with financial strategies increased by 37% on average, and most importantly the use of financial strategies is now on par with the use of physical strategies. This suggests that improvements in PRM competency levels did result in credible and improved changes in organizational practices. The lower gains made by CPOs in managing physical PRM strategies was due to the high levels

of using these methods at baseline. Overall figures showed that while 100% of the traded volume was covered by physical strategies, only 8% was traded using financial strategies.

Financial performance: At endline there were limited increases in the number of CPOs receiving lending and investing in the adoption of financial PRM strategies, namely the use of options. However, the number of CPOs that fulfilled the requirements to access lending for the purchase options increased from two to twenty, and eight CPOs received financing from Oikocredit at endline. The amount of lending used to adopt financial strategies also increased six-fold from $100,000 to $700,000. As the number of organizations receiving financing only increased by three (from 9 to 12), this suggests that for some organizations the use of options is moving from a pilot organizational practice into a mainstream practice, which is strong evidence of real change. The number of CPOs that opened and are managing a brokerage account also increased from two to eleven, and this also reflects an improved capacity and confidence of CPOs to manage the financial instruments for PRM themselves. At the time of the endline analysis, the PRM tool kit did not include the web-based Price Risk Simulator, as it was not yet operational, therefore, no organizations used this in their training or PRM strategy development. The lack of a simulator which could be used by the CPO staff and board members was a major limiting factor in the CPO's being able to test their knowledge in a virtual testing environment, and the lack of more hands on practice may explain the lower level of CPO's using financial strategies in live trading.

A more in-depth financial analysis will be provided in the project final evaluation and this is being conducted by financial specialists working with Oikocredit. However, the endline analysis suggests limited financial performance gains were made. A critical reason for the limited financial performance may have been because the project took place against the backdrop of a global coffee price crisis which likely affected these outcomes. Despite the rock bottom prices, the net coffee operation margin did increase by 14%, but it did not reach the target of 30%. Interestingly, the average net coffee operation was higher for the CPOs that implemented financial strategies for PRM at $21/QQ versus $9/QQ for those that did not. Thus, we should conclude that the project only partially achieved the strategic objective of mitigating price volatility faced by smallholder farmers, as the fluctuation in price received by CPO members was higher than the Coffee C Futures Contract price during the same time period. However, fluctuation in coffee trade gross margin was reduced at endline from a standard deviation of $13 to $8 per quintal. There were no differences in these two results between those organizations that implemented financial PRM strategies and those that did not. Additional financial analysis that will be provided in the final evaluation report will further explore what contributed to a lack of improvement in financial performance outcomes despite substantial gains in individual competencies and limited gains in organizational practices for PRM.

Governance: From the perspective of board members and the management team, organizational governance was generally high, and this contributed to the positive changes in implementation of PRM and positively influenced organizational performance, confirming project assumptions. However, there are three key areas that could be improved, 1) more delegation and empowerment of the management team so that they can make more timely decisions, 2) improving the understanding of member preferences for higher or more stable prices, and 3) improving social cohesion within the organization. Lastly, the governance assessment and competencies' assessment revealed that there continues to be a perception of low member buy-in on the part of management team members and more work needs to be done to bridge this confidence gap between members and their leaders.

RECOMMENDATIONS

The results and conclusions of the endline assessment led to the following recommendations to inform future initiatives to continue this process of supporting CPO's in better PRM management:

1. The transition for CPO's from a reliance on physical PRM methods to a more balanced and more sophisticated use of both physical and financial PRM strategies to protect their long-term revenue interests is not an easy step to make. There are considerable risks in use of the financial instruments and losses can be high if inexperienced managers invest unwisely. This project made good progress in terms of building the competency of target managers and board members and clearly there were changes in behavior at the organizational level. Nevertheless, more work is required to continue this process, and to get more of the next tier of CPO's to use both physical and financial PRM strategies and shift from learning to putting their knowledge into action. The project revealed that although many of the CPO's opened brokerage accounts, and were monitoring data, a large number were not yet able to implement the new PRM strategies and also few were able to find the necessary financing for the PRM tools, due to competing needs for finance for working capital.
2. The data collection process revealed substantial turnover of management team and board members. Thus, it is important to encourage project participants, both board members and management team members, to communicate learnings and contribute to building the capacity of other team members to ensure the long-term impact and sustainability of project interventions.
3. Future projects should ensure that key training methods and products such as the Price Risk Management Simulator are operational, to enable managers to practice their new skills in a virtual trading environment, prior to entering the new skills in the live trading environment. The lack of the simulator may explain why many CPO's scored well in knowledge and competency but were less keen to put ideas and new skills into practice.
4. Actions should be taken to learn more about the low perception of organization members' and their commitment to PRM, and confidence in decision-making around PRM. A continued lack of members' buy-in is likely to continue to prevent CPO's and their staff from effectively implementing PRM strategies. This may require more discussions about the full range of PRM methods and effective knowledge and information materials being made available at the PRM training sessions that specifically target the members. Providing members with information about how the use of physical and financial methods has increased revenues, reduced costs and provided a more stable return to the organization and the members is also an important channel of communication that needs to be opened and strengthened.
5. A major aim of this project was to address the finance gap to purchase contract options. The additional financial analysis that will be part of the final project evaluation should provide clear information on whether the 45% of CPOs that did not access financing for the purchase of options were unable to access funding or did not seek lending for that purpose, and if this is the case, why that is so? This information would help to explain the extent to which the organizations were able to access loans if so desired. Additional financial analysis to address this issue is being supported by a follow-on study by Oikocredit.

Project Overview

Oikocredit, Fair Trade USA and Catholic Relief Services implemented a three-year activity to support smallholder coffee farmers organized in coffee producers' organizations(CPOs) to use financial instruments for managing price risk to mitigate the effects of price volatility in their trading operations, in addition to strengthening their use of existing instruments based on inventory management, selling contracts and certifications. Annual trade in coffee is valued at over 20 billion USD but coffee markets are prone to large price variations, driven by major swings in annual production levels, which are affected by area planted, climate, pest outbreaks, technical innovations in production, harvesting and processing and consumer trends. Price Risk Management (PRM) is the mitigation of risks associated with financial loss when buying and selling coffee as prices fluctuate over time. Price risk is mitigated using two main strategies: (1) physical management of product inventories, selling contracts and certifications; and (2) financial tools such as call and put options (or derivatives), a type of price insurance, and futures contracts.

Price Risk Management (PRM) is not a new concept. Coffee producer organizations (CPOs) have been using physical strategies for managing price risk for many years. There are opportunities to improve physical inventory management and clearly defining open position limits. However, physical strategies are not enough in the modern trading environment and CPO need to complement physical strategies with financial tools to improve their trading performance.

Up to now, most CPOs have accessed financial instruments for managing price risk management through their trading partners, but there is increasing resistance from these companies to continue this practice. As a result, buyers want to pass this function onto the CPOs. Some CPOs have started using financial strategies, but most struggle with executing these complex instruments because they lack the knowledge, expertise and finances to support these more complicated buying options and the additional finances competes with needs for working capital and infrastructure investments.

Although many CPOs in the region have a good theoretical understanding of the mechanics of "options" and futures contracts, this specialized knowledge is concentrated in a few managerial staff. The broader cooperative members typically have very little understanding of these tools and as a result, few CPOs manage their own PRM financial strategies. Many CPOs also do not have the basic accounting and inventory management systems in place to manage cash flows and coffee stocks. Basic knowledge and understanding of the benefits of PRM is also very limited among board members. The result is that few CPOs have made the transition to use the full suite of PRM tools, which leaves them vulnerable to increasing costs if they continue to rely on outsourced financial mechanisms, or potentially higher financial losses if they engage in financial PRM strategies with limited understanding and experience .

THEORY OF CHANGE

The project worked with twenty-two coffee producer organizations, providing training and coaching to their managerial staff and board members to (1) develop and strengthen their PRM competencies; (2) adopt improved organizational practices for implementing PRM strategies and (3) strengthen their organizational, financial and managerial systems and practices to meet the requirements to access additional finance to support options trading. By using these new skills coffee CPOs would be better positioned to mitigate price volatility, providing more stable coffee incomes for smallholder producers.

Thus, the project's theory of change, is as follows:

1) IF the capacity of coffee CPOs' management teams and board members in PRM is strengthened, **THEN** they will develop their competencies to use different instruments, included financial instruments, to manage price risk.

AND 2) IF management team members and board members have competencies to manage price risk, can pilot them and have the financial means to do so, **THEN** organizational practices for managing price risk will be strengthened.

AND, 3) IF organizational practices for managing price risk management are in place and functional, AND they strengthen their organizational, managerial and financial practices **THEN** CPOs' performance will improve, specifically as it relates to reducing price volatility, and increasing/smoothing net coffee operation margins.

A critical assumption for this theory of change is that coffee CPOs have proper governance mechanism in place and that they are functional. To assess whether this critical assumption holds, a governance study was also conducted.

GOAL

To enable coffee CPOs to manage PRM using both physical and financial strategies to mitigate price volatility and offer smallholder farmers more stable prices in Latin America.

RESULTS FRAMEWORK

The project had two strategic objectives and four intermediate results, which correspond with the four implementation components of the project as show in the project results matrix in **Table 1**. Each implementation component also had its respective implementation objectives.

TABLE 1. PROJECT RESULTS MATRIX.

Strategic Objective	Intermediate Result	Implementation Component	Implementation Objective
1. Coffee producer organizations in Latin America mitigate the price volatility faced by smallholder farmers	1.1 Coffee producer organizations implement effective PRM strategies.	Cooperative Strengthening in Price Risk Management	Build the capacities of 16 coffee CPOs in areas critical to direct implementation of effective PRM strategies.
	1.2 Board members and managerial staff demonstrate price risk management competencies in performing their roles in their organization.	Price Risk Management Toolkit	Design and deploy a PRM toolkit that includes a price risk simulator, a web-based technology to give hands-on training with financial hedging instruments, as well as publish a comprehensive PRM Toolkit at the end of the program.
		Peer to Peer Experience Sharing	Expose the CPOs to hands-on experiences of peers who are implementing PRM strategies directly.
2. Financial institutions fill financing gaps of coffee producer organizations ready for direct PRM implementation by providing liquid, flexible and unsecured loans	2.1 Coffee producer organizations have fulfilled the requirements to access loans for implementing price risk management strategies	Options Financing	Fill the financing gap for CPOs ready for direct PRM implementation by providing liquid, flexible, unsecured loans.
	2.2 Financial institutions are aware that coffee		

	producer organizations can effectively manage PRM using financial strategies		

BASELINE ASSESSMENT AND MONITORING

CRS carried out a baseline assessment at the start of the project in June and August of 2017, to determine the capacities of the participating coffee producers' organizations related to PRM. The baseline assessment measured impact (income stability), outcome (individual competencies, organizational practices, and financial performance) and output-level indicators. The baseline results are presented alongside the endline data. Throughout the project consultants also monitored the open trading positions for the target CPOs and collected key financial data. Changes in organizational practices were assessed at baseline and endline.

This report presents the results of the endline assessment and progress made toward achieving project targets.

Endline and Governance Assessment

This report evaluates changes in individual PRM competencies, organizational practices, and financial performance and a "deeper-dive" into organizational governance. The endline evaluates progress made during the project towards achieving the outcomes, strategic objectives, and goal. The objective of the governance deep-dive was to evaluate the governance of participating organizations in order to gain insight on how good governance contributes to successful adoption of price risk management practices and tools, as good governance was a critical assumption in project design.[1]

MONITORING AND EVALUATION ASSESSMENT TOOLS

Four tools were used to collect the data necessary to build the performance indicators at three levels of analysis as shown in **Table 2** and assess organizational governance. A detailed explanation of the first three tools can be found in the baseline assessment report. This report will highlight any differences or changes made to these tools for the endline assessment.

TABLE 2. MAIN TOOLS FOR DATA COLLECTION TO ESTIMATE THE PROJECT INDICATORS

Level of assessment	Objective	Tool
Individual competencies	Assess PRM competencies of: (a) board members; and (b) managerial team necessary to implement PRM strategies.	SenseMaker-based competencies assessment tool
Organizational practices	Assess PRM and organizational practices required for the successful implementation of PRM strategies.	Organizational assessment tool
Financial performance	Assess the financial performance of coffee producer organizations	Financial performance assessment tool and Open Position Monitoring Tool

[1] Additional information regarding endline assessment implementation can be found in **Attachment 1**: Statement of Work: Endline Evaluation and Governance Study of the Price Risk Management for Coffee CPOs in Latin America Project.

Organizational Governance	Evaluate the governance of participating organizations to assess how governance relates to adoption of PRM and overall organizational performance	Extended SenseMaker-based competencies assessment tool

SENSEMAKER COMPETENCIES ASSESSMENT TOOL

The Sensemaker-based tool was developed to assess individual PRM competencies[2] of managerial staff and board members. It is based on two competency models[3] that managerial teams and board members, respectively, need to demonstrate for successfully implementing PRM strategies (see Appendices A and B). Between baseline and endline, these models were modified slightly based on project learning. The behavioral evidences from the competency models provide a proxy to determine the level of competency, which is classified in four levels: basic (0-<40%), in-progress (40-<60%), functional (60-<75%), and fully competent (≥75%).

The methodology uses an open-ended question to derive a narrative from each respondent. The open questions placed respondents into a concrete situation and task that needed to accomplish as part of its role in the organization during the last coffee cycle, and asked respondents to share the decisions and actions they took, and the results achieved, both positive or negative. The prompted question for the endline assessment was:

Remember the last coffee commercialization cycle and share what you did to reduce price fluctuations and with what results.

- *What decisions did you have to take and how did you do it?*
- *What actions did you take and how did you implement them?*
- *What were the results (positive or negative)?*

The narrative gave interviewers a first approximation on the behavioral evidences showed by the respondent in the specific experience shared, which were included in the assessment tool as open-ended follow-up questions, one for each competency being evaluated, focusing on the specific competency being assessed. These questions were designed as a multiple-choice question (MCQ) that included the behavioral evidences for the competency as response options. As respondents provided their narrative to the initial prompt question, and the more specific questions by competency, interviewers recorded the behavioral evidences showed, probing as necessary for key evidences to ensure a reasonable level of accuracy.

In addition, other SenseMaker-specific type of questions (see **Table 3** for an explanation of each type of question) were also included to provide additional information about the experience. This was to improve understanding of the actions participants took in their experience shared and the results of these actions, and their internalization of the values that sustain the competency model. In contrast to the conventional manner of conducting evaluations, in which an expert interprets the responses provided by the person being evaluated, the Sensemaker methodology, to assess demonstrated evidence of behavioral change in a competency, provides the opportunity for respondents to do their interpretation without the evaluators intermediation. At endline, the online SenseMaker software,

[2] A **competency** is defined as a cluster of relevant skills, abilities, talents, attitudes, experiences, and knowledge that a person possesses which determines job success.

[3] A **competency model** is a collection of competencies that together define successful performance in a particular work setting. Competency models are the foundation for important human resource functions such as recruitment and hiring, training and capacity development, and performance management. Competency models can be developed for specific jobs, job groups, organizations, occupations, or industries.

SenseMaker Designer[@], was used to configure the signification framework for online collection. Due to the COVID pandemic, assessments were conducted virtually using Skype or Zoom.

TABLE 3. KEY SENSEMAKER SIGNIFIER QUESTION DEFINITIONS EXCERPTED FROM GUJIT ET. AL. (2018)[4]

Signification framework	The core SenseMaker instrument, equivalent to a survey instrument. Includes a prompt question, a story title question, a set of signifier questions, and a set of socio-demographic and collection protocol multiple-choice questions.
Signifier question	Core SenseMaker questions used to capture layers of meaning additional to the narrative. Types of signifier questions: Multiple-choice, triad, slider, slider with stones, and canvas with stones.
Slider	A core SenseMaker question, wherein respondents are asked to signify what happened in the experience they shared by placing their response on a line between two extremes.
Slider with stones	A core SenseMaker question, wherein respondents are asked to signify what happened in the experience they shared by selecting options relevant to their experience, called 'stones,' and placing them on a line between two extremes.
Triad	A core SenseMaker question that uses an equilateral triangle with element labels on each corner to understand the relative importance of three different elements of a single concept in the experience shared by the respondent in their narrative.
Canvas with stones	A type of signifier or follow-up question, wherein respondents are asked to signify what happened in the experience they shared by selecting different options, called 'stones,' and indicating where they lie on a two-way matrix of interrelated continuums, representing different elements of a concept.

ORGANIZATIONAL PRACTICES ASSESSMENT TOOL

This excel-based tool was developed to assess the degree to which the coffee producer organizations implement PRM practices, as well as other organizational practices needed to have the necessary organizational systems, structures and policies in place to facilitate the implementation of these practices. This includes good governance and basic accounting and inventory management systems that enable effective management of cash flows and coffee stocks. The organizational practices assessment seeks to assess whether organizations are adopting best practices that are directly related to price risk management or related to the business and socio-organizational practices required to ensure effective price risk management and access to loans for investing in financial instruments for PRM. This organizational-level assessment tool was developed by Oikocredit[5] and CRS based on a more comprehensive tool for facilitated self-evaluation for associative rural enterprises developed by CRS in conjunction with CATIE and other members of the Central America Learning Alliance for Sustainable Rural Development.[6]

Results of the baseline assessment were shared with representatives of participating South American coffee producers' organizations (CPOs) during the basic and intermediate learning modules in Jaén, Perú in February 2018 and with participating Central American organizations in Marcala, Honduras in July 2018. Oikocredit contracted a consultant to create individual organizational profiles to share the endline data with organizations and offer concrete guidance regarding areas for further improvement.

4 Guijt I, Gottret MV, Hanchar A, Deprez S and Muckenhirn R. 2018. The learning power of listening: Practical guidance for using SenseMaker. CRS and Oxfam-GB: Baltimore, US. p156.

5 Following baseline, the tool was modified by Oikocredit to better fit their specific information needs. The modified tool is available from Oikocredit by request

6 Gottret, María VerónicaAutoevaluación facilitada para la gestión de empresas asociativas rurales /María Verónica Gottret, Ruth Junkin y Carlos Ilabaca Ugarte. – 1 ed. –Turrialba, C.R : CATIE, 201162 p. : il. – (Serie técnica. Manual técnico / CATIE; no.100).

The endline version of the tool includes the following five evaluation areas:
Business management. Includes qualified multidisciplinary technical team, communications between teams and access to information, use of the open position monitoring tool, relationships with buyers who provide coverage through options and a sound accounting structure.
Management of price risk with physical strategies. Includes production forecasting, harvest monitoring, a technical field team, storage infrastructure, and determination of open position limits.
Management of price risk with financial strategies. Includes technical analysis and analysis of fundamentals, access to brokerage services, financial hedging strategy and implementation, brokerage account and use and maintenance of liquidity in the brokerage account.
Systems for price risk management. Includes integrated system for managing and monitoring the commercialization process, real-time monitoring of the open position, an online system for monitoring the open position, and an integrated accounting system.
Organizational governance. Includes budgeting for the purchase of options, development and approval of policies and monitoring and accountability.

Each of these evaluation areas include a set of optimal practices that are assessed using a score card that includes three categories from 1 to 5.

- 5 points means that the organization completely meets the optimal description of the organizational practice.
- 1 point means that the organization does not at all meet the optimal description of the organizational practice.

FINANCIAL PERFORMANCE ASSESSMENT

This tool was developed to assess the financial performance of the participating coffee producer organizations and looks at the strength of the coffee business and related business activities that support the value creation strategy of the organization. The financial analysis is focused on the economic performance of the organization via cash flow, income statement, and examination of the break-even point. This financial assessment is a clear reflection of economic health and efficiency of coffee business operation that could be extrapolated to understand how business and organizational structure are performing and how they can be improved. The financial performance assessment tool was adapted from an existing tool utilized by Oikocredit and modified to fit the specific needs of this project. Additional data was collected and tracked monthly using the open position monitoring tool; an excel based tool developed by project consultants that will eventually be housed online.

GOVERNANCE ASSESSMENT TOOL

The endline competencies' assessment tool was expanded to include additional "signifiers" to assess various aspects of organizational governance from the perspectives of management team and board members. To design the governance portions of the signification frameworks, CRS drew from the tool

used for the assessment of organizational practices[7], a CRS-developed tool for assessing social cohesion, and a CRS-developed competency model and assessment tool aimed at evaluating aspects of governance, transparency, and collective marketing of market and microfinance groups.[8] The resulting governance assessment add-on included signifiers to assess advanced organizational competencies for board members and the results of those competencies, key norms and beliefs that govern actions, social cohesion, participation and leadership, internal and external communication, belonging and commitment to the organization, operational performance and transparency, inclusivity, and the cost benefit of external linkages.

Due to the COVID-19 pandemic, the tool was only applied with board members and management team members, and not with the general membership as planned. The finalized tools for the board and management team are included in **Attachments 2 and 3**.

For management team members, the same prompt question as mentioned under the SenseMaker-based Competencies Assessment description was used as the entry point. However, for board members, an additional prompt question was added to the signification framework:

Please describe the actions you took to make and follow-up on strategic decisions for your organization.

- *What strategic decisions did you make, and how did you make them?*
- *How did you follow up on their implementation?*
- *What results did you achieve (positive or negative)?*

DATA COLLECTION, MANAGEMENT AND QUALITY ASSURANCE

Due to the COVID-19 crisis and travel restrictions, CRS staff and consultants conducted data collection for the competencies' and governance assessment virtually between June – July 2020 for the CPOs listed in **Table 4**. Virtual application of the assessment tool may have limited the participation of some management team members, but imposed a major limit to interview board members who either lacked a strong internet connection, or who were unable to travel to their producer organization office to complete the assessment, given the lockdown restrictions established by governments. No data for the competencies' assessment was conducted with Pangoa and Norandino from South America as they opted out of the latter stages of project implementation and were not interested in participated in the final evaluation. Ubiriki from Perú, CoopeTarrazú from Costa Rica, and UCA San Juan de Rio Coco from Nicaragua, were unavailable for this assessment. An added challenge was that some respondents were in a shared office space when completing the interview. This could have affected their ability to respond to sensitive questions openly and honestly.

Oikocredit consultants completed end-line data collection for the organizational practices' assessment with South American organizations in July 2019 during the final training event, and with Central American organizations in January 2020 during monitoring visits. Data for the financial performance indicators was gathered using the open position monitoring tool as well as the financial performance assessment tool which was applied during the final training and follow-up visits. As explained above, Pangoa and Norandino were not included in the endline assessment after dropping out. Additionally, there is some missing financial data for Cenfrocafe and Coocentral.

[7] Gottret, María Verónica Autoevaluación facilitada para la gestión de empresas asociativas rurales /María Verónica Gottret, Ruth Junkin y Carlos Ilabaca Ugarte. – 1 ed. –Turrialba, C.R : CATIE, 201162 p. : il. – (Serie técnica. Manual técnico / CATIE; no.100).

[8] CRS. 2019. The mini-Social Cohesion Barometer: A tool to assess and strengthen social cohesions in divided communities. CRS: Baltimore, US. p48.

TABLE 4. LIST OF PARTICIPATING CPOS BY REGION AND COUNTRY

Region	Country	Department	Coffee producer organization
Central America	Guatemala	Huehuetenango	Asociación Cooperativa al Desarrollo Integral de Huehuetenango (ACODIHUE)
		Huehuetenango	Asociación Barrillense de Agricultores (ASOBAGRI)
		San Gaspar Chajul	Asociación Chajulense
	Honduras	Copán	Cooperativa Cafetalera Capucas Limitada (COCAFCAL)
		Ocotepeque	Cooperativa Cafetalera Ecológica La Labor (COCAFELOL)
		La Paz	Cooperativa Regional Mixta de Agricultores Orgánicos de La Sierra (RAOS)
		Marcala	Café Orgánico de Marcala (COMSA)
	Nicaragua	Estelí	PRODECOOP
		Jinotega	Unión de Cooperativas Agropecuarias (UCA) SOPPEXCCA
		San Juan de Rio Coco	Unión de Cooperativas Agropecuarias (UCA) San Juan de Rio Coco
	Costa Rica	Tarrazú	CoopeTarrazú R.L.[9]
South America	Perú	Cajamarca	Cooperativa de Servicios Múltiples (APROCASSI)
		Cajamarca	Cooperativa Agraria Cafetalera La Prosperidad de Chirinos Ltda (CAC Chirinos)
		Cajamarca	Central Fronteriza del Norte de Cafetaleros (CENFROCAFE)
		Cajamarca	Cooperativa de Servicios Múltiples Norandino Ltda (NORANDINO)[10]
		Cajamarca	Cooperativa de Servicios Múltiples Sol y Café (SOL Y CAFÉ)
		Junín	Cooperativa Agraria Cafetalera ACPC Pichanaki (PICHANAKI LB)
		Junín	Cooperative Agraria Cafetalera Pangoa (PANGOA)[11]
		Junín	Cooperativa de Servicios Múltiples Selva Andina (SELVA ANDINA)
		Junín	Cooperativa Agraria Cafetalera Sostenible "Valle Ubiriki"[12]
	Colombia	Huila	Cooperativa Central de Caficulltores de Huila (COOCENTRAL)
		Magdalena	Red de Productores Ecológicos de la Sierra Nevada de Santa Marta (RED ECOSIERRA)

APPLICATION OF THE COMPETENCIES AND GOVERNANCE ASSESSMENT

CRS staff and two consultants facilitated the tool with general managers, management teams and board members. The intention was to apply the assessment to all participants of the training modules as well as with management team members, board members and organizational members who did not participate. However, COVID-related travel restrictions prohibited the facilitation team from applying the assessment in person. It proved difficult to access all participants, especially those located far from city centers and without adequate access to internet. Data collection was delayed by over a month as a result.

The sample of board members of board members was small, and therefore, findings need to be interpreted carefully. Further, this sample came from only 10 of the participating organizations.

[9] Data from CoopeTarrazú was not included in the baseline assessment as they joined the project after baseline data was collected.

[10] This organization opted out of participating in the latter part of the project. Subsequently, an end-line competencies' evaluation was not completed with this organization.

[11] This organization opted out of participating in the latter part of the project. Subsequently, an end-line competencies' evaluation was not completed with this organization.

[12] Data from this cooperative was not included in the baseline as they joined the project after baseline data was collected.

Facilitators collected the narratives and answers to the signifiers, or follow-up questions, using SenseMaker Collector© using an online web-based application. Facilitators shared their screen with respondents through skype or zoom so that respondents were able to indicate where they would like to place their responses. The facilitators also recorded responses on paper copies as an added backup in case the internet connection were to fail. The SenseMaker facilitators provided a brief orientation of the process to participating management team and board members and then collected the information on an individual basis so that participants would feel free to answer honestly. Further explanations of the questions were given when solicitated, but facilitators avoided providing leading information.

Once the information was input into SenseMaker Collector©, CRS staff reviewed and cleaned the database from duplicated entries and analyzed the data utilizing SenseMaker Explorer©, a desktop SenseMaker analysis software, SenseMaker Analyst©, an online analysis software used to create data visualizations from raw SenseMaker data, and the open-source statistical analysis software, R.

APPLICATION OF THE FINANCIAL PERFORMANCE AND ORGANIZATIONAL PRACTICES ASSESSMENTS

Project consultants collected data for the financial performance assessment and organizational practices assessment during visits to each participating organization or during the final training/peer-to-peer visit. Tools were in Excel format, and Oikocredit staff interviewed members of the management team—mainly the General Manager and sometimes the Finance Manager if the General Manager was unavailable. Data that was not readily available at the time of the visit to the organizations was gathered via email or phone. Additional data was provided to Oikocredit through open position reporting.

At endline, Oikocredit calculated the values for financial performance indicators and provided this data, in some cases consolidated and, in some cases, disaggregated, to CRS. A more detailed analysis of the financial performance of these organizations will be included in the final project evaluation report commissioned by Oikocredit and carried out by a consultant who is a financial specialist. In this report, financial information is only presented with the aim to compare baseline with endline values of the financial performance indicators.

Endline Results and Analysis

The endline results are presented along with the baseline and midterm (if available) by project objective. Under each objective, tables provide average values across all CPOs and regions. In most cases graphs then provide disaggregated data by cooperative as well as regional and overall averages.

GOAL: SMALLHOLDER COFFEE PRODUCERS HAVE MORE STABLE COFFEE INCOME

The goal of the project was to mitigate price volatility by smallholder farmers organized in CPOs in Latin America members. The impact-level indicator provides the net coffee operations margin of the organization and its year-to-year fluctuations to test the assumption that if coffee producer organizations implement PRM strategies, they will stabilize and ideally increase their margins and become more profitable. Baseline, endline, percent change and target values for the life of the project are reported in **Table 5.**

G1: NET COFFEE OPERATION MARGIN

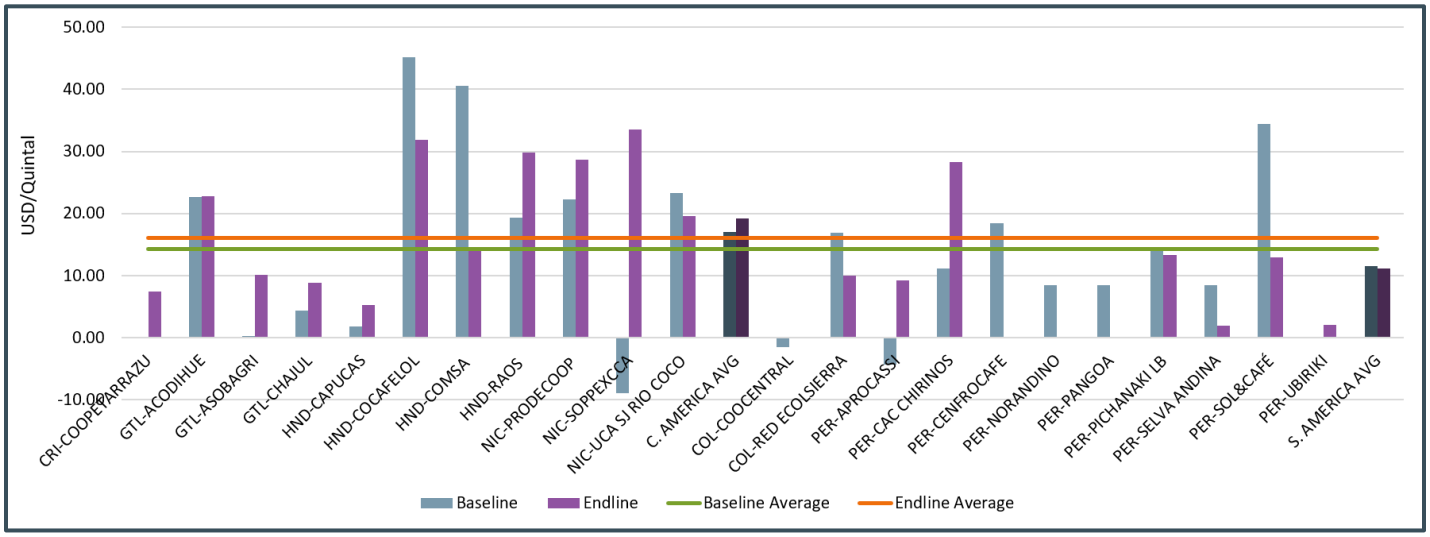
Definition: The total value of coffee sales minus total costs, including: (1) the total cost of buying coffee; (2) variable costs such as transport, packaging materials, processing services, insurance, certification costs, commissions/fees, and marketing costs; (3) fixed costs such as payroll, rent, public services, and social security, weighted by the percentage of total income of the organization that comes from coffee commercialization; and (4) financial costs such as interests, exchange rate differentials, the payment of the current portion of long-term debt, and fees/commissions.

The overall average value for net coffee operation in USD per quintal (100 kg) reported in **Table 5** is based on an average of all coffee producer organizations, meaning that the same weight was given to each coffee producer organization, instead of weighting by volume of sales. The overall average net coffee operation margin across all CPOs for the 2018-19 commercialization cycle was about $16 USD per quintal. This was an increase of $2 USD per quintal. The average net coffee operation margin for Central American CPOs increased from about $17 to $19 per quintal, whereas the average decreased slightly for South American CPOs ($11.49 to $11.09 per quintal). Thus, the increase over the overall average baseline value is mainly attributed to a positive change among Central American CPOs. The net coffee operation margin ranged from around $2USD per quintal to $33USD per quintal; and unlike at the baseline, all CPOs had positive net coffee margins (Figure 1). At endline, the net coffee operation of the 12 CPOs who implemented financial strategies for PRM was much higher than those who did not ($21/QQ versus $9/QQ).

TABLE 5. BASELINE VALUE AND TARGETS FOR THE GOAL-LEVEL INDICATOR

OBJECTIVES STATEMENTS	#	IMPACT / OUTCOME / OUTPUT INDICATORS	Targets				
			Baseline	Year 1	Year 2	Endline and (percent change)	End of Project Target
Goal Smallholder coffee producers have more stable coffee income	G1	Net coffee operation margin (2016 USD / QQ of green coffee)	14	10	11	16 (14%)	30% increase

FIGURE 1. NET COFFEE OPERATION MARGIN



STRATEGIC OBJECTIVE 1: COFFEE PRODUCERS' ORGANIZATIONS MITIGATE PRICE VOLATILITY

The two indicators for strategic objective 1 assess the extent to which the PRM strategies reduced fluctuations in the price received by producers and the organization income from coffee sales. Thus, they allow for testing the assumption that if coffee producer organizations used price risk management strategies effectively: (1) the price received by their members will be less volatile; and (2) the coffee trade gross margin of the organization, and therefore their income, will be more stable. Baseline, yearly and endline values and target for the life of the project are reported in **Table 6**.

TABLE 6. BASELINE VALUES AND TARGETS FOR STRATEGIC OBJECTIVE INDICATORS

OBJECTIVES STATEMENTS	#	IMPACT / OUTCOME / OUTPUT INDICATORS	Targets				
			Baseline	Year 1	Year 2	Endline	Target
Strategic Objective 1 Coffee producers' organizations in Latin America mitigate the price volatility faced by smallholder farmers	SO 1.1	Fluctuation in price received by producer organization members (SD USD/QQ of green coffee)	1.1	1.4	1.7	1.2	<1 (Target not met)
	SO 1.2	Fluctuation in coffee trade gross margin (SD USD/QQ of green coffee)	13			8	Reduced SD (Target met)

SO1.1: FLUCTUATION IN PRICE RECEIVED BY PRODUCER ORGANIZATION MEMBERS

Definition: The ratio between the standard deviation (SD) of the average price received by the organization members at the collection center during the last four commercialization periods (US$ per QQ equivalent green) and the SD of Coffee C Futures Contract price in the Intercontinental Exchange (ICE) during the same timeframe (US$/QQ of green coffee)[13]

This indicator compares volatility of prices paid to organization members from year to year to volatility happening in the Arabica coffee benchmark price, the Coffee C Futures Contract price in the Intercontinental Exchange (C-Price). A value above 1 indicates that the inter-annual price paid to members was more volatile than the C-Price, and a value between 1 and 0 indicates that prices paid to members were less volatile than the C-Price as a whole.

The baseline value was calculated as the SD of the average figure of the last four years (from the 2013 to 2016 seasons) and the endline from the 2016 – 2019 seasons. Both the baseline and endline values were greater than one, with the endline value being 0.1 higher than the baseline, indicating that the volatility of the price paid to organization members relative to the volatility of the C-market has slightly increased.

Nine organizations at the time of the baseline assessment had a ratio below one, and ratios ranged from 0.3 to 2.9. At endline, only six organizations had a ratio below 1, and ratios ranged from 0.22 to 2.5. The data in **Figure 2**, depicts the ratios for the last three cycles:

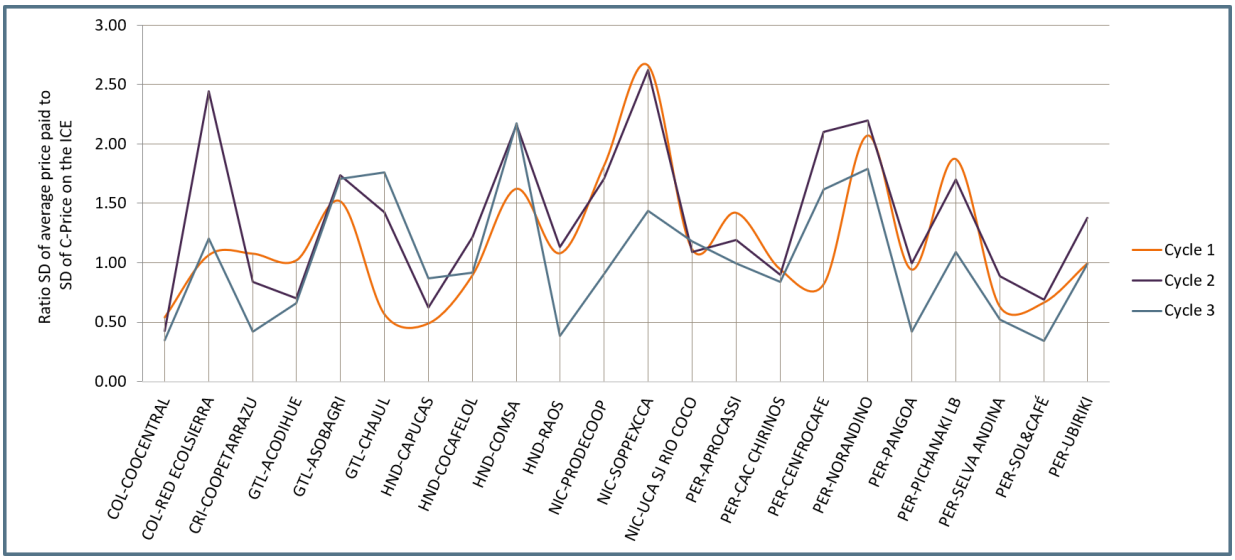
Cycle 1: Ratio of: SD Price Paid / SD NYC during collection months. (2013-14 through 2016-17)
Cycle 2: Ratio of: SD Price Paid / SD NYC during collection months. (2014-15 through 2017-18)
Cycle 3: Ratio of: SD Price Paid / SD NYC during collection months. (2015-16 through 2018-19)

In Central America, the price paid to producers was *less* volatile than the C-Price for all three cycles for four organizations and *more* volatile for the same number. In three organizations, the price paid to members was more volatile in some cycles. In South America, only two organizations had a value of <1 all three cycles. Six had some cycles with more volatility than the C-Price, and four had higher volatility all three cycles.

In the last cycle, there was no difference in the volatility of price paid to producers between the 12 organizations who employed financial strategies for PRM and those that did not; both groups had a ratio of 1.2.

[13] SD of the Coffee C futures contract price as per the ICE Futures (https://www.theice.com/FuturesUSReportCenter.shtml) was calculated using the average daily close of the nearby month from 01/01/13 to 12/31/16. The period overlaps with the commercialization year for South American organizations, but not Central American organizations whose commercialization period spans from October to September. However, the SD of the C-Price did not differ between the two periods (26.9 USD/QQ for both), so the same value was used to determine the ratio for all organizations.

FIGURE 2. FLUCTUATION IN PRICE RECEIVED BY PRODUCER ORGANIZATION MEMBERS[14]

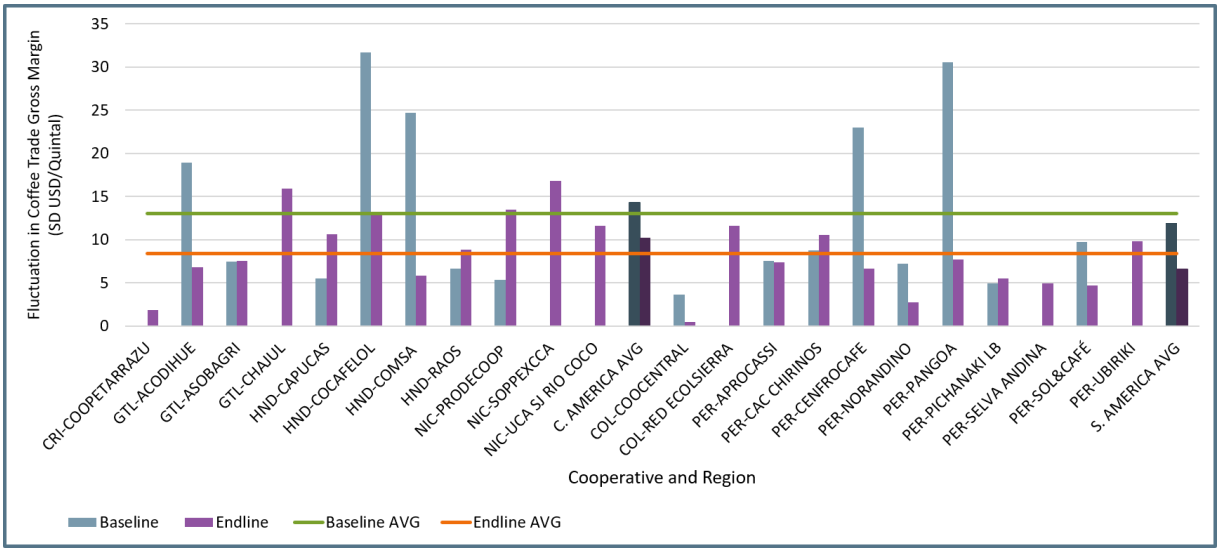


SO1.2: FLUCTUATION IN COFFEE TRADE GROSS MARGIN

Definition: The standard deviation (SD) of the coffee trade gross margin during the last 4 years, which is calculated by subtracting the average price paid for coffee in US$/QQ of green coffee from the average coffee sale price sold in US$/QQ of green coffee.

The average fluctuation in coffee trade gross margin was reduced from 13 to 8 USD per quintal from baseline to endline. However, the baseline value only represents data from 15 of the 20 CPOs participating at the time of data collection (See Figure 3). The endline value contains data from all 22 of the participating organizations. There was no difference between the fluctuation in coffee trade gross margins for the 12 organizations who are using financial strategies and those who were not (8.4 and 8.3 USD/QQ, respectively).

FIGURE 3. FLUCTUATION IN COFFEE TRADE GROSS MARGIN



[14] This graphic was provided by Oikocredit

It is important to note that for all these three impact-level financial indicators, a high variability in results can be observed among the different coffee producer organizations in Central and South America. The final evaluation conducted by an external evaluator, specialized in financial analysis, provides a more in-depth analysis of these indicators, and how they relate with project achievements at the output (competencies strengthening) and outcome levels (improved organizational practices).

INTERMEDIATE RESULT 1.1: COFFEE PRODUCER ORGANIZATIONS IMPLEMENT EFFECTIVE PRM STRATEGIES

The following indicators for this intermediate result are related to the implementation of PRM practices and other related organizational practices that are important to enable CPOs to effectively implement PRM strategies. Data for these indicators were collected using the organizational assessment tool which was modified after the baseline; updated values based on the modified tool are presented for both the baseline and endline and presented along with the percent change in **Table 7**.

Endline values were higher than baseline for all five of the organizational practice categories. The greatest gains were made in the degree that CPOs are effectively and sustainably managing price risk with financial strategies, which was the main aim of the project, followed by the degree to which they are effectively and sustainable managing the organization. Despite gains, no category had a score of higher than 3.0 on a 5.0-scale, suggesting ample room for further improvement.

Lastly, there was a slight decrease in the percentage of traded volume that was covered by financial strategies at endline. More detailed results for each indicator under this intermediate result are provided below.

TABLE 7. BASELINE VALUES AND TARGETS FOR INTERMEDIATE RESULT 1 INDICATORS

OBJECTIVES STATEMENTS	#	IMPACT / OUTCOME / OUTPUT INDICATORS	Targets		
			Baseline	Endline	% Change[15]
Intermediate Result 1.1 **Coffee producer organizations implement effective PRM strategies**	1.1.1.	Degree that the coffee producers' organizations are effectively and sustainably managing the organization (1-5)	2.5	3.0	20.6
	1.1.2.	Degree that coffee producers' organizations are effectively and sustainably managing price risk with *physical* strategies (1-5)	2.5	2.9	16.7
	1.1.3.	Degree that the coffee producers' organizations are effectively and sustainably managing price risk with *financial* strategies (1-5)	2.0	2.8	37.4
	1.1.4	Degree that coffee producers' organizations have effective and timely internal control systems in place (1-5)	2.1	2.3	10.8

[15] Baseline and endline values presented in the table are rounded to the nearest tenth; however, the % change is based on the unrounded scores.

	1.1.5	Degree that the coffee producers' organizations are effectively and sustainably governing the organization (1-5)	2.3	2.6	17.5
	1.1.6	Percentage of total traded volume covered by price risk management strategies, disaggregated by type of strategy (physical, financial)	Physical = 65% Financial = 8.6%	Physical = 100% Financial = 8.2%	Physical = 35 Financial = -0.5

IR 1.1.1 DEGREE THAT COFFEE PRODUCERS' ORGANIZATIONS ARE EFFECTIVELY AND SUSTAINABLY MANAGING THE ORGANIZATION

Definition: A coffee producers' organization is considered to have effective and sustainable management capacity if they do or have the following:

- **Multidisciplinary and competent team**: Employs the necessary staff to perform management, commercialization and finance functions, with clearly defined roles, responsibilities and decision domains; and ensures that these staff have the necessary technical competencies to perform these functions.
- **Communication and access to information:** Maintains quality communication between the management team and and other key positions in the organization, and ensures access and understanding of commercialization information among relevant staff.
- **Use of the open position monitoring tool**: Utilizes a tool to evaluate the organization open position to determine daily its position for making management, commercialization and financial decisions.
- **Buyers/customers partnerships to access options**: Accesses options to protect contracts through their buyer/client's account in at least two of the last three commercialization cycles.
- **Accounting structure:** Implements accounting systems that allows to disaggregate expenses, incomes and profits by strategic business units (SBUs) in a timely manner.

This indicator looks at the management capacity of the organization, a key element in determining the level of price risk management in a cooperative.

Over the life of project, the average degree that the CPOs are effectively and sustainably managing their organization increased 0.5 on a 5-point scale, **Figure 4**. Baseline and endline values were slightly higher in Central America than in South America, however greater gains were made in South America as they started at a lower point. Gains in this category were mainly due to an increase in the use of the open position monitoring tool, **Figure 5**. Other components of this category remained relatively static from baseline to endline, with small gains only made in selling to buyers who facilitate the purchase of options, and in communication and access to information.

FIGURE 4. DEGREE THAT COOPERATIVE PRODUCERS' ORGANIZATIONS ARE EFFECTIVELY AND SUSTAINABLY MANAGING THEIR ORGANIZATION.

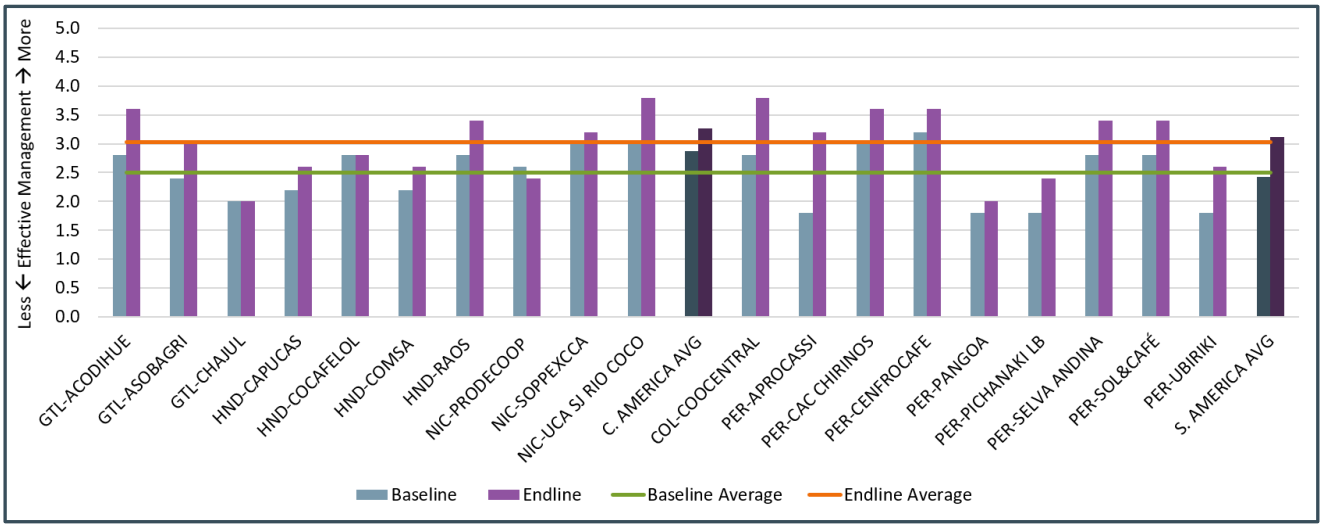
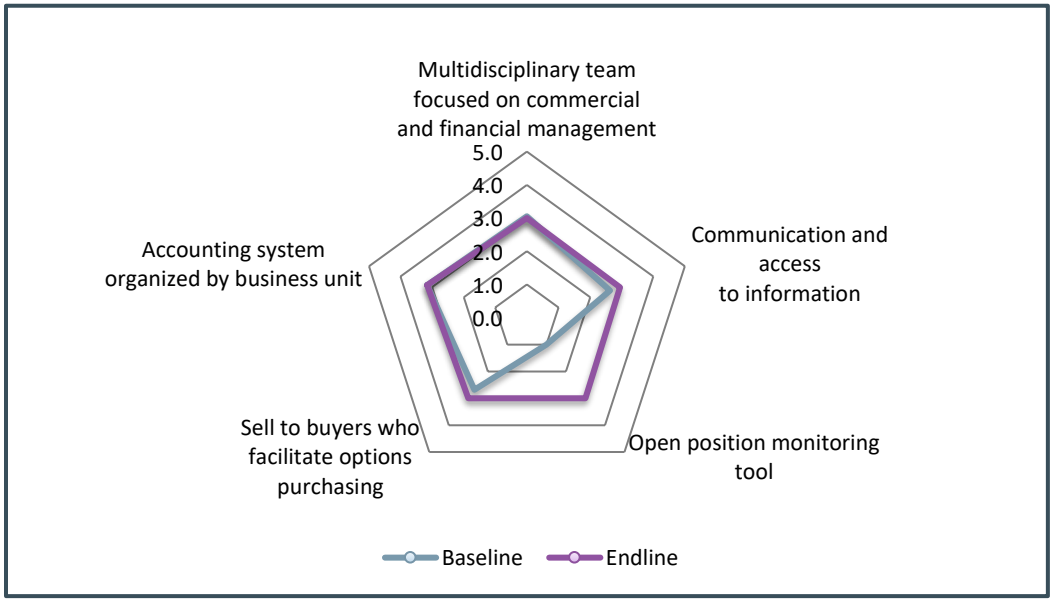


FIGURE 5. AVERAGE DEGREE THAT COOPERATIVE PRODUCERS' ORGANIZATIONS ARE EFFECTIVELY AND SUSTAINABLY MANAGING THE ORGANIZATION.



IR 1.1.2 DEGREE THAT THE COFFEE PRODUCERS' ORGANIZATIONS ARE EFFECTIVELY AND SUSTAINABLY MANAGING PRICE RISK WITH PHYSICAL STRATEGIES (1-5)

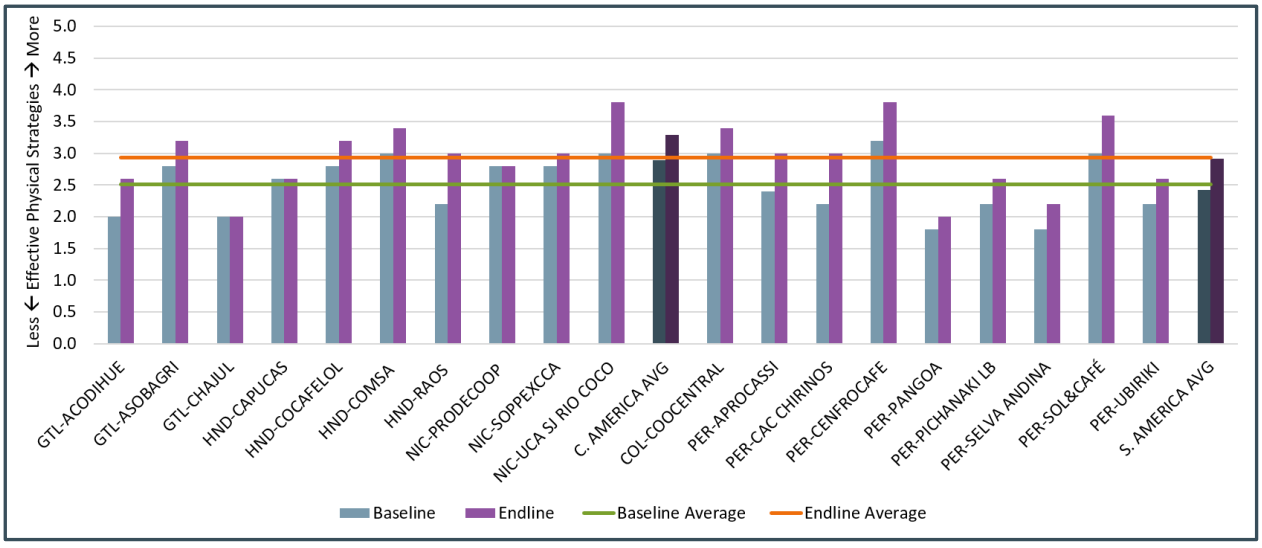
Definition: A coffee producers' organization is considered to effectively and sustainably manage prices risk with physical strategies if they implement or have the following:

- **Production forecast:** Implements a system to monitor production in members' fields and the organization's area of influence to forecast harvests, using a system that allows to timely visualize the information to make decisions.
- **Collection monitoring:** Establishes a system and has trained personnnel to monitor, in real time, the quantity and quality of coffee collected (automatic entry) and the level of inventories.
- **Technical field team:** Assigns clear responsibilities to the technical teams to ensure the targeted quantity and quality of produce collected during the harvesting season, manage the loan portfolio, and achieve agreed improvements in productivity.
- **Storage infrastructure:** Ensures threshing and drying patios, machinery, and warehouse capacity to allow storage of up to 40% of annual production.
- **Open position limits:** Defines open position limits, analyzes its open position daily, and understands the implicit risk of exceeding those limits.

This indicator looks at the management of price risk with **physical strategies** including production forecasts and monitoring, information analysis, infrastructure, human resources, and establishing open position limits.

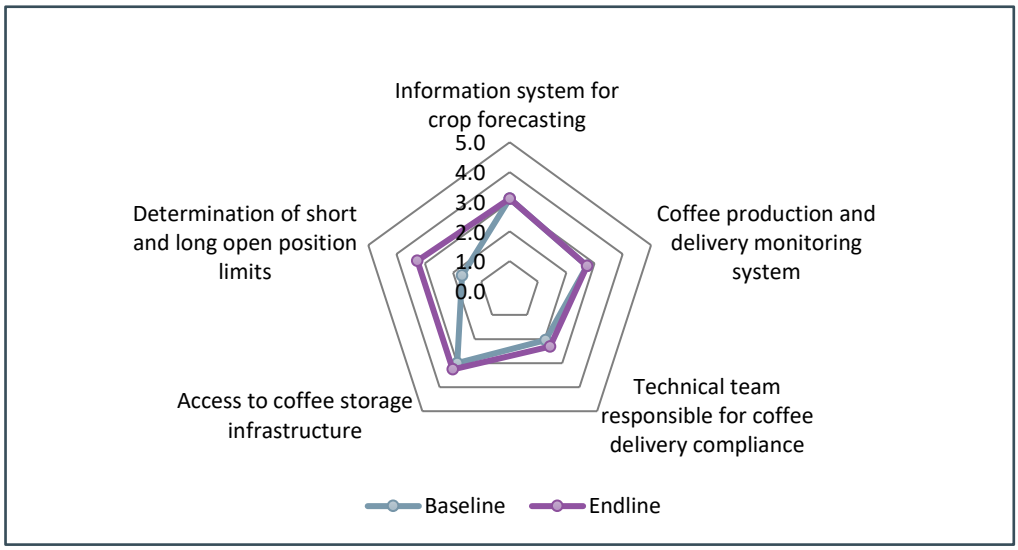
On average, CPOs improved in the effective management of price risk with physical strategies about ½ point on a five-point scale, **Figure 6**. At baseline, the organizations were doing a moderate job using physical strategies as most organizations had been doing this for some time. At both baseline and endline, the Central American organizations were managing price risk with physical strategies to a greater degree than their South American counterparts.

FIGURE 6. DEGREE THAT THE COFFEE PRODUCERS' ORGANIZATIONS ARE EFFECTIVELY AND SUSTAINABLY MANAGING PRICE RISK WITH PHYSICAL STRATEGIES.



Gains in effective management of price risk with physical strategies were made in the increase in organizations determining short and long open position limits, **Figure 7**. This improvement reflects the emphasis of the training curriculum on this topic.

FIGURE 7. AVERAGE DEGREE TO WHICH COFFEE PRODUCERS' ORGANIZATIONS ARE EFFECTIVELY AND SUSTAINABLY MANAGING PRICE RISK WITH PHYSICAL STRATEGIES BY PRACTICE.



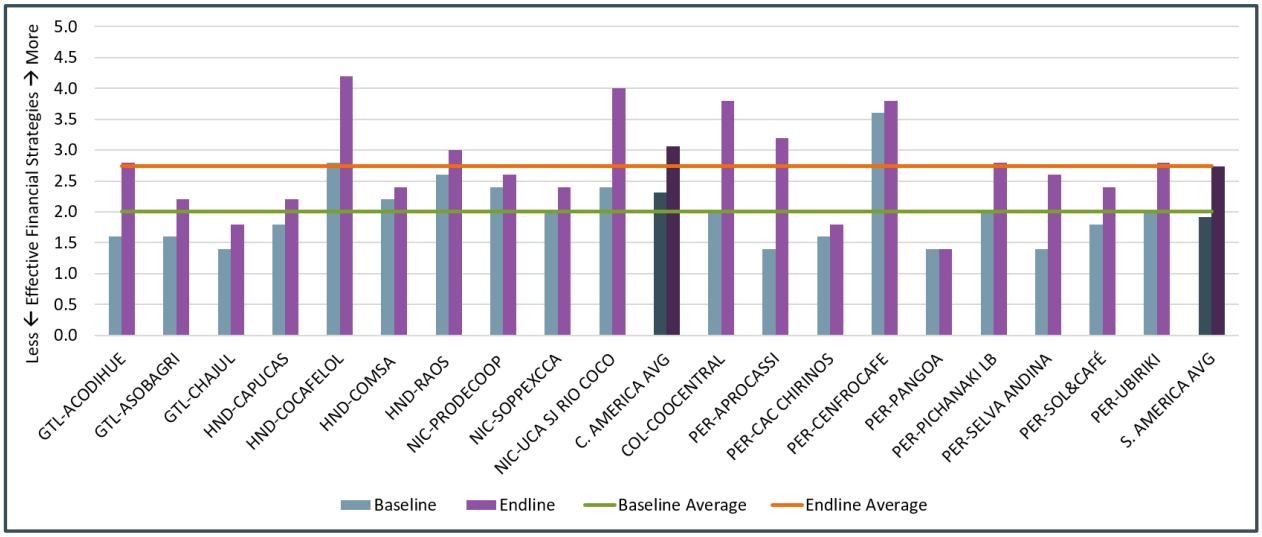
IR 1.1.3 DEGREE THAT THE COFFEE PRODUCERS' ORGANIZATIONS ARE EFFECTIVELY AND SUSTAINABLY MANAGING PRICE RISK WITH FINANCIAL STRATEGIES (1-5)

Definition: A coffee producers' organization is considered to effectively and sustainably manage price risk with financial strategies if it implements the following practices:

- **Technical and fundamental analysis**: Follows macroeconomic news and information on variables that could affect coffee prices, and conducts daily technical analysis using at least three indicators.
- **Brokerage services:** Accesses brokerage services that provide specialized advisory and coaching for managing options every year.
- **Financial hedging strategy and implementation:** Designs and implements financial hedging strategies covering up to 20% of production volume.
- **Brokerage account and use:** Opens its own brokerage account for managing options and has been using it for the past two years.
- **Liquidity in brokerage account:** Maintains the necessary liquidity to implement a financial hedging strategy in accordance with the organization size.

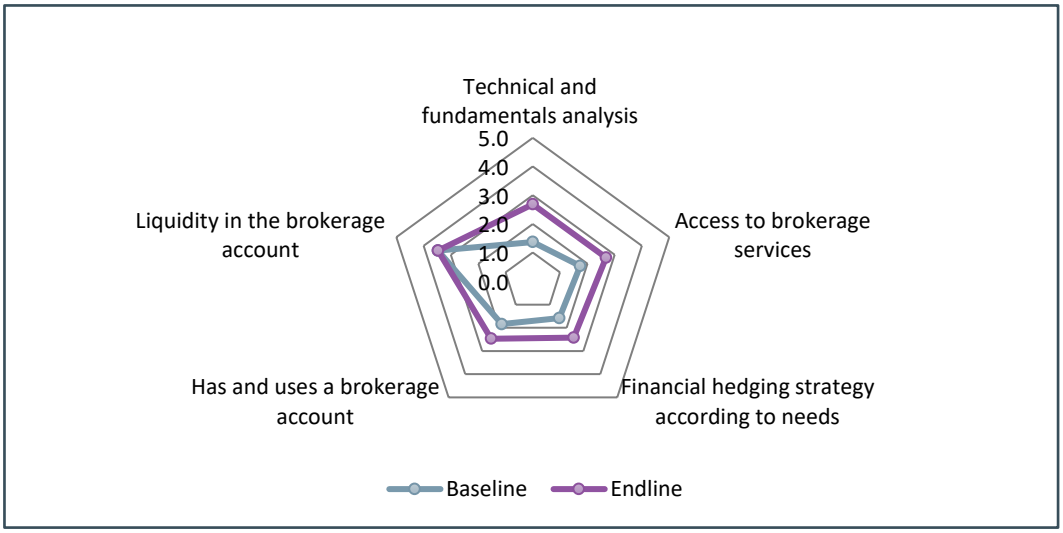
This indicator evaluates the ability of coffee producer organizations to effectively and sustainable manage price risk with financial strategies. Although overall CPOs are employing financial strategies for PRM to a lesser degree than physical strategies, all organizations have had gains in this indicator reflecting the special focus that the project has placed in promoting the use of financial strategies for PRM. On average, CPOs increased the degree that they are effectively managing PRM with financial strategies 0.8 over baseline levels, representing a 37.4% change, **Figure 8**. This is the largest increase in any of the organizational practices' indicators. However, this high gain was in part driven by the large gain made by two organizations, COCAFELOL and UCA San Juan de Rio Coco.

FIGURE 8. DEGREE THAT THE COFFEE PRODUCERS' ORGANIZATIONS ARE EFFECTIVELY AND SUSTAINABLY MANAGING PRICE RISK WITH FINANCIAL STRATEGIES



On average, gains were made in all aspects of the effective use of financial strategies for managing price risk, except for maintaining liquidity in the brokerage account, which at baseline had the highest average score, **Figure 9**. The greatest improvement was in technical analysis and fundamental analysis (analysis of contextual variables that affect coffee prices) and analysis of fundaments which demonstrates the effectiveness of the training in this topic.

FIGURE 9. AVERAGE DEGREE TO WHICH COFFEE PRODUCERS' ORGANIZATIONS ARE EFFECTIVELY AND SUSTAINABLY MANAGING PRICE RISK WITH FINANCIAL STRATEGIES BY PRACTICE AREA.



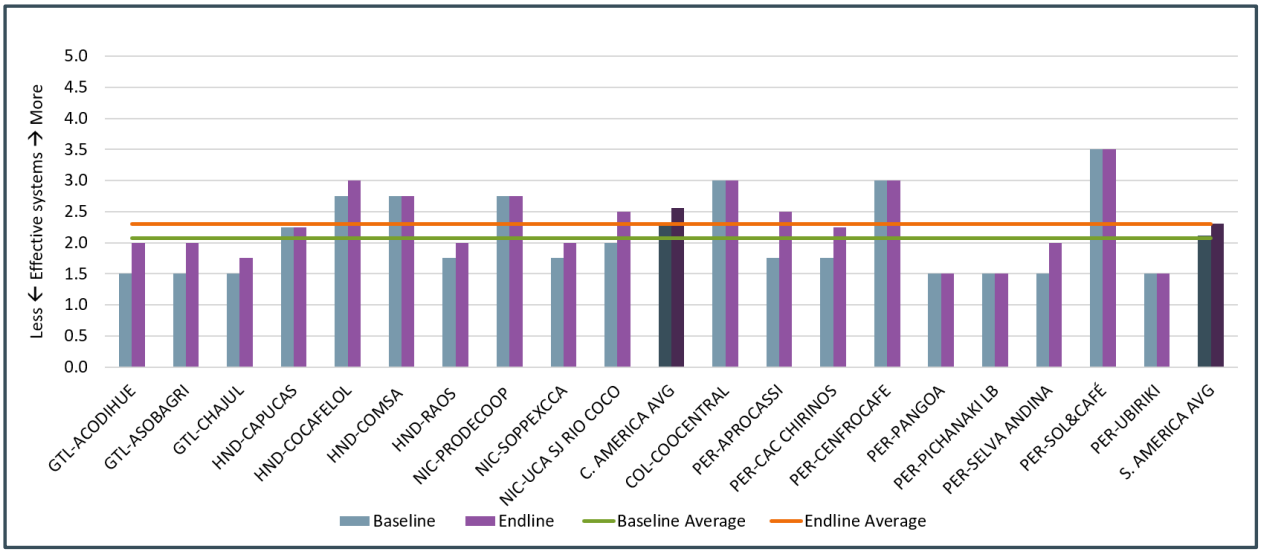
IR 1.1.4 DEGREE THAT THE COFFEE PRODUCERS' ORGANIZATIONS HAVE EFFECTIVE SYSTEMS IN PLACE FOR PRICE RISK MANAGEMENT

Definition: A coffee producers' organization is considered to have effective systems for managing internal control systems of the organization if they do or have the following:

- **ICT-based systems to monitor the commercialization process:** Establishes ICT-based system to integrate information on coffee purchases, sales, and thes status of existing contracts, making this information fully accessible to the entire management team.
- **Open position real-time monitoring**: Establishes a system to calculate and display the open position in real time, with graphics, tables, and percent variance, allowing easy visualization for decision-making.
- **Open position visualization access:** Ensures real-time online access to open position data visualizations from any place with an internet connection.
- **Integrated accounting system:** Establishes an accounting system that is integrated/synchronized with the internal management system and credit program.

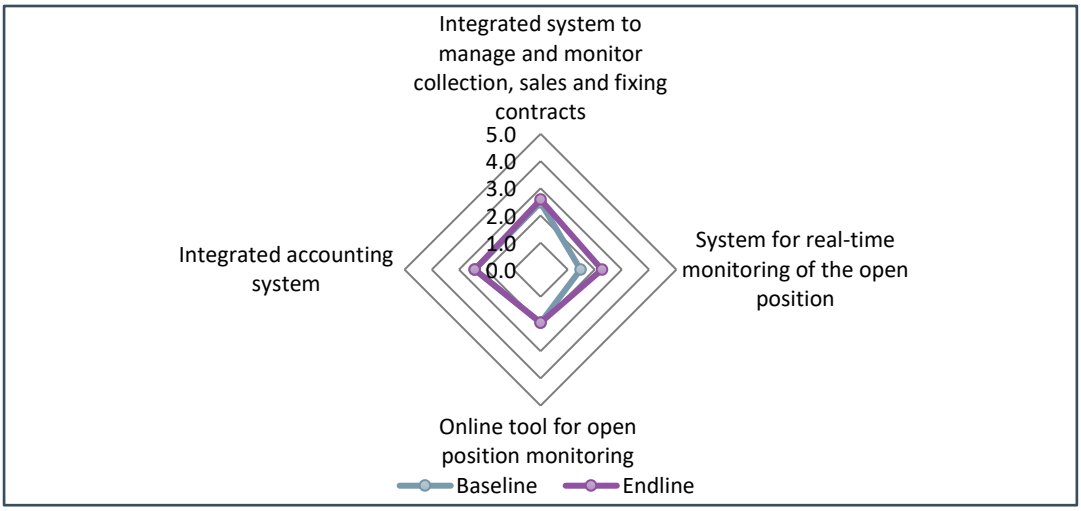
This indicator evaluates the use of technology to support management systems for internal control, including the ability to capture and analyze real time data, essential for making PRM decisions. This indicator had the lowest percent increase over baseline values of all organizational practice categories at just 10%, **Figure 10**. Nine organizations maintained the same scores from baseline, and eleven have improved their score; however, since the baseline was very low, the mean score at endline remains below 2.5.

FIGURE 10. DEGREE THAT COOPERATIVE PRODUCERS' ORGANIZATIONS HAVE EFFECTIVE SYSTEMS IN PLACE FOR PRICE RISK MANAGEMENT.



The increase from baseline to endline can be attributed to an increase in the number of organizations who have a system for real-time monitoring of the open position, **Figure 11**. This was a major focus of project trainings and follow-up support.

FIGURE 11. DEGREE THAT COOPERATIVE PRODUCERS' ORGANIZATIONS HAVE EFFECTIVE SYSTEMS IN PLACE FOR PRICE RISK MANAGEMENT, BY SYSTEM.



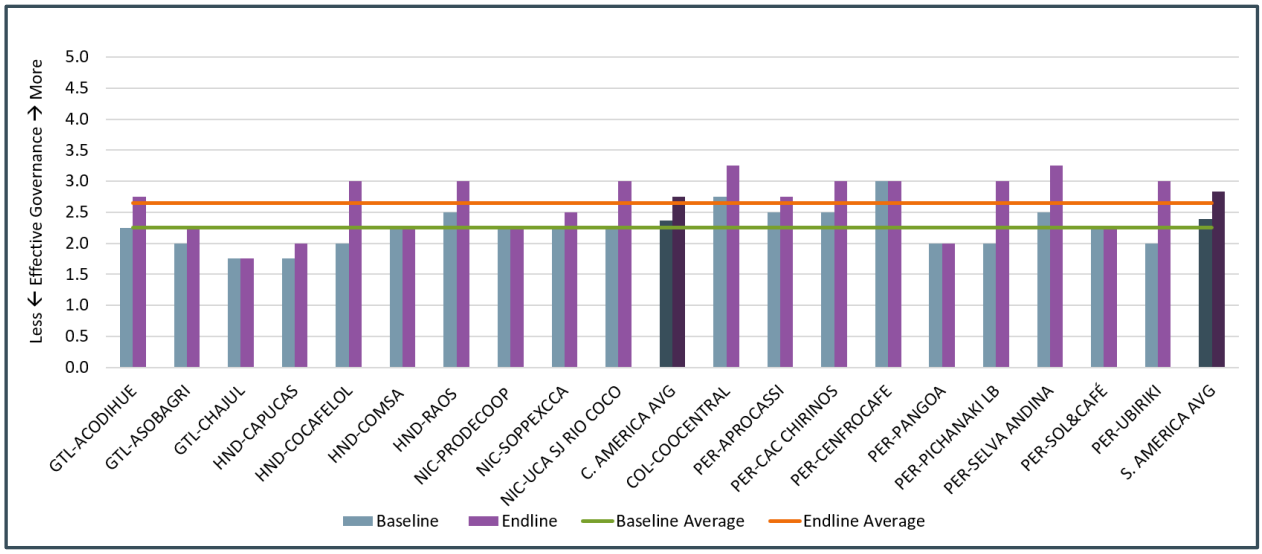
IR 1.1.5 DEGREE THAT THE COFFEE PRODUCERS' ORGANIZATIONS HAVE EFFECTIVE AND SUSTAINABLE GOVERNANCE MECHANISMS IN PLACE TO SUPPORT PRICE RISK MANAGEMENT

Definition: A coffee producers' organization is considered to effectively and sustainably govern the organization in a way that is supportive of price risk management if they have or do the following:

- **Budgets for purchasing options:** Allocates funds for the purchase of options.
- **Comercialization policies developed:** The management team thoroughly drafts comerciaization policies related to collection, sales, fixing contracts and funding.
- **Commercialization policies approved:** Board members approve commercialization policies related to collection, sales, fixing contracts y funding developed by the management team.
- **Monitoring and accountability:** Board members monitor progress in produce harvest and collection, and in the negotiation and fixing of contracts, and hold the management team accountable.

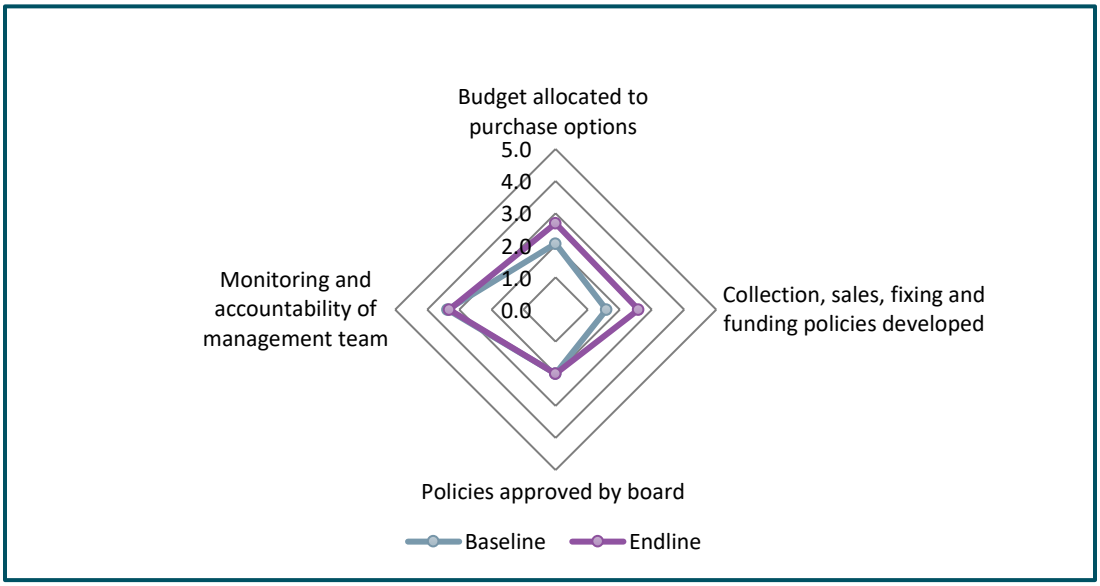
The last organizational practices' indicator looked at organizational governance in relation to price risk management, including the development and approval of policies, budget allocations to support PRM, and monitoring and accountability. On average, the value of this indicator increased 17% over baseline values, and besides four organizations that showed no change, all the others have seen gains in this indicator. Also, average scores were similar for Central and South American CPOs, **Figure 12**.

FIGURE 12. DEGREE THAT COOPERATIVE PRODUCERS' ORGANIZATIONS HAVE EFFECTIVE GOVERNANCE MECHANISMS IN PLACE TO SUPPORT PRM



Slight gains in governance in support of PRM were made through an increase in policies to guide collection and sales of coffee as well as for fixing contracts and funding, and an increase in the number of organizations that allocate budget for purchasing options. Despite an increase in the management teams developing policies to guide the commercialization and price risk management strategies, there was not a concomitant increase in approval of these strategies by the board; that score remained on average low at 2.0, **Figure 13**. This should be an area of focus for CPOs moving forward.

FIGURE 13. DEGREE THAT COOPERATIVE PRODUCERS' ORGANIZATIONS HAVE EFFECTIVE GOVERNANCE MECHANISMS IN PLACE TO SUPPORT PRM



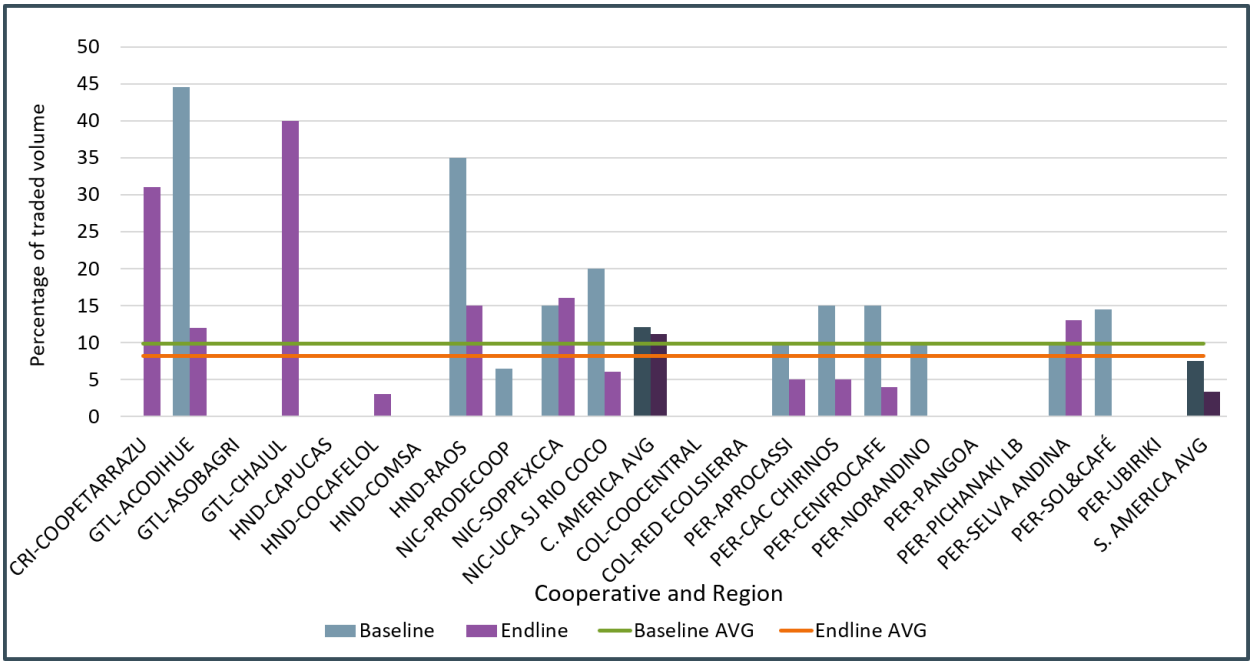
IR 1.1.6 PERCENTAGE OF TOTAL TRADED VOLUME COVERED BY PRICE RISK MANAGEMENT STRATEGIES, DISAGGREGATED BY TYPE OF STRATEGY (PHYSICAL, FINANCIAL)

Definition: This indicator is defined as the share of total volume of green coffee sold during a specific commercialization period or export season that is covered with either physical and/or financial PRM strategies. It is calculated by dividing the total volume of green coffee sold that was covered by physical or financial strategies and multiplying by 100 to yield the percent.

At endline, 100% of total traded volume was covered by physical strategies for PRM as expected as CPOs have been using physical strategies for much longer, **Table 7**. The baseline percentage was 86%; however, upon reflection, Oikocredit revised the figure to 100% as all coffee was covered by some form of physical strategy. The high percentage covered with physical strategies contrasts with the very low percentage covered with financial strategies (8.6% at baseline and 8.2% at endline). This percentage did not increase despite the increase in the score for organizational practices related to effective and sustainable management of price risk through financial strategies. Endline data by organization are not shown for traded volume covered by physical strategies because all coffee is covered by some form of physical strategy.

The amount of volume traded that was covered by financial strategies for PRM decreased by 5% over the life of the project. Eight organizations covered 0% of traded volume with financial strategies. For Coocentral, Pangoa, Norandino and Cooptarrazu, comparing baseline with endline data is not possible as the data for either one are missing.

FIGURE 14. DEGREE THAT COOPERATIVE PRODUCERS' ORGANIZATIONS HAVE EFFECTIVE GOVERNANCE



INTERMEDIATE RESULT 1.2: BOARD MEMBERS AND MANAGERIAL STAFF DEMONSTRATE PRICE RISK MANAGEMENT COMPETENCIES IN PERFORMING THEIR ROLES IN THEIR ORGANIZATION

This intermediate result and the associated indicators relate to individual competencies of both management staff and board members that are necessary for successful implementation of PRM strategies. Information for these indicators was collected using the SenseMaker-based competencies assessment tool. Each competency has associated behavioral evidences that serves as a proxy to determine if a competency has been achieved, see the Competency Models in **Appendices A and B** for board members and management teams.

The overall averages for management team and board members, which are the values for indicators 1.2.1 and 1.2.1, respectively, are the averages of all competencies that were assessed both at baseline and endline, **Table 8**. These results show that management teams have progressed, in average, from an "in progress" level of competency for PRM (40 - ≤60%) to a "functional" level (60 - ≤75%), while board members show a higher gain from "in-progress" to a "competent" level (≥75%).

TABLE 8. BASELINE VALUES AND TARGETS FOR INTERMEDIATE RESULT 1.2 INDICATORS

OBJECTIVES STATEMENTS	#	IMPACT / OUTCOME / OUTPUT INDICATORS	Targets		
			Baseline	Endline	% Change
Intermediate Result 1.2 **Board members and managerial staff demonstrate price risk management competencies in performing their roles in their organization**	1.2.1	Level of price risk management competencies of management staff (0-100)	50	60	20
	1.2.2	Level of price risk management competencies of board members (0-100)	48	76	56

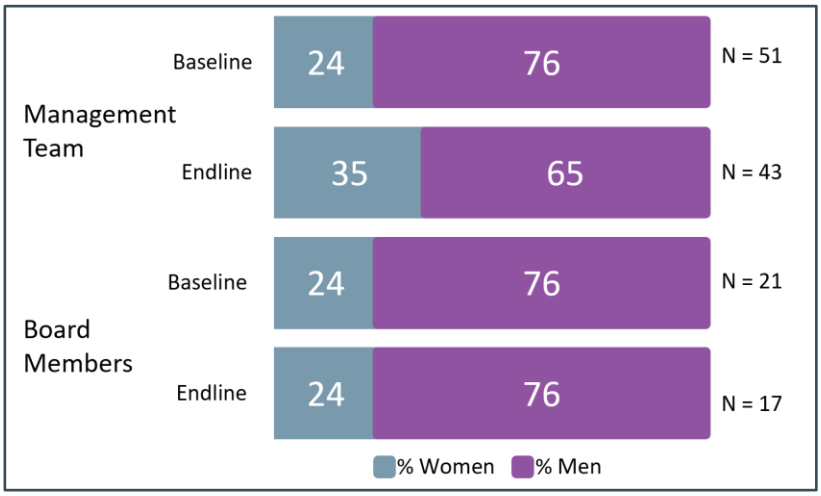
To better understand these results, a short section of the respondents' characteristics, both for baseline and endline respondents, is included. This is followed by the findings of the follow-up questions included for assessing the importance that these two groups (board members and managerial teams) gave to price risk management, and how they stand with respect to the values that support the competency models: certainty and confidence. This provides important contextual information for interpreting the specific indicators for this intermediate result which are discussed later in this section.

RESPONDENT CHARACTERISTICS

At baseline, fifty-one managerial team members, including general managers, and 21 board members were interviewed using the SenseMaker-based Competencies Assessment tool. At endline, the sample size of management team members and board members who were interviewed and participated in the project were 43 and 17, respectively.

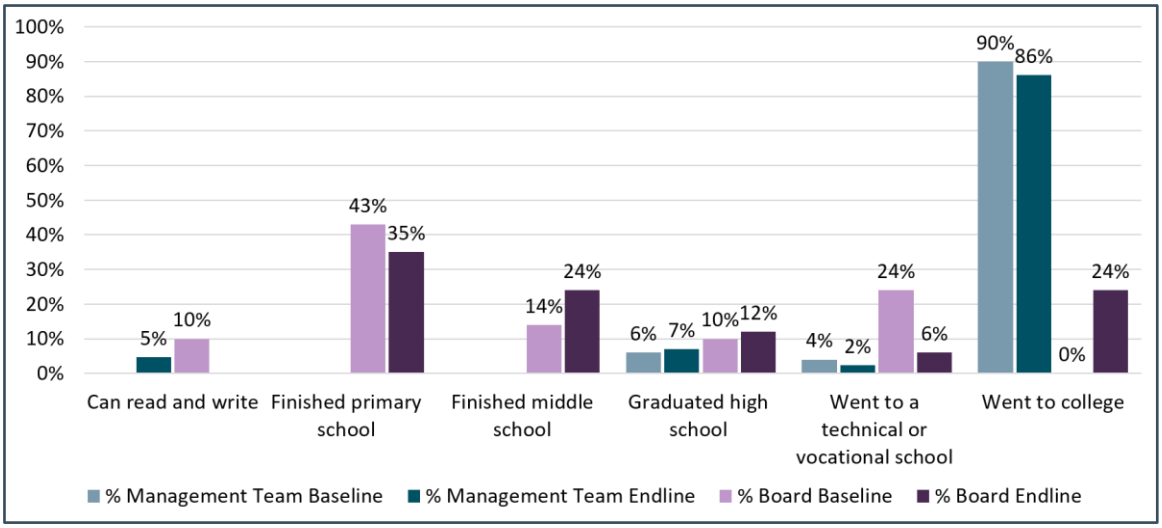
At baseline and endline, a greater percentage of board members and management team members that responded to the competencies' assessment were men, **Figure 15**, suggesting much greater representation of men within management teams and on boards. The gender proportion of the sample aligns closely with the gender breakdown of the project participants as 76% of project participants were men, and only 24% of participants were women.

FIGURE 15. SAMPLE INTERVIEWED USING THE SENSEMAKER-BASED ASSESSMENT TOOL



With respect the level of formal education a big gap can be observed between board members and the management team, **Figure 16**. While nearly all managerial team members have finished high school and at least 86% have attended a University, only around 40% of board member finished high school, and the highest level of education attained by most board members of 35% and 43% of respondents was primary school. The education level of board members was higher among the endline respondents than the baseline respondents, with a higher percentage of endline respondents having attended university. This may be a result of more educated board members having greater access to internet and thus enabling their participation. Given the education gap between management team and board members, it was important that the training modules were accessible for people with different levels of education.

FIGURE 16. FORMAL EDUCATION LEVEL OF PARTICIPATING MANAGEMENT TEAM MEMBERS AND BOARD MEMBERS INTERVIEWED AT BASELINE AND ENDLINE

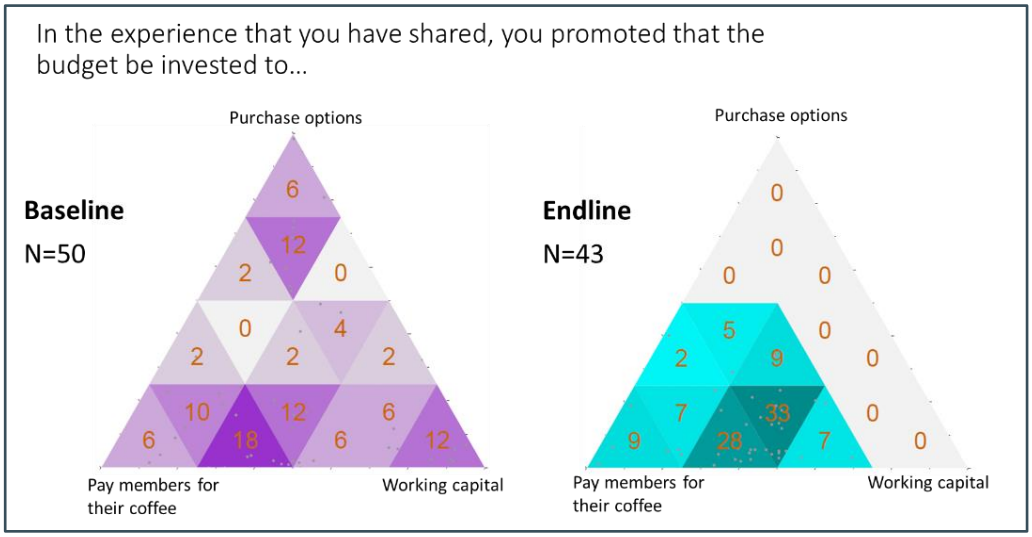


IMPORTANCE OF PRICE RISK MANAGEMENT

To assess the importance that managerial team members and board members gave to the use of financial strategies for PRM, in relation to other investment of financial resources, a follow-up question called a 'triad' was used in both the baseline and endline assessments. Respondents were asked on the relative importance they gave to using financial strategies for PRM (purchase options) in relation to paying members for their coffee or for working capital as funding priorities during the last commercialization cycle. Findings show that at endline, management teams gave less importance to purchase options than to using their available financial resources for paying members for their coffee and working capital, whereas at baseline responses were more dispersed and 20% of managerial team members gave more priority to purchasing options, **Figure 17.**[16] This result aligns with the findings on the other project indicators that show a lower percentage of traded coffee covered with options (IR 1.1.6).

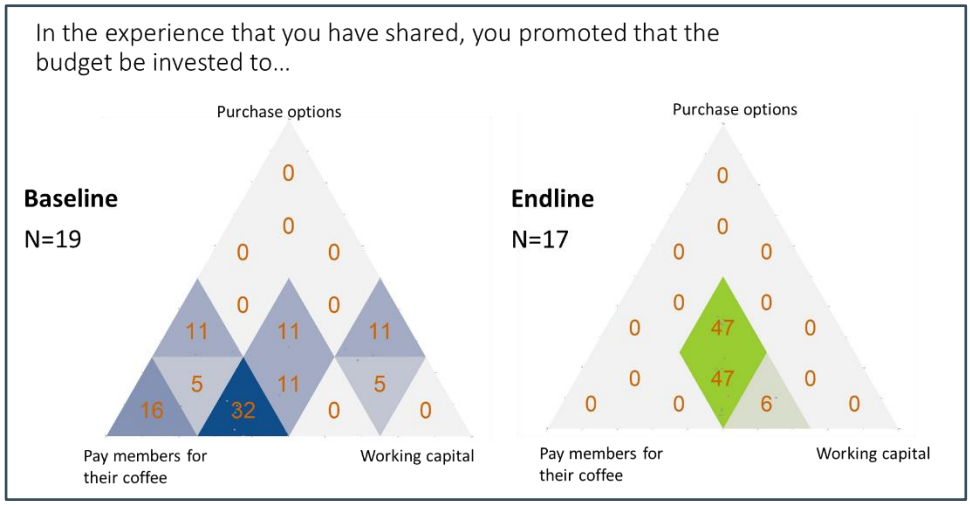
Interestingly, board members' responses shifted somewhat from baseline to endline, **Figure 18**. While at baseline, board members gave greater importance to using available funding for paying members for their coffee, at endline, over 50% of respondents gave equal if not more importance to working capital, and about 50% of respondents gave similar importance to all three elements. This shows that board members are giving more importance to the use of financial strategies for PRM, which could be to some extent related to the previous findings that show an important increase in board members competencies in PRM (IR 1.2.2).

FIGURE 17. IMPORTANCE GIVEN TO PRM AS DETERMINED BY MANAGEMENT TEAM MEMBERS' FUNDING PRIORITIES AT BASELINE AND ENDLINE



[16] The darker colored triangles within each triad represent a greater concentration of responses in that zone, and the orange numbers represent that percentage of responses in the corresponding zone

FIGURE 18. IMPORTANCE GIVEN TO PRM AS DETERMINED BY BOARD MEMBERS' FUNDING PRIORITIES AT BASELINE AND ENDLINE



ASSESSMENT OF THE VALUES THAT SUPPORT THE COMPETENCY MODELS

For the competency models to be aligned with the organization's mission and vision, they need to be supported by values, which must be expressed in the organization's culture and in the actions of its general manager, managerial team members, other staff, and board members, who should in turn promote them among all members of the organization. Therefore, the assessment also looked at organizational values related to price risk management, including adaptation, certainty, transparency, and confidence.

CERTAINTY

Definition: Certainty is the appreciation and sense of stability that generates: (a) a timely access to information, (b) clarity regarding the risks faced and how the organization handles them; and (c) knowledge of the business dynamics and how it can change the financial scenarios. In the context of this project certainty specifically refers to staff, board and members clarity about the price risk that the organization faces, access to relevant information, knowledge of the strategies that the organization has designed and implemented to manage it, and the possible financial outcomes of strategic and operational decisions.

To assess the value of certainty two follow-up questions were used. The first 'triad' type of question evaluated the relative importance that managerial teams and board members give to three elements of the value of certainty: accessing relevant information, having knowledge of the price risk management strategy, and having clarity about the price risk faced by the organization. The ideal response will be that the organizations' staff, board, and members give importance to all three elements.

At baseline, all but one management team member gave importance to at least one of the elements to the certainty value in relation to PRM, and all respondent gave importance to at least one element at endline. At baseline, response patterns for management teams were more dispersed, indicating that different members gave more importance to one element than the others, but with a greater importance, in average, to knowing the price risk management strategy, **Figure 19**. At endline, responses were less dispersed and either in the middle (35% of

responses), meaning they gave equal importance to all three elements, or a combination of two elements: accessing information and knowing the PRM strategy (21% of responses), or having clarity about price risk and knowing the PRM strategy (39% or responses).

Response patterns of board members at baseline and endline did not show a major difference, **Figure 20**. However, at endline, there was a greater concentration of responses in the center indicating that board members consider all three elements to be of similar importance, and there was a shift from knowing the price risk management strategy to having clarity about price risk.

FIGURE 19. RELATIVE IMPORTANCE GIVEN BY MANAGEMENT TEAM MEMBERS TO UNDERSTAND PRICE RISK AND THE ORGANIZATIONAL STRATEGY TO MANAGE IT AT BASELINE AND ENDLINE.

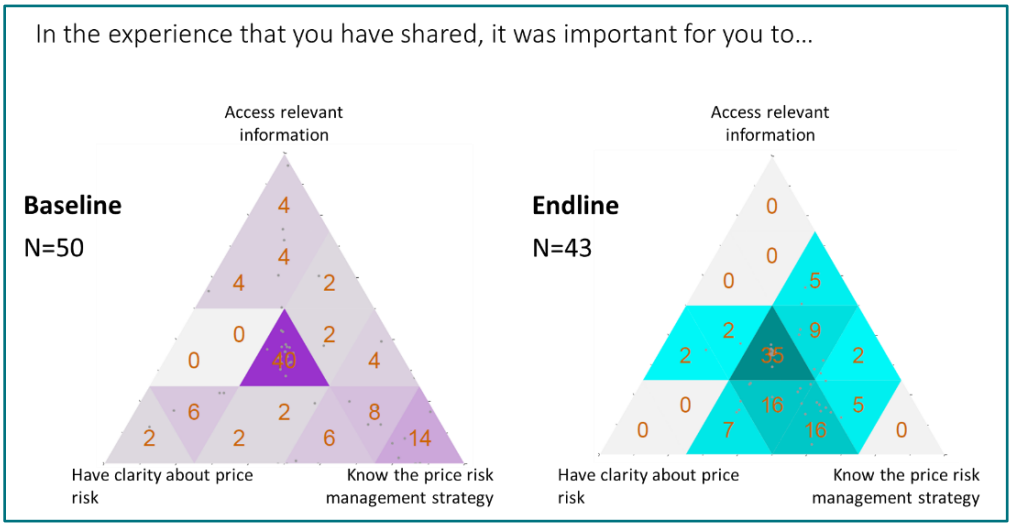
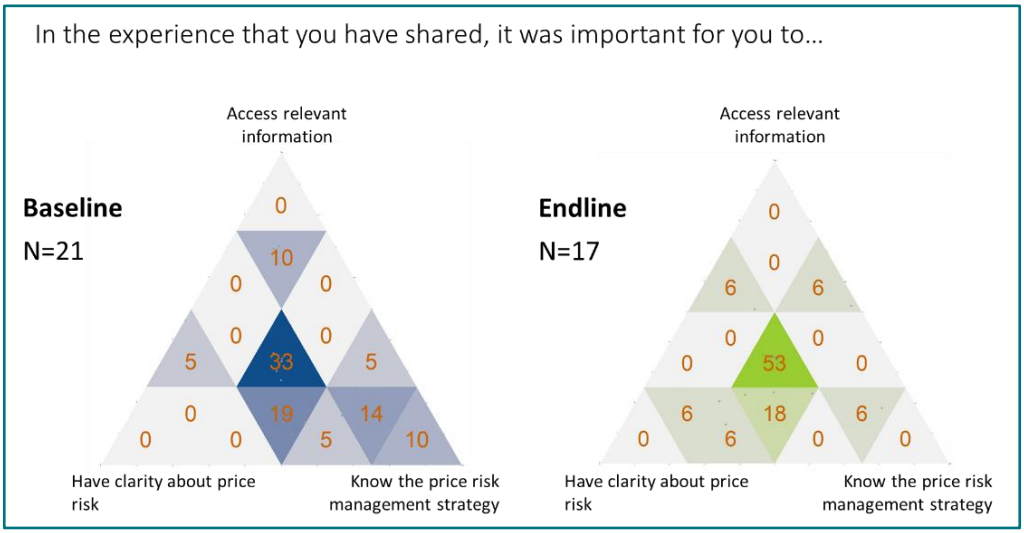


FIGURE 20. RELATIVE IMPORTANCE GIVEN BY BOARD MEMBERS TO UNDERSTAND PRICE RISK AND THE ORGANIZATIONAL STRATEGY TO MANAGE IT AT BASELINE AND ENDLINE.

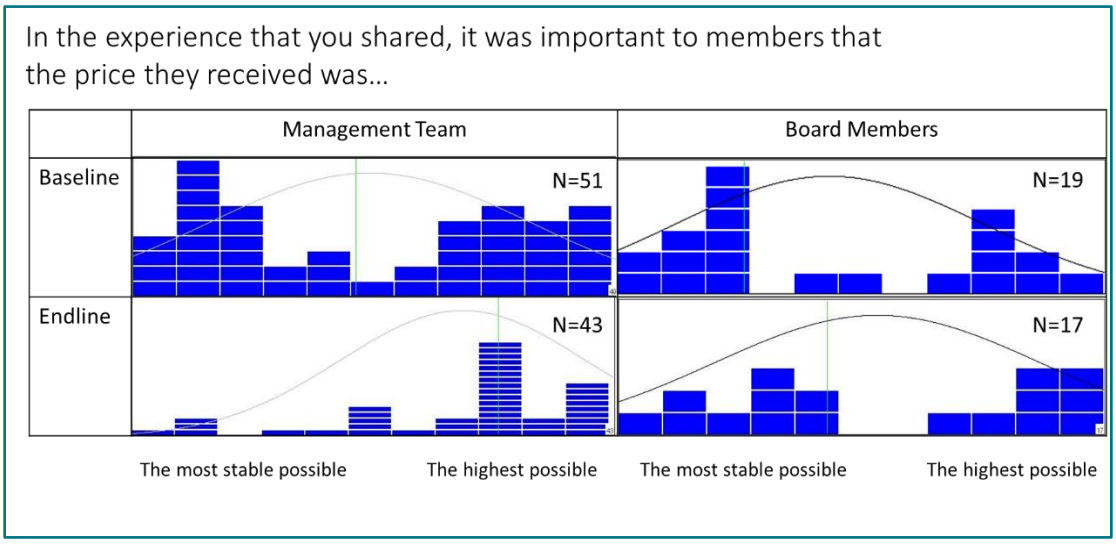


The second follow-up question was a slider-type question in which respondents were asked to signify what happened in the experience. Respondents were asked to reflect on the extent that members valued "a more stable price, even if it was not the highest possible" or "the highest price possible, even if it implies a higher risk" to assess how managerial teams and board members perceive the extent of organization members' risk aversion.

At baseline, management team members showed a lack of consensus on the position of organization members regarding price preference, **Figure 21**. Half of the management team members responded that they believe cooperative members to be slightly more inclined towards a more stable price, even if it is not the highest possible, and the other half responded that cooperative members are inclined toward the highest price possible. At endline, there was more consensus in the response trend toward "the highest possible," indicating that the perception of management team members is that organization members value a higher price over stability. This perception contrasts with the aim of the project which is to achieve greater price stability which may also explain the low adoption of financial strategies for PRM.

On the other hand, board members continue to demonstrate a lack of consensus as shown by the bimodal response patterns. This suggests that there continues to be a lack of clarity of members' risk aversion.

FIGURE 21. PERCEPTIONS OF THE EXTENT OF COFFEE PRODUCER ORGANIZATION MEMBERS' RISK AVERSION ACCORDING TO MANAGEMENT TEAM AND BOARD MEMBERS AT BASELINE AND ENDLINE

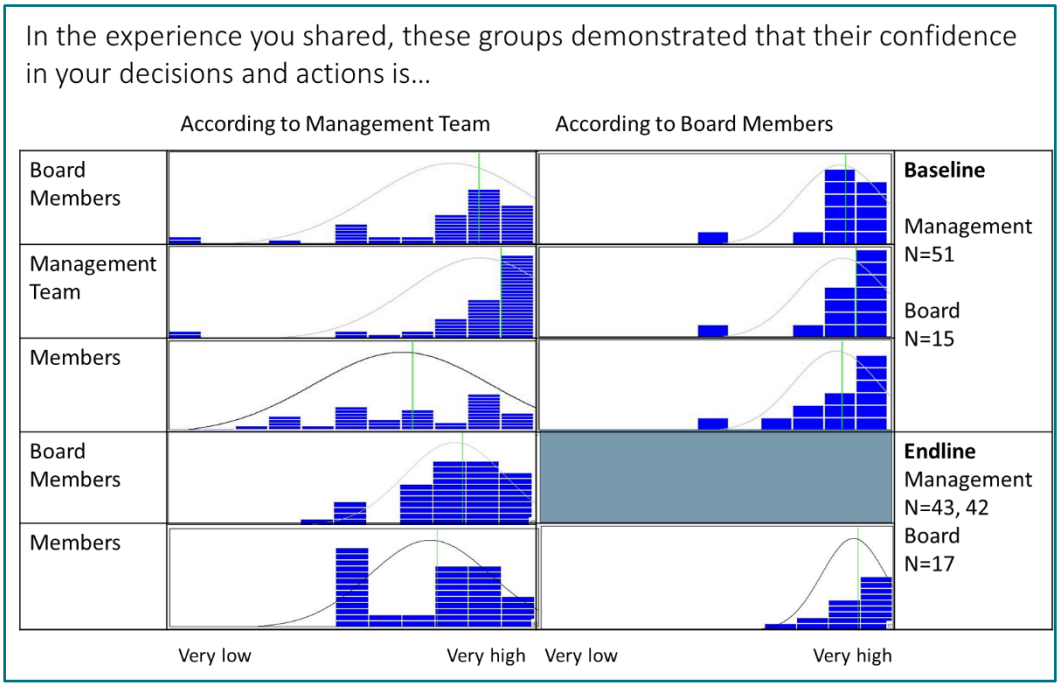


CONFIDENCE

Definition: Confidence is to believe in the honorability, intention, knowledge, and judgement of every person who holds a position in the organization. In the context of this project it refers to the marketing processes and specifically to the management of price risk.

To assess the value of confidence, a slider-type of follow-up question was used to assess the extent to which the members of the organizations had confidence in the decisions and actions of their management teams and boards (from very low to very high). For this question, the responses of the members themselves would have been important, but that was not possible given the Covid-19 situation. Median management team perceptions on the confidence that board members have in their decisions and actions has decreased from baseline to endline, while their perceptions on the level of confidence of members have slightly improved. Responses are still dispersed, however, highlighting that management team members still lack consensus on organization members' level of confidence in their actions and decisions. In addition, there is a concentration of responses in the middle, indicating an intermediate level of confidence, **Figure 22**. Board member perceptions on the level of confidence that members have in their decisions and actions was equally high at baseline and endline, showing an even higher level and less dispersion of answers at endline.

FIGURE 22. PERCEIVED CONFIDENCE ON THE DECISIONS AND ACTIONS TAKEN BY MANAGERIAL TEAMS AND BOARD MEMBERS



IR 1.2.1: LEVEL OF PRICE RISK MANAGEMENT COMPETENCIES OF MANAGEMENT STAFF

Definition: This indicator assesses management teams' competencies for managing price risk effectively.

For management staff, the model consists of the following two macro competencies and associated specific competencies:

Macro-competency 1: Marketing with PRM
Competencies: Information Monitoring and Analysis, Commercial Operation, Price Risk Management with Financial Strategies, Financial Operation

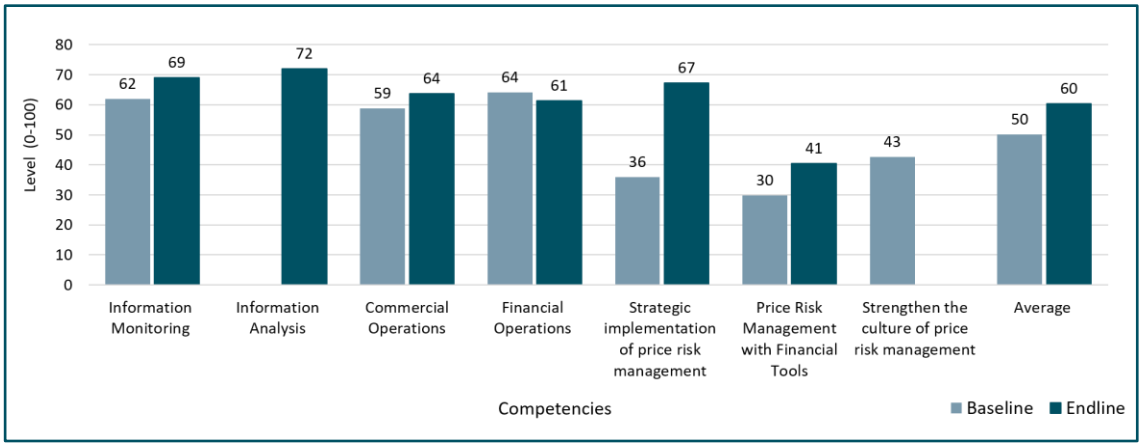
Macro-competency 2: Price Risk Management
Competencies: Strategic Implementation of PRM, Strengthen the Culture of Risk Management

Only those competencies that were assessed at both baseline and endline were included in the calculation of the overall average. Therefore "strengthen the culture of price risk management" and "information analysis" were not included in the calculation for the overall competency level. The Information-related competency that was assessed at baseline was misnamed as "Information Analysis" when in fact the competency that was evaluated was limited to "Information Monitoring." At endline, the evaluation was improved by moving beyond asking what elements the respondent monitored (Information Monitoring) to evaluate what they did with that information (Information Analysis).

Similarly, if any behavioral evidences were removed or added to a given competency between baseline and endline because of project learning, only those behaviors that were present in both evaluations were included in the calculations of competency averages. However, results of all behaviors for each competency are presented in **Appendix C**.

The average level of price risk management competencies of managerial team members increased by 20% over baseline values. Average levels by competency at baseline and endline are presented in **Figure 23**. The "Organizational Culture" competency was only evaluated at baseline, and the at endline, the Information competency was split into two components, "Information Monitoring" and "Information Analysis." Only those competencies common to both baseline and endline evaluations were included in the calculations of overall averages.

FIGURE 23. LEVEL OF PRICE RISK MANAGEMENT COMPETENCIES OF MANAGEMENT STAFF



The competency level represents, on average, the percentage of behaviors associated with that competency that the respondents demonstrate. To facilitate understanding of a given competency score, they can be categorized based on the following ranges:

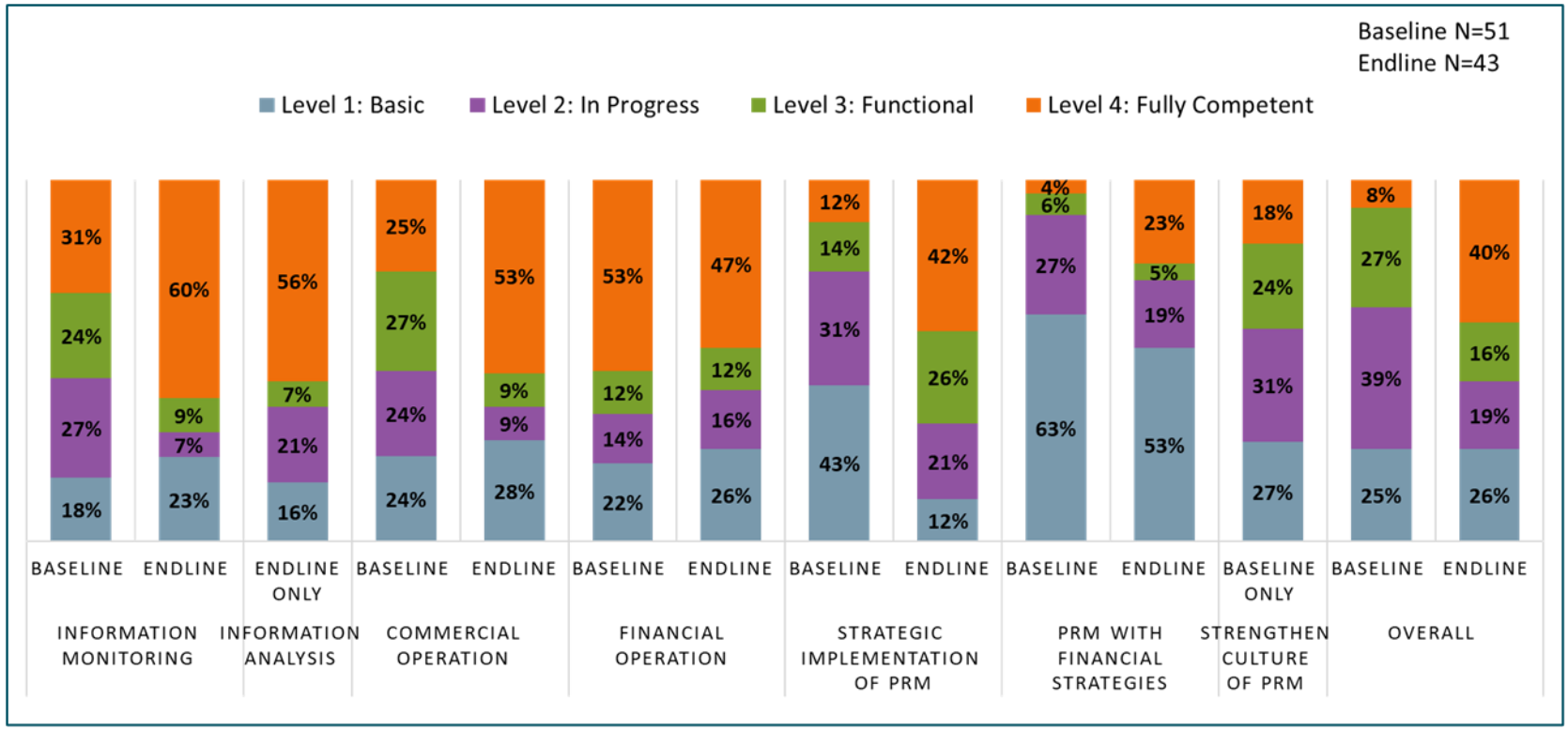
Range	Category	Definition
<40%	Basic	Has limited knowledge and experience with performing their role and function in the organization related to price risk management but has potential to improve.
40 - <60%	In progress	In the process of improving but needs substantial training. Can perform limited duties related to their role and function in the organization but may need substantial support.
60 - <75%	Functional	Able to adequately perform their role and function in the organization related to price risk management. Has some gaps and is need of some additional training.
75-100%	Fully Competent	Able to excel in their role and functions in the organization related to price risk management and can train others to perform similar functions

Respondents' levels of each competency at baseline and endline were categorized using the above scale, and the percentage of management team member respondents at each level are shown in **Figure 24.** Overall, the percentage of respondents who reached the level of "Fully Competent" increased from 8% to 40%. At endline there was an increase in the percentage of respondents scoring the highest level for all competencies except for "Financial Operation." The competencies with the highest percentage of respondents at the "Fully Competent" level at endline were "Information Monitoring" (60%) and "Commercial Operation" (53%). Those competencies that saw the greatest increase in percent of respondents at the highest level from baseline to endline were "Strategic Implementation of PRM" (from 12 to 42%) and "Information Monitoring" (from 31 to 60%).

Despite these gains, about a quarter of respondents are still only at the basic level for several of the competencies including "Information Monitoring," "Commercial Operation," and "Financial Operation." Over half are still at the basic level for the "PRM with Financial Tools" competency. This suggests that additional training or support may be necessary for management team members to excel in their roles and functions related to price risk management. Additionally, 20% of respondents selected the "none of the above" answer for the "Price Risk Management with Financial Strategies" competency. This suggests that there is still significant room for improvement and that many management team members still may not feel comfortable using financial instruments. Those respondents that selected the "none of the above" option included members of commercialization and financial teams.

Lastly, when comparing the overall average competency levels of respondents from organizations that were using financial instruments for PRM versus those that were not, the percentage of respondents who were at the "Fully Competent" level was 61% versus 41%. On average, respondents from organizations who were implementing financial strategies scored higher for all competencies. However, these results should be interpreted with caution given the small sample size and unbalanced sample between organizations.

FIGURE 24. PERCENTAGE OF MANAGEMENT STAFF AT EACH LEVEL FOR PRICE RISK MANAGEMENT COMPETENCIES AT BASELINE AND ENDLINE



The assessment also examined seven expected results from showing the behavioral evidences for each of these competencies, corresponding to the competency model, as follows:

Competency 4: Information Monitoring.[17] The extent that the information analyzed was used for decision-making, **Figure 25**.

Competency 5: Commercial operation. The level of satisfaction of buyers with the organizations' commercial operation, **Figure 26**; and the level of satisfaction of the organization members with the price received for their coffee, **Figure 27**.

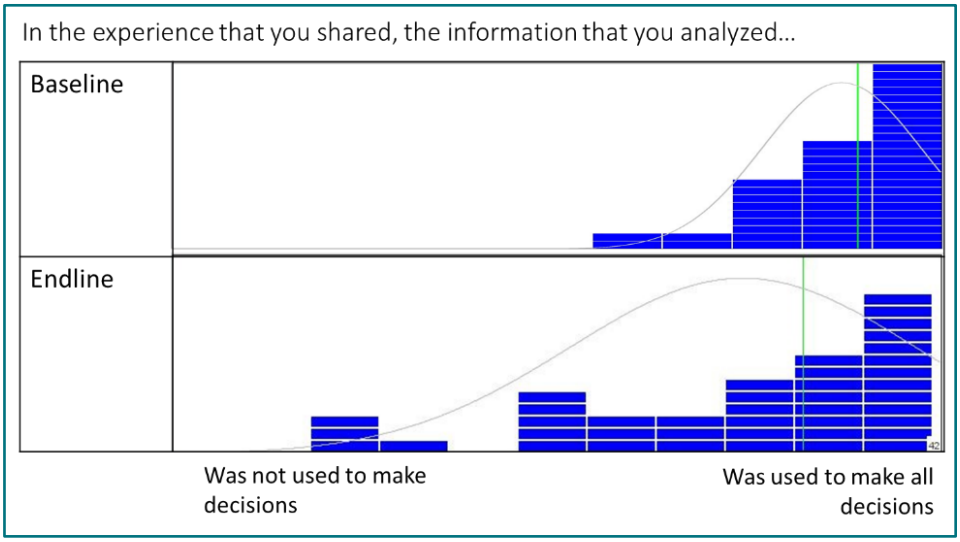
Competency 6: Price risk management with financial strategies. The extent to which the price risk management practices implemented were effective, **Figure 28.**

Competency 7: Financial operation. The extent to which the organization ensured that financial resources were available when needed, **Figure 29**.

Competency 8: Strategic implementation of PRM. The extent that the organization had a tight or high coffee trade net margin, **Figure 30.**

Competency 9: Strengthen the culture of risk management. The degree of commitment of organization members to price risk management, **Figure 31**.

FIGURE 25. EXPECTED RESULT OF THE 'INFORMATION MONITORING AND ANALYSIS' COMPETENCIESCOMPETENCY OF MANAGEMENT TEAM MEMBERS



[17] This competency was called "Information Analysis" at baseline; however, the baseline assessment actually evaluated information monitoring, rather than analysis. At endline, two questions were created to assess both information monitoring and analysis.

FIGURE 26. EXPECTED RESULT OF THE 'COMMERCIAL OPERATIONS' COMPETENCY OF MANAGERIAL TEAM MEMBERS WITH RESPECT TO BUYERS' SATISFACTION

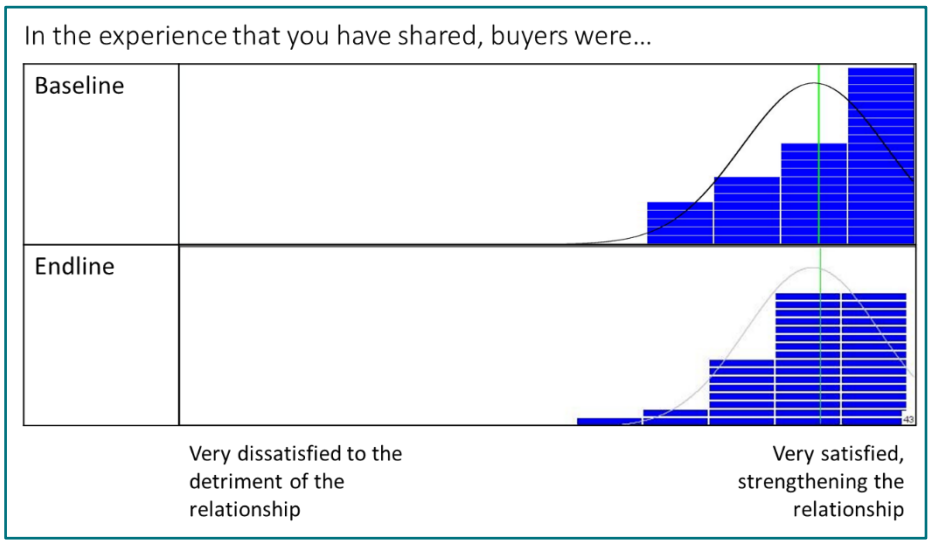


FIGURE 27. EXPECTED RESULT OF THE 'COMMERCIAL OPERATIONS' COMPETENCY OF MANAGERIAL TEAM MEMBER WITH RESPECT TO ORGANIZATION MEMBERS' SATISFACTION

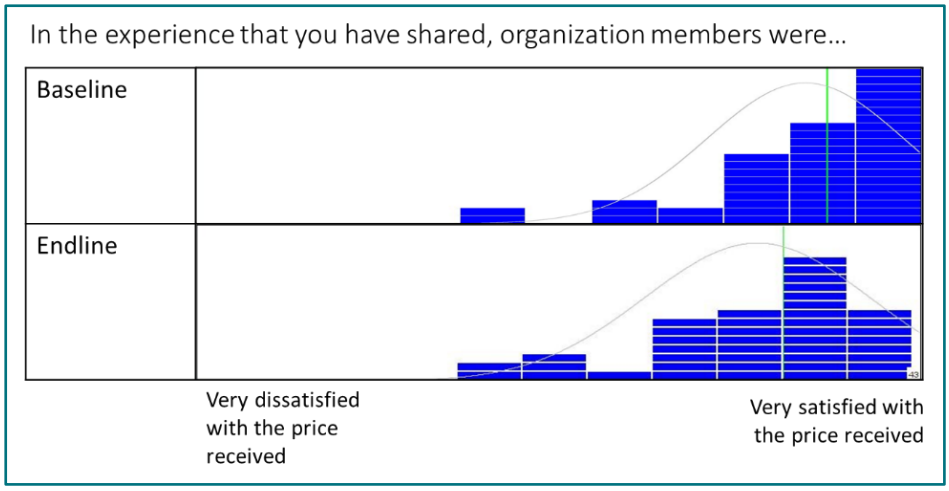


FIGURE 28. EXPECTED RESULT OF THE 'PRICE RISK MANAGEMENT' COMPETENCY OF MANAGERIAL TEAM MEMBERS

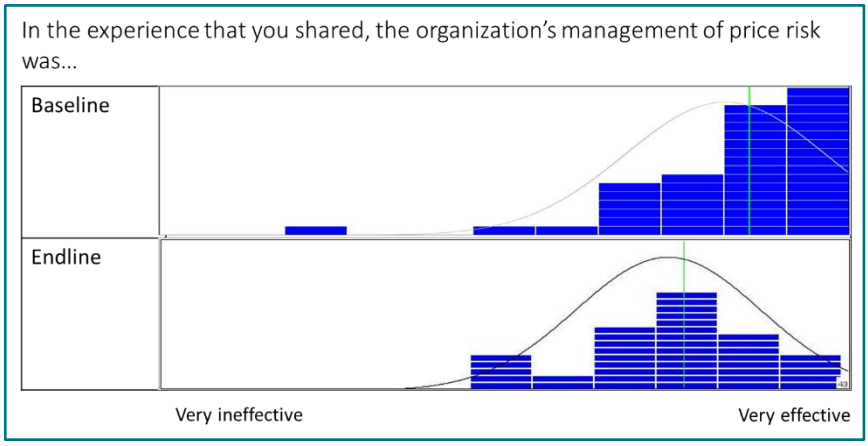


FIGURE 29. EXPECTED RESULT OF THE 'FINANCIAL OPERATIONS' COMPETENCY OF MANAGERIAL TEAM MEMBERS

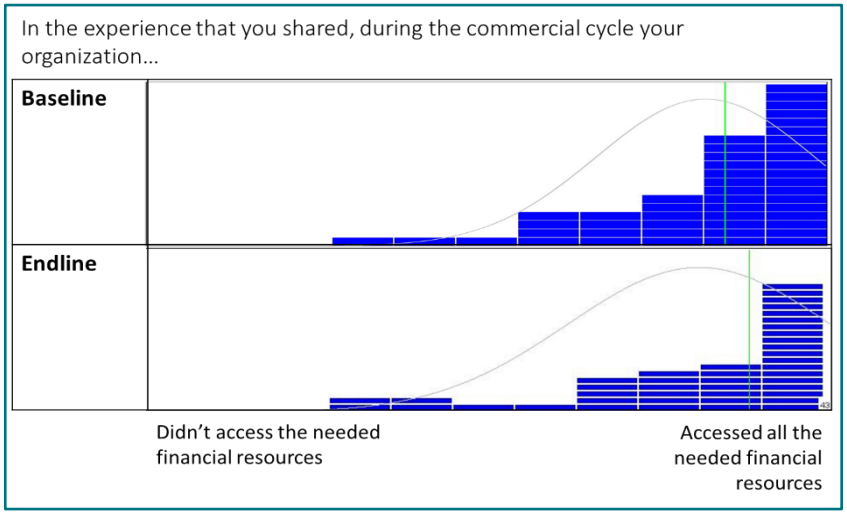


FIGURE 30. EXPECTED RESULT OF THE 'STRATEGIC IMPLEMENTATION OF THE PRICE RISK MANAGEMENT' COMPETENCY OF MANAGERIAL TEAM MEMBERS

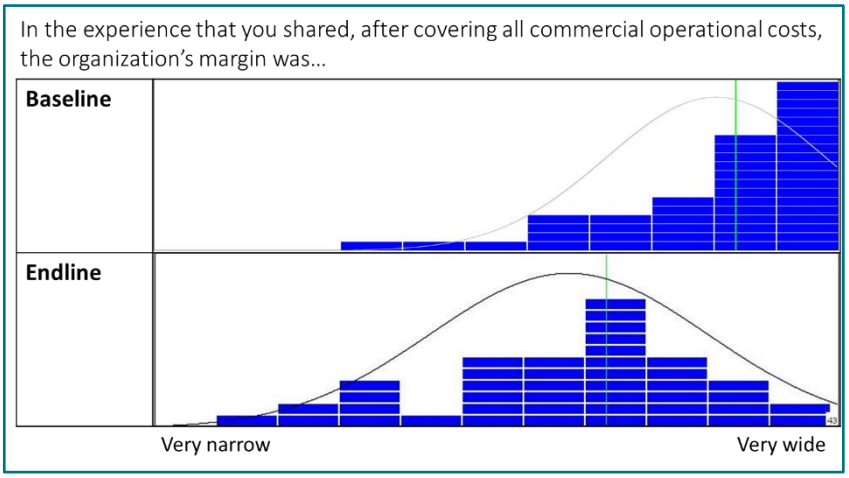
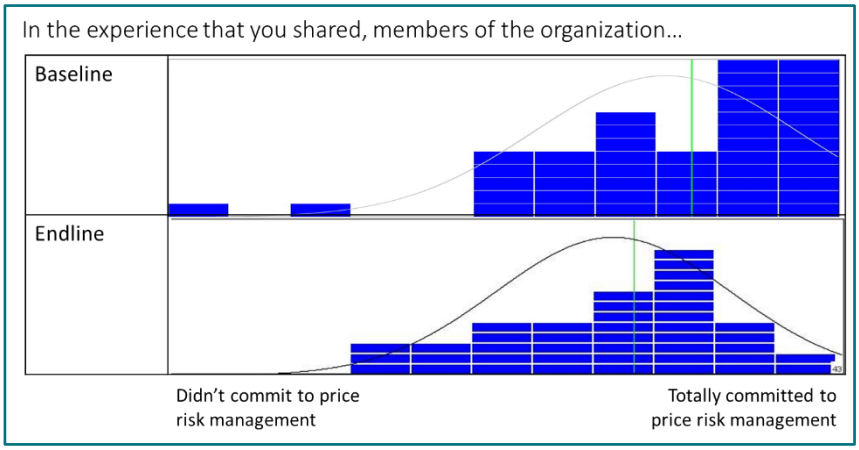


FIGURE 31. RESULT OF 'STRENGTHEN THE CULTURE OF RISK MANAGEMENT' COMPETENCY OF MANAGERIAL TEAM MEMBERS



The above analysis of the expected results of managerial team members' competencies show that their perceptions of the achievements of these results are relatively high at both baseline and endline. However, the perception of the results achieved was slightly lower at endline than at baseline with two exceptions. The level of satisfaction of buyers remained the same, **Figure 26**, and the ability to access the needed financial resources was slightly higher at endline, **Figure 29**. The latter coincides with an increase in the percentage of respondents who demonstrate the behavior of "ensured resources for price risk management," **Figure 43** in **Appendix C**.

Some of the baseline responses should be interpreted with caution. With respect to the level of satisfaction of buyers with the organizations' commercial operation, **Figure 27**, 10% of respondents selected the "does not apply" option, indicating that they may have been unsure of the level of satisfaction of buyers. At baseline, only 45% of respondents indicated that they had a system in place to verify buyer satisfaction; however, this increased to 70% at endline, **Figure 40** in **Appendix C**. Similarly, 20% of respondents at the baseline selected the "does not apply" option when asked to assess the level of satisfaction of the organization members with prices received, **Figure 27**. At endline, all respondents responded to these two questions.

The lower perception of achievements related to the "Information Monitoring/Analysis" and "Strategic Implementation of Price Risk Management" competencies are surprising given the increase in levels of these competencies of management team members at endline. However, several factors may have contributed to lower perceptions of achievements as demonstrated by narrower margins.

Most importantly, coffee producers have faced a global coffee price crisis during the last commercialization cycle that was the basis of endline results. Second, the "financial operation" competency was slightly lower at endline, **Figure 23**, and the perceived commitment of organization members to price risk management, **Figure 31**, was also lower at endline than baseline which may have inhibited effective implementation of the strategy.

Moving forward, it will be important to continue to assess members' commitment to PRM, which was the result with the lowest perception of achievement at both baseline and endline. At endline, a higher percentage of management members did respond that they communicated PRM decisions and actions to collaborates and the board (86% versus 59%), and over 90% of

board members communicated results achieved directly to members, therefore the two groups will need to continue to work together to see how this commitment can be approved. As mentioned in the baseline report, ensuring this commitment will be important to ensure the impact and sustainability of the project interventions.

IR 1.2.2: LEVEL OF PRICE RISK MANAGEMENT COMPETENCIES OF BOARD MEMBERS

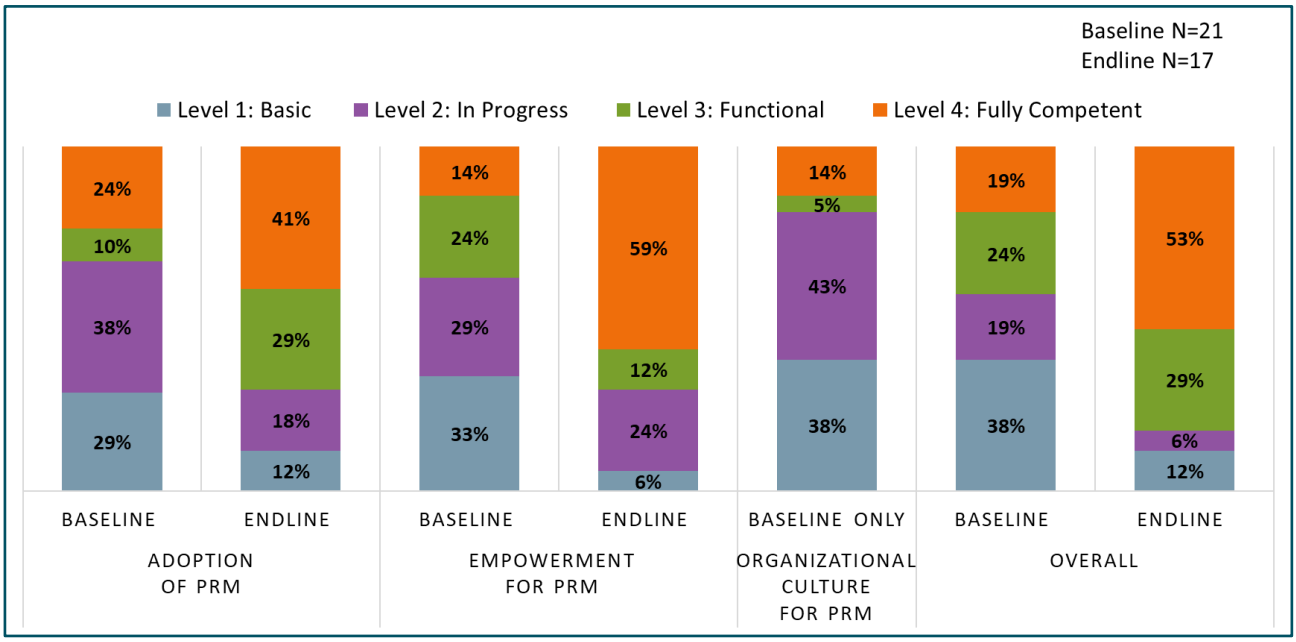
Definition: This indicator assesses the competencies of board members to understand and oversee price risk management strategies effectively and sustainably, defined as the cluster of interrelated knowledge, skills, and attitudes that enables them to effectively perform its role. For board members, the model consists of:
Macro-competency: Strategic vision for price risk management
Competencies: Adoption of price risk management, Empowerment for price risk management, and Organizational culture for price risk management.

The average level of price risk management competencies of board members increased by 60% over baseline values from 48 to 76, **Figure 32.** The "Organizational Culture for PRM" competency was only assessed at baseline and not included in the overall calculation.

FIGURE 32. AVERAGE LEVEL OF PRICE RISK MANAGEMENT COMPETENCIES OF BOARD MEMBERS

Figure 33 shows the percentage of board members at each level for each competency at baseline and endline. Overall, the percentage of respondents at the highest level of "Fully Competent" increased from 19% to 53%, and the percentage of respondents at the lowest "Basic" level decreased from 38% to 12%. This suggests that project was successful in increasing the competencies of board members through training workshops. The greatest gains were made in the "Empowerment for PRM" competency which saw a shift in the percentage of board members at the "Fully Competent" level from 14% to 59%. A more detailed analysis on the behavioral evidences for each of these three competencies that make-up the competency model can be found in **Appendix D**.

FIGURE 33. PERCENTAGE OF BOARD MEMBERS AT EACH LEVEL FOR PRICE RISK MANAGEMENT COMPETENCIES



However, the results of the competencies' assessment should be interpreted with caution given the small sample size of board members at both baseline and endline. At baseline, only board members from 14 of the participating organizations participated in the assessment, and board members from only about half of participating CPOs participated in the endline assessment. At baseline, the low number of assessments completed with this group was due to lack of availability of board members at the time of the visit to the coffee producers' organizations. At endline, applying the tool virtually likely limited the participation of board members who had poorer access to internet and were more isolated from town centers. It would have been best to build in an extra day during trainings to ensure availability of respondents and ample time to apply the tool.

The assessment of these competencies was taken further to not only assess the extent that board members demonstrate the behavioral evidences described for each competency, but also the results of their level of competencies. For that purpose, 'slider' type of follow-up questions where used at baseline and endline to assess the expected results of showing the behavioral evidences for each of the three model competencies, as follows:

Competency 1: Adoption of price risk management. The extent to which the price risk management practices implemented were effective, **Figure 34.**

Competency 2: Empowerment for price risk management. The extent to which decisions were taken in a timely manner, **Figure 35**.

Competency 3: Organizational culture for price risk management. The degree of commitment of organization members to price risk management, **Figure 36**.

Two of these three follow-up questions were also asked to managerial team members, and the responses are presented in **Figures 28 and 31**.

FIGURE 34. EXPECTED RESULT OF 'ADOPTION OF PRICE RISK MANAGEMENT' COMPETENCY OF BOARD MEMBERS

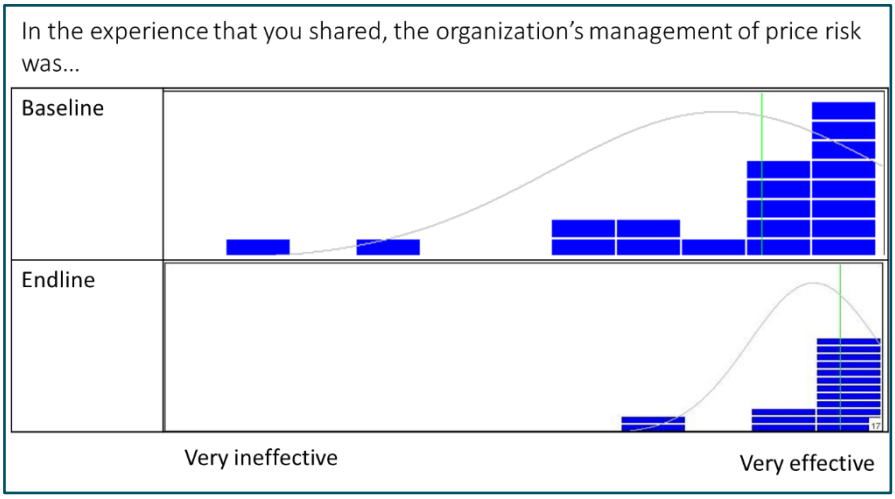


FIGURE 35. EXPECTED RESULT OF 'EMPOWERMENT FOR PRICE RISK MANAGEMENT' COMPETENCY OF BOARD MEMBERS

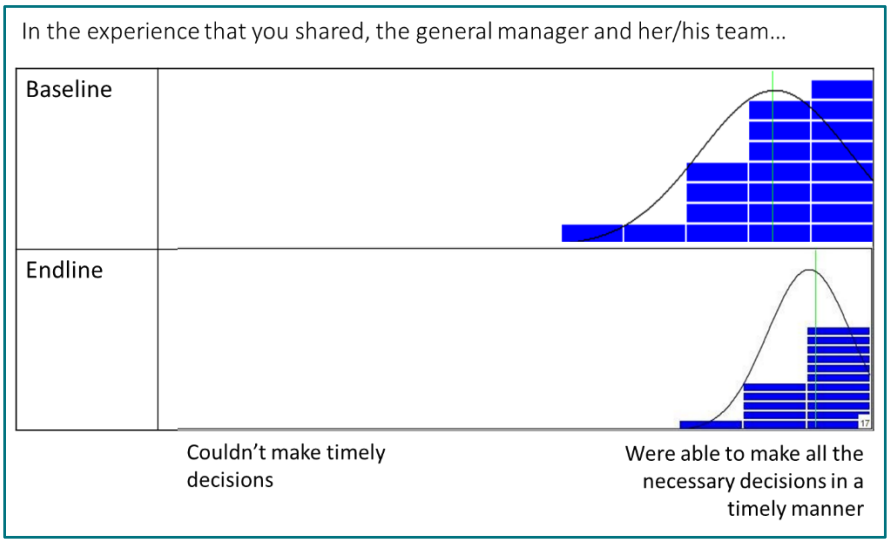
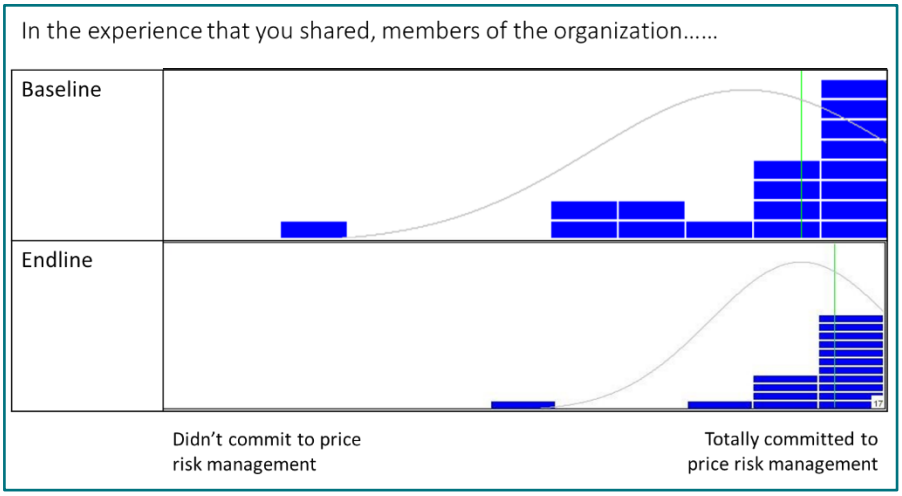


FIGURE 36. EXPECTED RESULT OF 'ORGANIZATIONAL CULTURE OF RISK MANAGEMENT' COMPETENCY OF BOARD MEMBERS



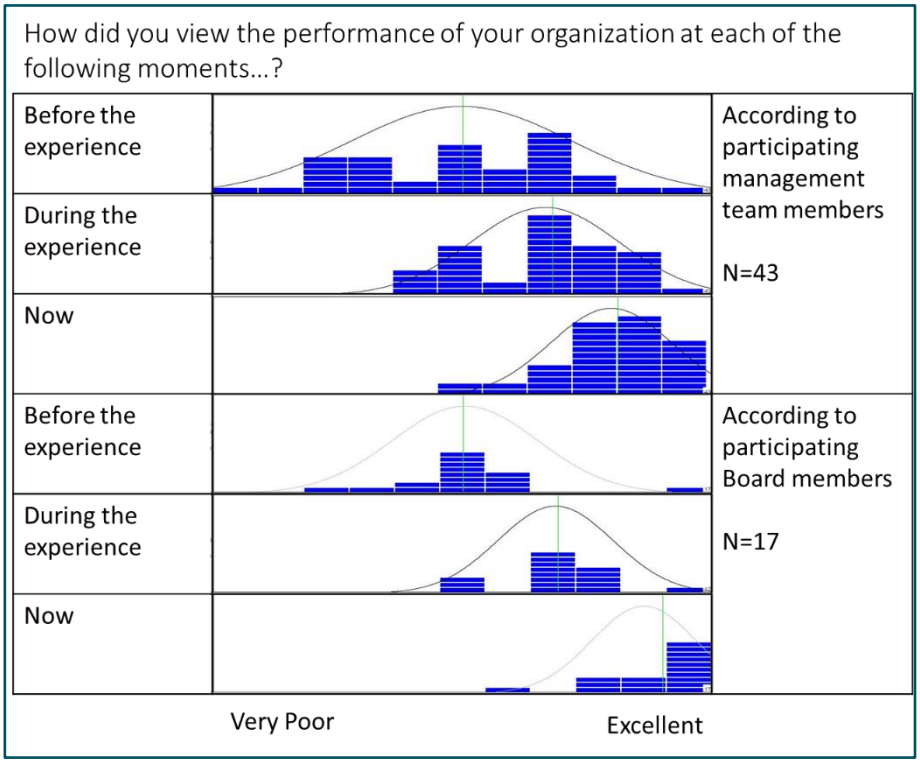
The results of board members' competencies show that their perceptions of the achievements of these results continue to be higher than those of managerial team members and were higher at endline than at baseline, in contrast to managerial team members' responses which were lower at endline.

Board members' responses for the effectiveness of price risk management, which looks at the expected result of the "adoption of price risk management" competency, and for member commitment to price risk management, which looks at the expected results of the "organizational culture of risk management" were more concentrated toward a positive response at endline. However, there was still one outlier that responded more toward a neutral perception for the latter question, **Figures 34 and 36**.

Board members' higher perception of members' commitment to price risk management relative to management team members' warrants further exploration as there continues to be a marked difference in perception of commitment, **Figures 31 and 36**.

Despite differences in the perceived results between management team and board members, both groups responded similarly to the perceived performance of the organization before, during and after participation in the project, although board members did have a slightly higher perception of performance "now", **Figure 37**.

FIGURE 37. PERCEIVED PERFORMANCE OF THE ORGANIZATION BEFORE, DURING, AND AFTER PARTICIPATION IN THE PROJECT



STRATEGIC OBJECTIVE 2: FINANCIAL INSTITUTIONS FILL FINANCING GAPS FOR DIRECT PRM IMPLEMENTATION

The financial assessment tool was used to assess whether financial institutions are filling the financing gaps for coffee producer organizations that are ready to implement PRM using financial strategies, **Table 9**. Endline results show that a little over half of all participating CPOs dedicated resources to adopt financial strategies for price risk management, namely the purchase of options (Indicator SO2.4). Despite only a 22% increase in the percentage of CPOs receiving lending to purchase options (two additional CPOs received funding), the amount of financing received increased by over six-fold (Indicator 2.1). It would be important to know the distribution of this financing among the 12 organizations receiving it, but this increase in financing relative to number of organizations suggests that the CPOs receiving financing have moved beyond simply piloting the use of options. This supposition is further supported by the increase in number of organizations that have opened and are managing a brokerage account which will be discussed further in the subsequent section.

The share of total short-term loans used for options finance (SO 2.2) remained low at less than 1%. This is not unexpected given the total amount of working capital that is lent to the CPOs. It remains unclear if a financing gap exists or not. There was an increase in the repayment of short-term loans from 84 to 100% repayment (SO 2.3)

TABLE 9. BASELINE VALUES AND TARGETS FOR STRATEGIC OBJECTIVE 2 INDICATORS

OBJECTIVES STATEMENTS	#	IMPACT / OUTCOME / OUTPUT INDICATORS	Targets		
			Baseline	Endline	Change
Strategic Objective 2 **Financial institutions fill financing gaps to coffee producer organizations ready for direct PRM implementation by providing liquid, flexible and unsecured loans**	SO 2.1	Total value of lending received by coffee producers' organizations used to adopt financial strategies for price risk management (US$/commercialization cycle; 2016 at baseline, 2019 at endline)	$107,500	$700,000	+$592,500
	SO 2.2	Share of total short-term loans used for financing options (%)	0.12%	<1%	--
	SO 2.3	Percentage of the value of total short-term loans that are repaid by the coffee producers' organizations to lenders (%)	84%	100%	19%
	SO 2.4	Percentage of coffee producers' organizations receiving lending to invest in options	45%	55%	22%

SO 2.1: TOTAL VALUE OF LENDING RECEIVED BY COFFEE PRODUCERS' ORGANIZATIONS USED TO ADOPT FINANCIAL STRATEGIES FOR PRICE RISK MANAGEMENT

Definition: This indicator refers to the total value of lending received by coffee producer organizations to finance options converted to USD and is calculated for each organization by adding the value of every loan received to finance options during the commercialization cycle.

To calculate the value of the indicator, the value of lending received by each of all participating organizations during the commercialization cycle is added.

The original intent of this indicator was to quantify the total value of lending provided to coffee producer organizations for financing options and is the sum of the value of lending received by each participating coffee producer organization. However, the baseline provided to CRS was not disaggregated by source of funds and could include the organizations' own funds, buyers' funds as part of the coffee contracts or lending.

At baseline, less than half of all participating producer organizations have invested in financial strategies for PRM (mainly the purchase of options) during the 2016-17 commercialization cycle, and the majority of those that purchased options spent 10,000 USD or less. Only two producer organizations dedicated more than 10,000 USD to the purchase of options, and the highest amount that a coffee producer organization dedicated was 50,000 USD. The endline data provided to CRS was not disaggregated by organization, but the six-fold increasing in lending used for financial strategies for PRM suggest that some organizations have moved beyond piloting the use of options. Although the source of financing is still not disaggregated at endline, the 100% repayment rate of short-term loans also suggest that the CPOs were able to manage additional liability for options financing.

SO 2.2: SHARE OF TOTAL SHORT-TERM LOANS USED FOR OPTIONS FINANCE (%)

Definition:
This indicator is calculated by dividing the total value of short-term credit received for options finance during a given commercialization period by the total value of short-term loans for the same commercialization period.

The value of total short-term loans includes: (1) total short-term credit received for all trading activities in each commercialization period; and (2) total short-term credit received for options financing during a given commercialization period.

The average baseline value for this indicator was very low (0.12%) and increases to 0.26% if the average is calculated only for those coffee producer organizations who bought options during the 2016-17 commercialization cycle. This showed that for the 45% of coffee producer organizations who bought options during the 2016-17 commercialization cycle, buying options as a strategy for managing price risk was still new and in a pilot phase.

The average endline value for this indicator was still quite low at less than 1% of short-term loans used specifically for the purchase of options. The low percentage can be explained by high overall amount of short-term lending in the form of working capital received by these organizations.

Additionally, project implementers and participants should reflect on the total value of funds needed to buy options and compare that amount with the actual value of funds invested in order to determine if there was or still is a financing gap.

SO 2.3: PERCENTAGE OF THE VALUE OF TOTAL SHORT-TERM LOANS THAT ARE REPAID BY THE COFFEE PRODUCERS' ORGANIZATIONS TO LENDERS

Definition: The value of total short-term loans includes: (1) total short-term credit received for all trading activities in each commercialization period; and (2) total short-term credit received for options financing during a given commercialization period. Repaid means that the loans are not outstanding beyond the date specified on the loan agreement.

This indicator is calculated by dividing the sum of all short- term loans that are repaid at the end of the commercialization cycle by the total sum of all short-term loans disbursed during the same period.

This indicator assesses the capacity of a coffee producer organization to manage liability related to short-term financing. The average percent of the value of total short-term loans, which include both total trade credit and total options finance, repaid increased from 84% to 100% at endline. The high baseline and endline results suggest that these organizations have a high capacity to manage liability related to total short-term financing as demonstrated by 100% repayments.

SO 2.4: PERCENTAGE OF COFFEE PRODUCERS' ORGANIZATIONS RECEIVING LENDING TO ADOPT PRICE RISK MANAGEMENT STRATEGIES

Definition: This indicator will monitor the percentage of coffee producers' organizations who receive lending from Oikocredit and others to implement PRM strategies. It will be calculated dividing the number of coffee producers' organizations who receive lending to implement PRM strategies by the total number of coffee producers' organizations who participate in the project.

The intent of this indicator is to evaluate the extent to which participating coffee producer organizations are being able to access loans for funding their financial strategy for PRM, under the assumption on which the project was designed, which is that a financing gap exists and needs to be fulfilled. At end line, 55% of participating organizations received lending to adopt price risk management strategies. However, it is not clear if the remaining 45% of organization did not wish to access financing for the purchase of options, or if they did not seek lending for that purpose. This information would better reflect the extent to which the organizations were able to access loans if so desired. Additional financial analysis to address this issue is being supported by a follow-on study by Oikocredit.

INTERMEDIATE RESULT 2.1: COFFEE PRODUCER ORGANIZATIONS HAVE FULFILLED THE REQUIREMENTS TO ACCESS LOANS FOR IMPLEMENTING PRM STRATEGIES

The project design rationale was based on the assumption that there is a financing gap required to cover working capital needs, to manage stocks and implement commercial strategies as well as for buying options. However, to access the additional financial needs, the project would provide training to CPOs to enable them to be compliant with the financial diligence requirements of institutions, such as Oikocredit and others, so that they could access financing to implement options based PRM strategies. Given the defined requirements for accessing these loans, as provided by Oikocredit, only two of the participating organizations fulfilled all the requirements during the 2016-17 commercialization cycle, **Table 10**.

These numbers reversed at endline with only two of the 22 participating organizations *not* fulfilling the requirements during the 2018-2019 commercialization cycle because of their failure to report open position data. At endline eight organizations received lending from Oikocredit to adopt financial instruments for price risk management, which can be considered a major advance in the project.

TABLE 10. BASELINE VALUES AND TARGETS FOR INTERMEDIATE RESULT 2.1 INDICATORS

OBJECTIVES STATEMENTS	#	IMPACT / OUTCOME / OUTPUT INDICATORS	Targets		
			Baseline	Endline	Change
Intermediate Result 2.1 Coffee producer organizations have fulfilled the requirements to access loans for implementing price risk management strategies	2.1.1	Number of coffee producers' organizations that have fulfilled the requirements to access loans for implementing price risk management strategies (#)	2	20	+18

IR 2.1.1: NUMBER OF COFFEE PRODUCERS' ORGANIZATIONS THAT HAVE FULFILLED THE REQUIREMENTS TO ACCESS LOANS FOR IMPLEMENTING PRICE RISK MANAGEMENT STRATEGIES.

Definition: A coffee producers' organization have fulfilled the requirements to access loans for implementing PRM strategies if it meets all the following requirements:

1. Is accessing loans to finance their trade operations
2. Have a system to manage open positions
3. Shows no evidence of speculation, specifically: (a) does not store a high volume of coffee waiting for an increase in prices; and/or (b) does not sign contracts with fixed prices without having coffee stored
4. Current ratio is above 1 in 2 of 3 years assessed. The working capital defined by year 2 current assets (CA2) minus current liabilities (CL2) minus year 1 current assets (CA1) minus current liabilities (CL1) is more than the sum of trade finance costs and options costs.

INTERMEDIATE RESULT 2.2: FINANCIAL INSTITUTIONS ARE AWARE THAT COFFEE PRODUCER ORGANIZATIONS CAN EFFECTIVELY MANAGE PRM USING FINANCIAL STRATEGIES

The indicators for this intermediate result were selected to test the assumption that if financial institutions know that coffee producer organizations have acquired new competencies to manage price risk and can implement financial strategies for PRM, then financial institutions will be more confident in providing additional finance to support PRM costs.

These indicators assess the implementation of organizational practices related to the effective management of PRM using financial strategies. At baseline, ten CPOs, five in Central America and five in South America were using financial strategies for price risk management, **Table 11**. At endline, the number of organizations using financial strategies for PRM increased to 12. It is important to understand why more organizations are not yet using financial strategies and whether the majority of these twelve organizations are the same organizations who at baseline were also using financial strategies. The additional financial analysis that is being supported by Oikocredit will need to examine why specific CPOs were unable to shift into financial strategies, which may relate to diligence issues and lack of funds or insufficient expertise.

The number of organizations who have opened and are managing a brokerage account increased greatly at endline from two to eleven. One organization is using financial strategies but has not opened or is managing a brokerage account which suggests that they are using brokerage services.

At the time of the endline analysis, the web-based Price Risk Simulator was not operational, therefore, no organizations used this in their training or PRM strategy development. This was a major limiting factor and may explain the lower level of financial strategies implementation.

TABLE 11. BASELINE VALUES AND TARGETS FOR INTERMEDIATE RESULT 2.2 INDICATORS

OBJECTIVES STATEMENTS	#	IMPACT / OUTCOME / OUTPUT INDICATORS	Targets		
			Baseline	Endline	Change
Intermediate Result 2.2 **Financial institutions are aware that coffee producer organizations can effectively manage PRM using financial strategies**	2.2.1	Number of CPOs using financial strategies for price risk management	10	12	+2
	2.2.2	Number of CPOs that use the web-based Price Risk Simulator	0	0	0
	2.2.3	Number of CPOs that have opened and are managing a brokerage account	2	11	+9

Governance Assessment Results and Analysis

The analysis of organizational governance sought to understand two things: 1) the level of governance of the participating organizations from the perspective of management team and board members, and 2) the extent to which organizational governance inhibited or enabled successful implementation of price risk management strategies and how it contributed to organizational performance.

A summary of the key findings, especially as they relate to the implementation of price risk management and organizational performance, are presented here. Detailed results can be found in **Attachment 4** in the form of an annotated PowerPoint presentation in Spanish. Due to COVID-19 travel restrictions, the sample size for this analysis was smaller than anticipated and only the aggregated data are presented. The sample consisted of 55 management team members (43 project participants) and 28 board members (17 project participants). The organizational governance portion of this tool assessed additional advanced organizational competencies for board members beyond what was included in the price risk management portion of the assessment and the results of those competencies. Additional signifiers were used to assess key norms and beliefs that govern actions, social cohesion, participation and leadership, internal and external communication, belonging and commitment to the organization, operational performance and transparency, inclusivity, and the cost benefit of external linkages.

KEY FINDINGS

PATHWAYS

Management team and board members were asked how they viewed their organization's performance before the project training, during the project and now. Both groups indicated that performance has improved, and responses were concentrated closer to a response of "excellent" versus "very deficient." Board members' responses were more positive than management team member' responses. The more positive responses from board members could in part be because of overall lower expectations of this group related to performance.

Their responses could also have been influenced by the environment in which they participated in the interview. In some cases, it was not possible for respondents to find a private location, and they were forced to participate in the interview in a shared office at their respective CPOs to have sufficient internet access. They may not have felt comfortable responding as openly and honestly as they would have if there were alone.

ADVANCED ORGANIZATIONAL COMPETENCIES

In general, the advanced organizational competencies were quite high (74-98%), **Table 12**. This was expected as these organizations were amongst the strongest in their regions. For the "**Governance**" competency, there was more room for improvement related to encouraging the participation and leadership of other members. Additionally, both groups interviewed placed less emphasis on ensuring that members' ideas and opinions were considered than the other aspects of good governance.

The "**Empowerment**" competency was below 75% and responses indicated that some management team members felt that they could not make timely decisions.

The "**Participation and Transformational Leadership**" competency was nearly 100% on average. The high level of this competency is reflected by the positive responses related to the types of leadership and participation demonstrated by organizational members. This evidence suggests that board members and the management team are creating a positive environment and encouraging participation and leadership. However, the median response for type of participation demonstrated by members did not reach "active and meaningful," the highest level for board members or management team members. Similarly, the median response of the type of leadership displayed also did not reach the highest level of "transformational leadership" for these two groups, suggesting that there is room for improvement.

The percentage of respondents demonstrating behaviors related to the "**Adaptation and Learning**" (combined with Information Analysis) competency ranged from 54% to 100%. Higher percentages corresponded to behaviors that are common for the role of board member and that are easier to complete. Those that are more challenging such as "solicit or provided costs of production and profitability at the farm level" and "review sales contracts that the organization was negotiation" received lower percentages. These behaviors may not be within the common scope of board members but are worthy of promoting as they will ensure greater participation in the commercialization process and ownership of performance outcomes. Board members responded more positively about the results of the use of information for decision making as shown by a response pattern that trended toward decisions leading to "substantial profits for the organization" versus "large losses for the organization." Management team responses were not as positive, but this may be more of an issue of higher expectations.

TABLE 12. COMEPTENCY LEVELS AND CATEGORIES FOR BOARD MEMBER ADVANCED ORGANIZATIONAL COMPETENCIES

Competency	Average Level	Category
Good Governance	84%	Fully Competent
Empowerment	74%	Functional
Participation and Transformational Leadership	98%	Fully Competent
Adaptation and Learning/Information Analysis Part 1	81%	Fully Competent
Adaptation and Learning/Information Analysis Part 2	92%	Fully Competent

NORMS AND BELIEFS THAT GUIDE ACTIONS:

In general, for the signifiers related to norms and beliefs, board member and management team member responses were concentrated at the center of the sliders, between "you are in complete agreement" and "members are in complete agreement." This suggests strong alignment between social norms (members are in complete agreement) and personal norms (you are in complete agreement). A lower percentage of management team and board members indicated that they acted based on premises that were considered negative such as "it is ideal to nominate the people with the most resources for board positions" (please refer to annotated presentation).

OTHER KEY FINDINGS

In general, responses to signifiers assessing social cohesion, internal and external communications, belonging and commitment, inclusivity, operational performance and transparency, and the cost-benefit of external linkages were positive. Again, board members tended to respond more positively than management team members. Often, differences in response patterns reflect the distinct roles of board and management team members. For example, when asked what they give most importance to when the management team implements decisions made by the board, board members gave more importance to "evaluating the results of those decisions" and board members gave more importance to "informing members of the results." Potential areas for improvement or further reflection are social cohesion, conflict management, and commitment to commercialization.

Social cohesion. Social cohesion between members could be strengthened. In one signifier related to how members are demonstrating social cohesion, "solidarity between members" was weaker than "member confidence in their organization" and "collaboration for strong

organizational performance." Second, it appears that the confidence that members have in each other and in the board contributes to organizational performance.

Conflict management. There was limited awareness of conflicts on the part of management teams as only 25% of management team respondents indicated that there were conflicts in their organization. This may be because there were no conflicts or because management team have limited interaction with the general membership. It is important for board members to communicate with the management team more clearly about conflicts to resolve issues that may affect organizational performance.

Commitment to commercialization and price preferences. There is an important difference in perception between board and management team member related to member priorities. Management team members consider that members prioritize higher coffee prices over fulfilling their commitments to the organization, whereas board members consider members to be most concerned with fulfilling their commitments. There was a related difference in perception of member preferences for higher prices versus more stable prices, with management team members considering members to prefer a higher price even if that implied greater risk.

When asked about the results of the commercial operation, board member responses trended toward the results of the commercial operation permitting members "to obtain a very stable price for their coffee," and management team member response trended toward "obtain a very good price for their coffee." It is possible that these responses not only reflect what occurred but also reveal biases. It will be important for management team and board members to better communicate with organization members to check their assumptions about member preference as this has important implications for the commercialization and price risk management strategy.

Shared benefits of external linkages. External linkages with input service providers, buyers and financial institutions were strongly considered to benefit all organization members. This reinforces the importance of building and strengthening those linkages with private sector entities. However, there was less consensus on the part of board members about the shared benefits of linkages with NGOs and governmental organizations. Some respondents considered those linkages to only benefit a few members rather than all. Organizations, NGOs, and governmental entities should strive to improve upon the inclusivity of the services they provide.

Conclusions and recommendations

INDIVIDUAL COMPETENCIES

The project centered on a PRM training of management staff and board members, with an emphasis on "Price Risk Management with Financial Tools" and "Strategic Implementation of Price Risk Management," and the results showed that, in general, the trainings were successful in strengthening those competencies.

The initial competency levels of managers and board members were similar. However, over time the average competency levels of board members increased more than management team members', and, on average, board members achieved a "Fully Competent" level, whereas management team members achieved only a "Functional" competency level. The lower scores by management team members were linked with a lack of progress in competencies that were less targeted by the project, i.e., financial operation and commercial operation.

Assessing the perceived importance of PRM revealed that management team members continue to see a lack of buy-in for PRM by members, meaning that they are perceived to give low important to PRM, to have lower confidence the decisions and actions of the management team related to PRM, and a lower commitment to PRM at endline. Management team members have improved communication and knowledge sharing about PRM as demonstrated by higher percentages of respondents demonstrating those behaviors, however, those actions appear to be insufficient to address member concerns or hesitations about PRM.

The low levels of confidence in management team members' decisions and actions and commitments to PRM needs to be addressed as this may inhibit the support that the management team need to implement PRM strategies. The management team members should work with board members to improve general commitment to PRM, to ensure the impact and sustainability of the project interventions.

In general, there continues to be a lack of understanding of member preferences or perceptions to PRM. This suggests that more communication is required with members to fully understand their concerns and act accordingly. The project planned to explore this further in the governance study, but COVID prevented this work being explored further.

In contrast, the board members' perception of PRM achievements showed a clear improvement at endline and the competency and narrative analysis indicated that board members made substantial gains over the course of the project.

KEY CONCLUSIONS AND RECOMMENDATIONS

- The project was successful at improving the levels of management team and board members' competencies related to PRM, with higher gains made by board members than management team members.
- Future interventions should strengthen PRM competencies along with other skills such as commercial and financial operations, as limited operational skills could limit effectiveness of improved PRM competencies.

- There continued to be concern about members priorities with PRM and a low perception of member buy-in by management team members. A continued lack of member buy-in could negatively affect both physical and financial PRM strategies.
- As the project closes it will be important for project participants, both board members and management team members, to communicate learnings and continue build the capacity of other team members to support sustainability of project interventions.

ORGANIZATIONAL PRACTICES

The project aims to strengthen the competencies of managerial team and board members to (i) have the knowledge, skills and experience to implement physical and financial PRM practices; and (ii) influence the organization to adopt recommended organizational practices to ensure the successful implementation of PRM strategies.

Organizations improved their competency levels over baseline values in all five categories including: (i) organizational management, (ii) managing price risk with physical and (iii) financial strategies, (iv) use of effective systems, and (v) organizational governance. The percent increase was highest for managing price risk with financial strategies followed by management of the organization. This was expected as at the start of the project, the use of financial strategies was low, and supporting organizations to implement these practices was a primary aim of the project. Managing risk with financial strategies is now on par with physical strategies, suggesting that improvement in PRM competencies did lead to an improvement in organizational practices.

The weakest organizational practice category is use of effective systems, which had a low score on average. The lack of improvement in this category is mirrored by the lack of improvement in competencies related to commercial and financial operations. Improving systems and competencies could potentially be mutually reinforcing, so more effort should be put into supporting organizations to establish integrated accounting systems and integrated systems to manage the commercialization process.

Endline values for organizational governance were only 2.6 on a 5.0 scale, suggesting substantial room for improvement. However, this assessment was only applied with management team members, and one or two people per organization. Therefore, it may not provide a clear picture of organizational governance. The governance deep-dive that was completed at endline sheds more light on weak and strong areas of governance beyond what was assessed with the organizational practices tool.

Changes were made to the organizational practices' assessment post baseline data collection (baseline scores were mapped to the new format and scale), and new targets were not established. Therefore, it is not clear whether organizations achieved the desired levels of organizational practices. The highest score of any category was 3.0 on a 5.0 scale, so there remains substantial room for improvement in all five organizational practice categories.

Lastly, Oiko worked with a consultant to develop individualized organizational profiles that highlight strong and weak areas for each organization. This will be an important resource post-project for organizations to reference when developing personalized improvement plans.

KEY CONCLUSIONS AND RECOMMENDATIONS

- Organizational practice levels improved for all categories, however, there remains substantial room for improvement. Any subsequent interventions should emphasize weaker practices. For PRM specifically, this includes establishing a system for monitoring coffee production and

delivery, strengthening technical analysis and analysis of fundamentals, facilitating use of a brokerage account or access to brokerage services, developing financial hedging strategies and ensuring sufficient liquidity in the brokerage account.

- CPOs should use their specialized reports to inform their improvement plans.
- The organizational practices assessment was only based on responses from the management team. The managers and board members should regularly share progress or the effect of their physical and financial trade on prices, so that members can get a better understanding about the value of these tools on their livelihoods.

FINANCIAL PERFORMANCE

Note: A more detailed analysis of the financial performance of these organizations will be included in the final project evaluation report commissioned by Oikocredit and carried out by a consultant. This report is limited to reporting on baseline and endline values of the financial performance indicators.

At baseline, values for the financial performance indicators[18], varied greatly across participating CPOs. For some indicators, CRS did not have access to disaggregated data, so it was not possible to assess if the variation between organizations had decreased. The average net coffee operation margin increased over baseline values by 14% from 14 USD to 16USD per quintal, which was less than the target of a 30% increase. However, global coffee prices were extremely low during the project and importantly, no CPOs had negative net operation margin at endline and there was a lower variation in net coffee operation margin at endline.

Fluctuations in prices paid to members increased at endline and fluctuations in price paid to members were higher than the fluctuations in the NY stock exchange as shown by a higher average ratio (above one) between the standard deviation of price paid to members and the standard deviation of average price paid in the NY stock exchange (ICE) for both Central American and South American organizations. Although a key strategic objective of the project, reduced fluctuations in price received by producer organization members, was not achieved, the second strategic objective, reduced fluctuations in coffee trade gross margin, was achieved and fluctuations were reduced from baseline to endline.

Only a few CPOs started using financial strategies for PRM and only two more organizations invested in financial strategies, namely the use of options. However, the total value of lending received by CPOs to adopt financial strategies for PRM increased by nearly six-fold. Although CRS did not have access to disaggregated data, this could suggest that some organizations are moving beyond simply piloting the use of options. Further, at endline, nearly all organizations fulfilled the requirements to access loans for implementing price risk management strategies. This achievement reflects the substantial efforts of the project consultants in supporting organizations to monitor their open positions.

Similar to the baseline data, it was not clear if the financing of the $700,000 of lending used to adopt financial strategies for PRM was specifically for that purpose, or if they are using other sources of funding such as working capital loans to purchase options, or accessing them via buyers who are including options as part of the contract. Further information is needed to understand the source of the source of the financing currently allocated by coffee producer organizations to purchase options. All organizations are currently accessing short-term loans

[18] net coffee operation margin, fluctuation in price paid to members and fluctuation in coffee trade gross margin

which could serve as a source of finance for the purchase of options and the vast majority are also now fulfill the requirements to receive short-term loans for PRM.

A major assumption of this project is that there are two barriers to using financial strategies for price risk management, (1) lack of knowledge of PRM strategies and/or empowerment to implement strategies and (2) a gap in finance. Those assumptions should both be further explored in the more detailed financial analysis that will be commissioned by Oikocredit to better help to understand why only half of organizations are currently using financial strategies for price risk management and what barriers remain, whether that be a finance gap or a continued lack of knowledge and/or empowerment.

ORGANIZATIONAL GOVERNANCE

The organizational governance assessment sought to check a major assumption of the project design which was that the participating organizations had sufficient governance systems in place to successfully implementation a more balanced price risk management strategy. More specifically, it sought to assess the extent to which organizational governance of the participating organizations inhibited or enabled implementation of the PRM strategy and how it contributed to overall organizational performance.

Board member competency levels were high and in the “Fully Competent” category for all governance-specific competencies including “Good Governance,” “Participation and Transformational Leadership,” and “Adaptation and Learning,” confirming the project design assumption. In general, organizational governance in the participating CPOs facilitated the implementation of the PRM strategy and contributed positively to organizational performance.

However, the governance assessment revealed several potential areas for improvement that would have direct implications on the ability to effectively implement the PRM strategy. First, board members could improve behaviors related to delegating duties in order to empower management team members to be able to make timely decisions. Second, there is a continued lack of consensus amongst management team members and a difference in perception between the management team and the board regarding member preference for the highest price possible versus a more stable price. Operating on a faulty assumption of member preference for the highest price possible could have implications for both the commercialization and price risk management strategy. Therefore, those assumptions should be tested through improved communication with the general membership.

Results of the governance assessment also suggest that in some cases social cohesion between members could be improved and may negatively affect organizational performance. Lower confidence of members in each other relative to confidence in board members or the management team was perceived to somewhat hinder organizational performance.

KEY CONCLUSIONS AND RECOMMENDATIONS

- Organizational governance, from the perspective of board members and the management team was generally high and contributed to the implementation of PRM and positively influenced organizational performance, confirming project assumptions.
- Three key areas for improvement are, 1) delegation and empowerment of the management team so that they can make more timely decisions, 2) improving understanding of member preferences for higher or more stable prices, and 3) improving social cohesion within the organization.

Appendices

APPENDIX A. PRICE RISK MANAGEMENT COMPETENCY MODELS FOR BOARD MEMBERS

VALUES	
For the competency models to be aligned with the organization's mission and vision, they must be supported by values, which must be expressed in the organization's culture and in the actions of its managers, management, and staff, who should in turn promote them among their partners.	
Value	**Description**
Confidence	It is to believe in the honorability, intention, knowledge, and judgment of every person who holds a position in the organization. In this case, it refers particularly to the marketing processes, and specifically to the management of price risk.
Certainty	It is the appreciation and sense of stability that generates: (a) a timely access to information, (b) clarity regarding the risks faced and how the organization handles them; and (c) knowledge of the business dynamics and how it can change the financial scenarios. In this case, it specifically refers to the clarity about the price risk that the organization faces, management staff and board access to relevant information, knowledge of the strategies that the organization has designed and implemented to manage it, and the possible financial outcomes of strategic and operational decisions.
Adaptation	It is the acceptance, commitment, and embracement of organizational processes of change and how they are managed. In this case, it refers specifically to the acceptance of the new forms of operation that are required for price risk management.
Transparency	It is the habit of action that allows all the people of the organization to be informed about the decisions made and the actions that affect them, as well as the outcomes of these decisions and actions. In this case, it refers to the decisions and actions related to price risk management to the outcomes of these decisions and actions.
MACROCOMPETENCY: STRATEGIC VISION AND SUPPORT FOR PRICE RISK MANAGEMENT	
It is the visualization of the risks faced by price fluctuations, the adoption of mechanisms to manage the, the establishment of guidelines and processes of communication to the associates, and the construction of an organizational culture that is aware of price risk and committed to management it.	
Specific Competency	**Behavioral Evidence**
1. Adoption of price risk management	1.1 Approves the price risk management strategy 1.2 Defines or approved the policies and procedures for the management of price risk. 1.3 Communicates policies and procedures to organization members 1.4 Educates organization members 1.5 Ensures there were resources for the management of price risk 1.6 Promotes mechanisms for price risk 1.7 Communicates results achieved to organization members 1.8 Evaluates the cost-benefit of managing price risk 1.9 Determines the price risk of commercializing coffee 1.10 Promotes the use of physical and financial hedging strategies available to the organization
2. Empowerment for price risk management	2.1 Defines the decision-making level of the manager and the members of the management team for price risk management. 2.2 Allocates resources for the management of price risk. 2.3 Delegates the responsibility of price risk management to the managerial team. 2.4 Monitors the implementation of the price risk management strategy. 2.5 Assesses the outcomes of price risk management. 2.6 Promotes learning processes and communication of the lessons learned on price risk management.

3. Organizational culture for price risk management	3.1 Has clarity about what organization culture is. 3.2 Values the importance of organizational culture in promoting change. 3.3 Defines the organizational values that support price risk management. 3.4 Analyzes the organizational culture in relation to price risk management. 3.5 Proposes mechanisms to promote change I the organizational culture. 3.6 Assigns resources to facilitate organizational culture change. 3.7 Follows changes in organizational culture.

APPENDIX B. PRICE RISK MANAGEMENT COMPETENCY MODELS FOR MANAGERIAL TEAM MEMBERS AND GENERAL MANAGER

VALUES	
For the competency models to be aligned with the organization's mission and vision, they must be supported by values, which must be expressed in the organization's culture and in the actions of its managers, management, and staff, who should in turn promote them among their partners.	
Value	**Description**
Confidence	It is to believe in the honorability, intention, knowledge, and judgment of every person who holds a position in the organization. In this case, it refers particularly to the marketing processes, and specifically to the management of price risk.
Certainty	It is the appreciation and sense of stability that generates: (a) a timely access to information, (b) clarity regarding the risks faced and how the organization handles them; and (c) knowledge of the business dynamics and how it can change the financial scenarios. In this case, it specifically refers to the clarity about the price risk that the organization faces, management staff and board access to relevant information, knowledge of the strategies that the organization has designed and implemented to manage it, and the possible financial outcomes of strategic and operational decisions.
Adaptation	It is the acceptance, commitment, and embracement of organizational processes of change and how they are managed. In this case, it refers specifically to the acceptance of the new forms of operation that are required for price risk management.
Transparency	It is the habit of action that allows all the people of the organization to be informed about the decisions made and the actions that affect them, as well as the outcomes of these decisions and actions. In this case, it refers to the decisions and actions related to price risk management to the outcomes of these decisions and actions.
MACROCOMPETENCY: COFFEE MARKETING WITH PRICE RISK MANAGEMENT FOR MANAGERIAL TEAMS	
Refers to the management of coffee marketing dynamics with an emphasis on risk management, which includes the analysis of information on factors affecting the availability and value of the product, the management of the commercial operation of coffee, and the management of coffee. Price risk linked to the financial transaction.	
Specific Competency	**Behavioral Evidence**
4A. Information Monitoring	4A.1 Monitors members' production costs per unit of output. 4A.2 Monitors contextual variables that influence the price of coffee. 4A.3 Monitors analyzes harvest forecasts. 4A.4 Monitors the daily open position. 4A.5 Reviews the position of contracts daily. 4A.6 Monitors the price in the local markets daily. 4A.7 Reviews the level of inventories in a daily basis. 4A.8 Monitors the price of coffee on the stock exchange.
4B. Information Analysis	4B.1 Analyzes production costs per unit of output. 4B.2 Analyzes context variables that influence the price of coffee. 4B.3 Analyzes harvest forecasts. 4B.4 Monitors the daily open position. 4B.5 Analyzes the participation and business models of other local buyers. 4B.6 Monitors the local market price fluctuations daily. 4B.7 Reviews the level of inventories daily. 4B.8 Analyzes global coffee price fluctuations.
5. Commercial Operation	5.1 Analyzes the coffee value chain in which the organization participates. 5.2 Uses harvest forecasts to negotiate contracts. 5.3 Considers minimum levels of product in warehouse for the negotiation of contracts and pricing. 5.4 Validates the terms of commercial contracts. 5.5 Ensures compliance with commercial contracts. 5.6 Closes sales.

	5.7 Verifies buyer satisfaction.
6. Price Risk Management with Financial Strategies	6.1 Implements techniques for futures fixing: Good 'til canceled (GTC), Stop order (STOPS), One-cancels-the-other Order (OCO). 6.2 Defines financial strategies per the open position. 6.3 Negotiates the purchase of derivatives with buyers. 6.4 Uses the buyer's or the organization's stock account, based on a cost-benefit analysis. 6.5 Purchases options based on an analysis of the open position. 6.6 Monitors the position of the active derivatives. 6.6 Sells options that will not be used.
7. Financial Operation	7.1 Calculates the break-even point for the trading year. 7.2 Analyzes the composition of costs per unit of output. 7.3 Identifies working capital needs. 7.4 Budgets the cost of options. 7.5 Prepares a cash flow. 7.6 Analyzes different sources of funding. 7.7 Ensures liquidity during the commercial cycle. 7.8 Evaluates the income statement for the business year.
MACROCOMPETENCY: PRICE RISK MANAGEMENT FOR GENERAL MANAGERS	
The strategic management for price risk management, and the direction of change in organizational culture and organizational practices for price risk management.	
Specific Competency	**Behavioral Evidence**
8. Strategic implementation of price risk management	8.1 Influences the board of directors to approve the price risk management strategy. 8.2 Proposes policies and procedures for price risk management. 8.3 Documents policies and procedures for price risk management. 8.4 Ensures human and financial resources for price risk management. 8.5 Facilitates staff training for price risk management. 8.6 Implements policies and processes for price risk management. 8.7 Ensures the achievement of the objectives of the price risk management strategy. 8.8 Evaluates the results of price risk management. 8.9 Communicates the decisions and actions taken for price risk management to its collaborators and the board of directors. 8.10 Communicates the decisions and actions taken for price risk management to the organization associates.
9. Strengthen the culture of risk management	9.1 Educates its collaborators, the board or directors and associates in price risk management. 9.2 Analyzes the organizational culture in relation to price risk management. 9.3 Strengthens the organizational culture for price risk management. 9.4 Communicates the progress and results in price risk management to its collaborators and the board of directors. 9.5 Communicates the progress and results in price risk management to the organization associates.

APPENDIX D: ANALYSIS OF MANAGEMENT TEAM MEMBERS' BEHAVIORAL EVIDENCES BY COMPETENCY

The following figures (38-44) provide a detailed analysis of the percentage of managerial team members who have shown in the experience shared the behavioral evidences related to each competency. Behaviors identified as weak, meaning those shown by the lowest percentage of respondents at baseline and endline, should receive special attention in follow-on initiatives to strengthen the associated competency.

FIGURE 38. COMPETENCY 4A: BEHAVIORAL EVIDENCES FOR THE INFORMATION MONITORING COMPETENCY

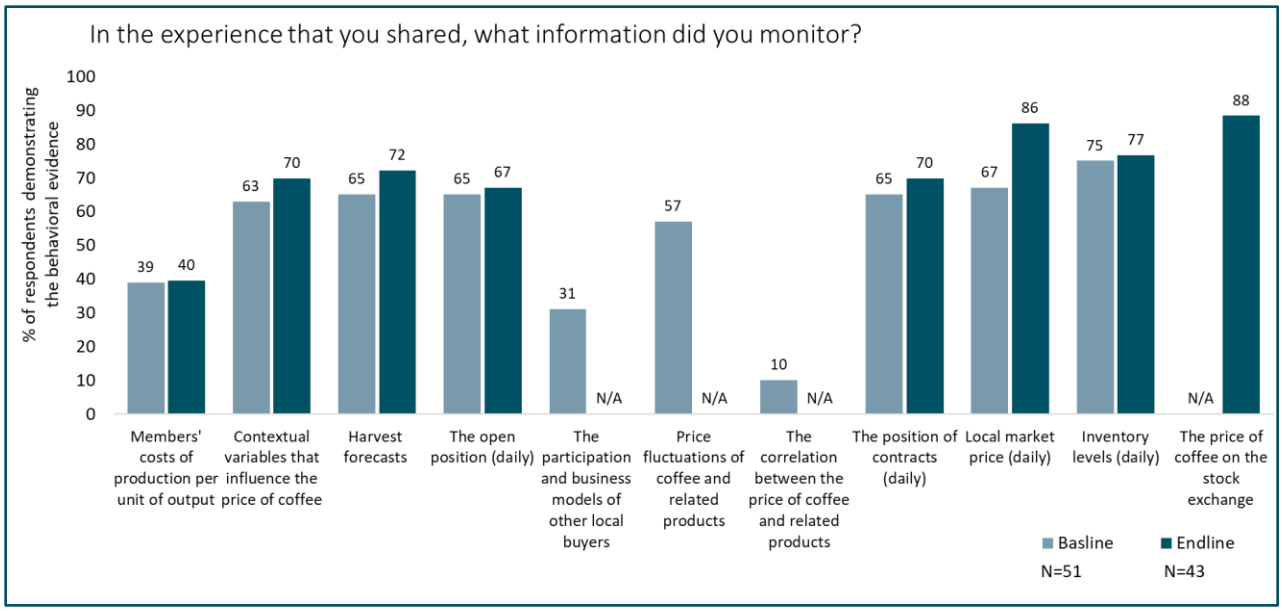


FIGURE 39. COMPETENCY 4B: BEHAVIORAL EVIDENCES FOR THE INFORMATION ANALYSIS COMPETENCY (ENDLINE ONLY)

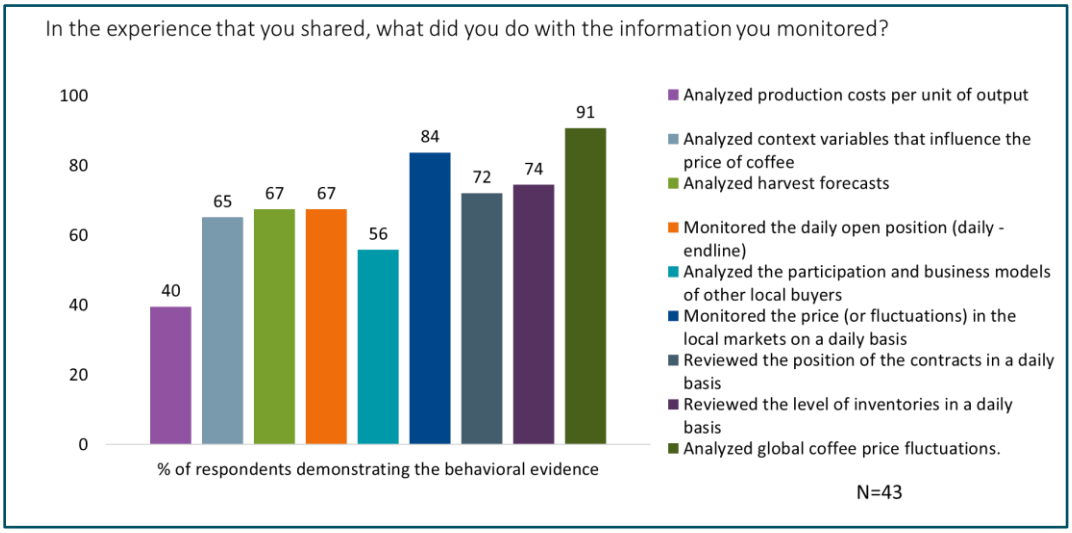


FIGURE 40. COMPETENCY 5: BEHAVIORAL EVIDENCES FOR THE COMMERCIAL OPERATION COMPETENCY

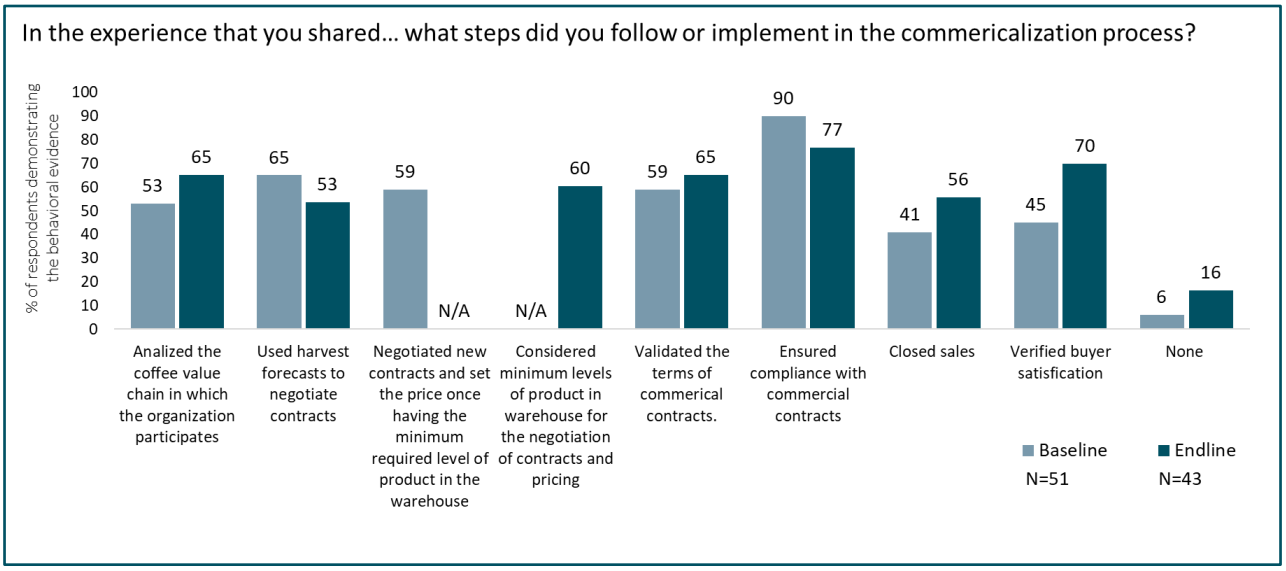


FIGURE 41. COMPETENCY 6: BEHAVIORAL EVIDENCES FOR THE PRICE RISK MANAGEMENT WITH FINANCIAL STRATEGIES COMPETENCY

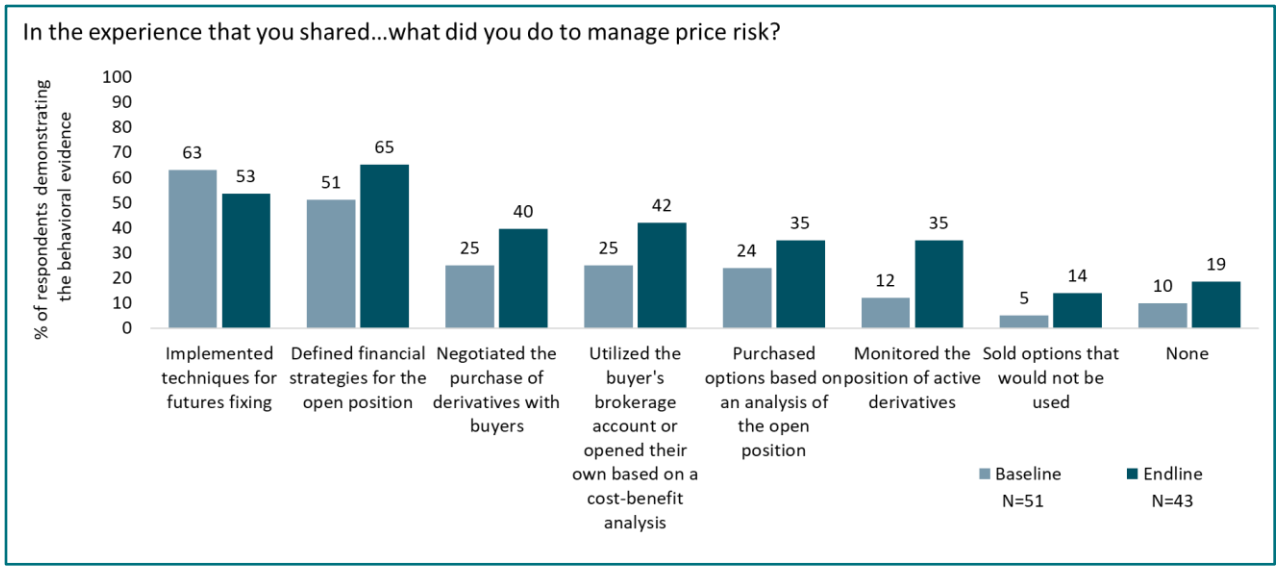


FIGURE 42. COMPETENCY 7: BEHAVIORAL EVIDENCES FOR THE FINANCIAL OPERATION COMPETENCY

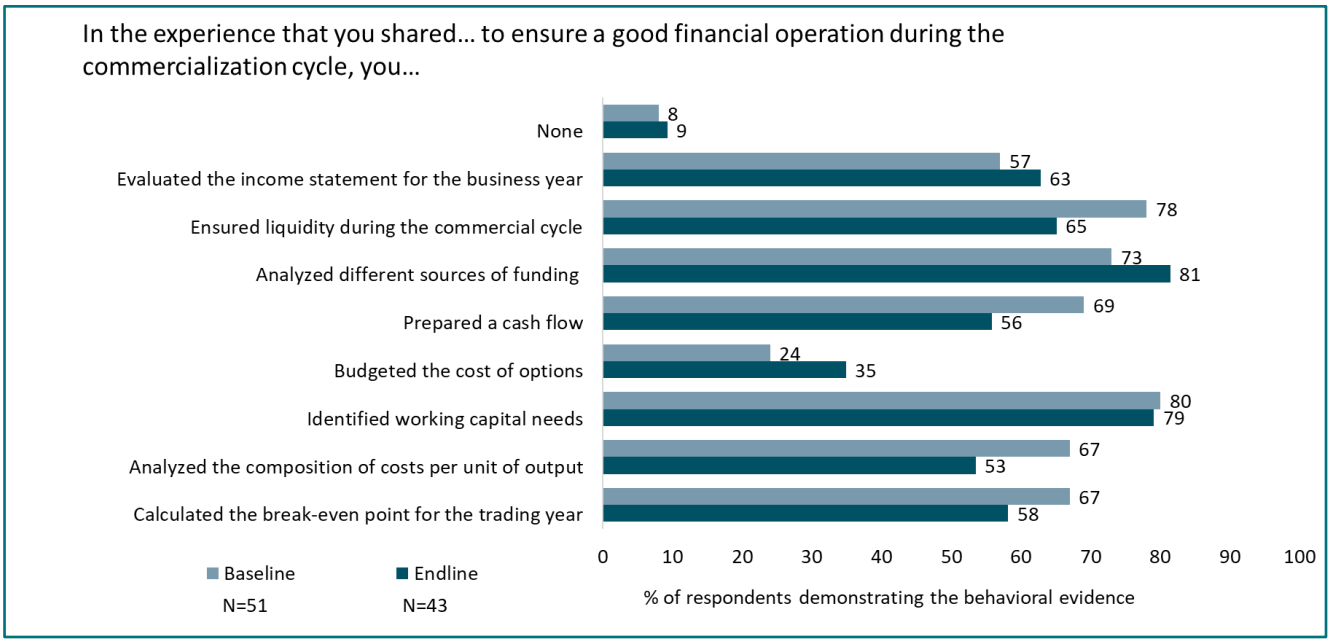


FIGURE 43. COMPETENCY 8: BEHAVIORAL EVIDENCES FOR THE STRATEGIC IMPLEMENTATION OF PRICE RISK MANAGEMENT COMPETENCY

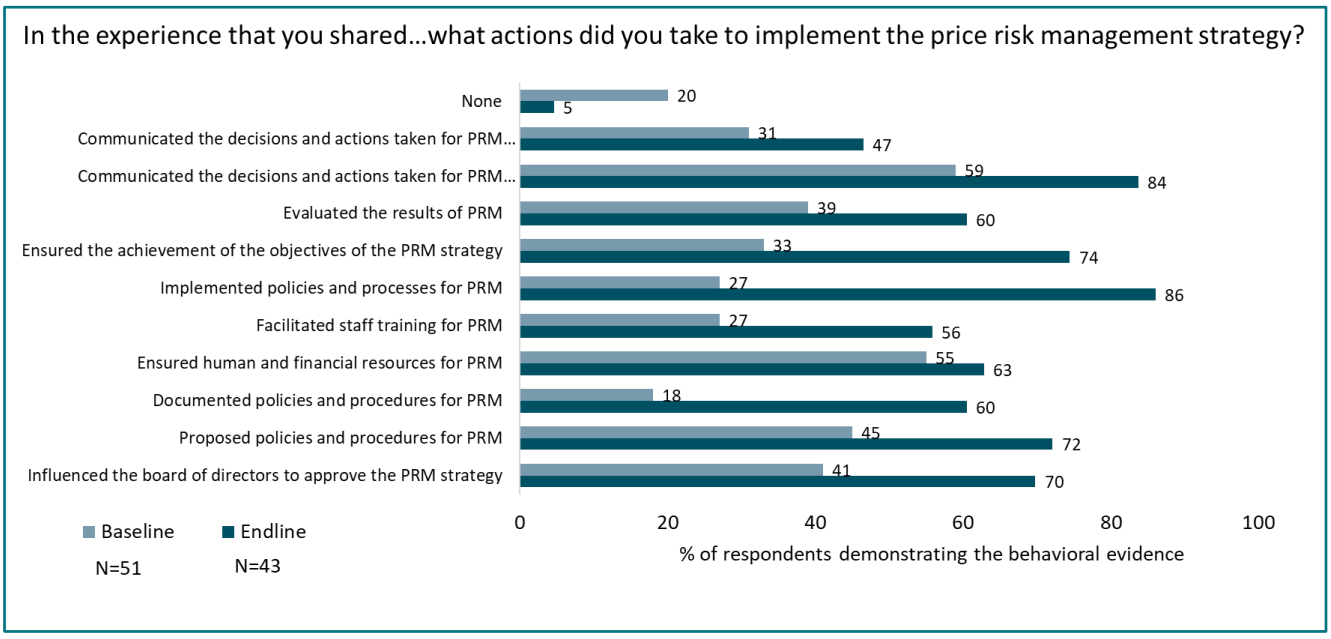


FIGURE 44. COMPETENCY 9: BEHAVIORAL EVIDENCES FOR THE STRENGTHEN ORGANIZATIONAL CULTURE FOR PRICE RISK MANAGEMENT COMPETENCY (BASELINE ONLY)

APPENDIX E: ANALYSIS OF BOARD MEMBERS' BEHAVIORAL EVIDENCES BY COMPETENCY

The following figures (45-47) provide a detailed analysis of the percentage of board members who have shown in the experience shared the behavioral evidences related to each competency. Behaviors identified as weak, meaning those that show the lowest percentage of respondents during the last commercialization period, should receive special attention in training modules to strengthen the associated competency.

FIGURE 45. COMPETENCY 1: BEHAVIORAL EVIDENCES FOR THE ADOPTION OF PRICE RISK MANAGEMENT COMPETENCY

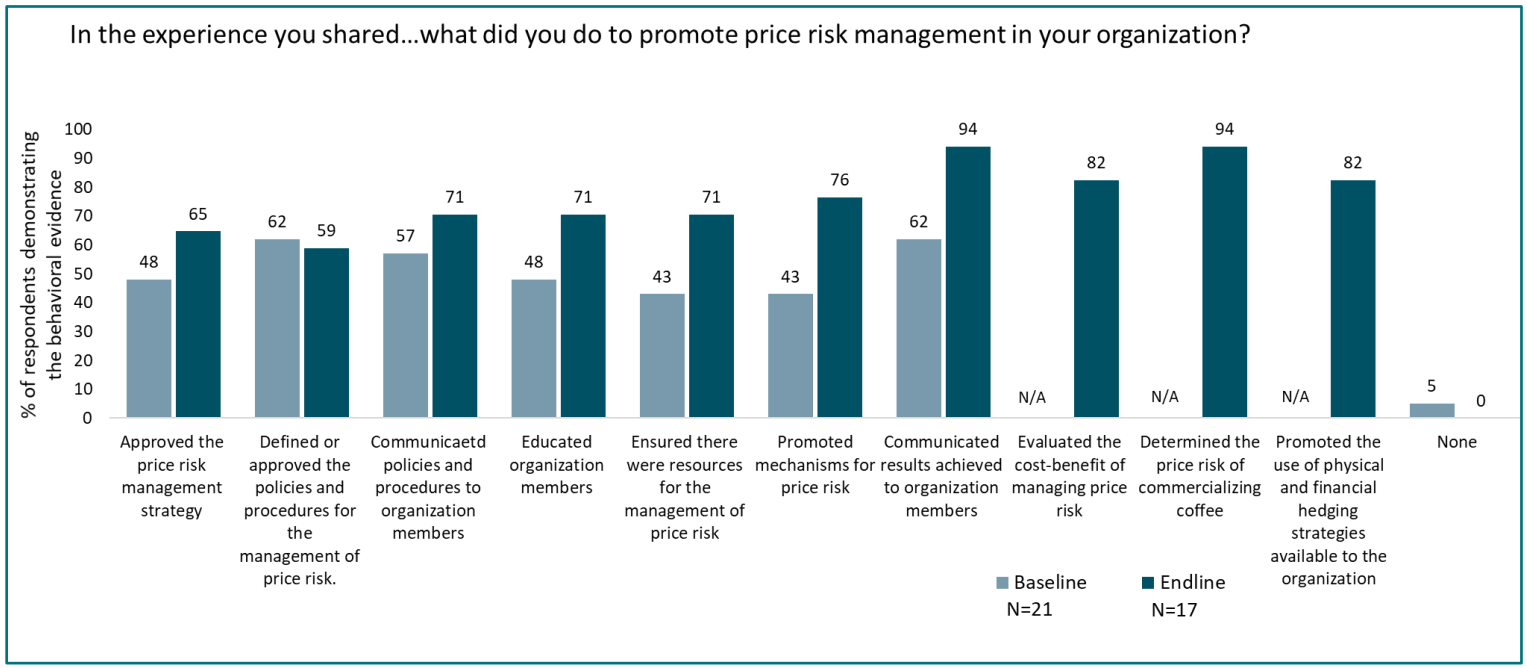
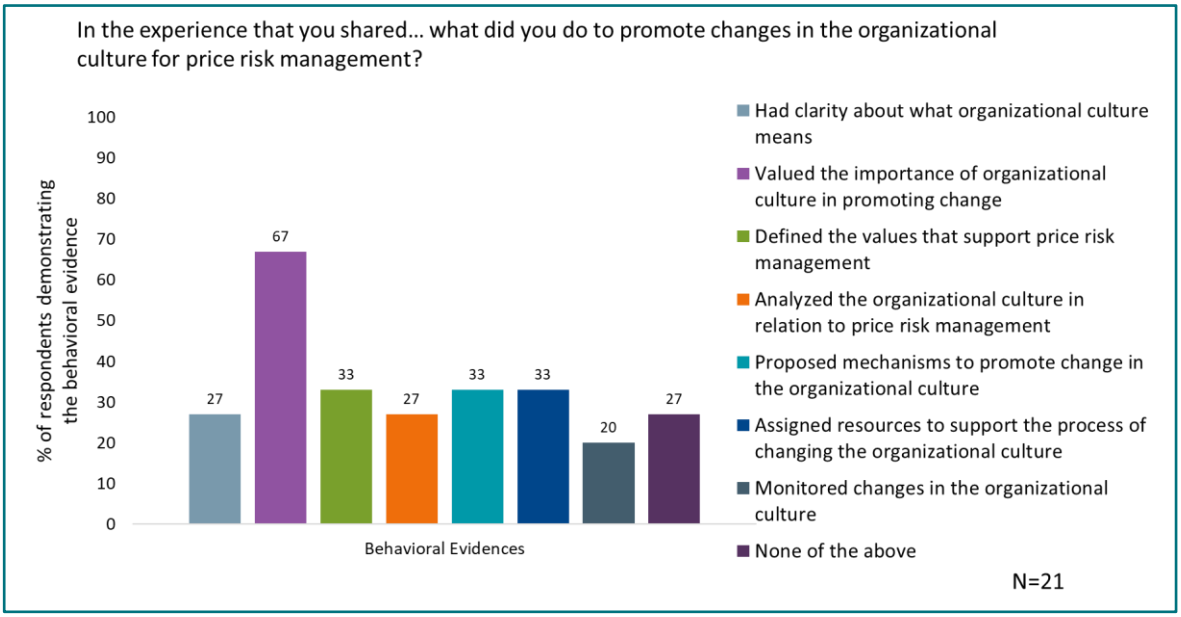


FIGURE 46. COMPETENCY 2: BEHAVIORAL EVIDENCES FOR THE EMPOWERMENT FOR PRICE RISK MANAGEMENT COMPETENCY

FIGURE 47. BEHAVIORAL EVIDENCES FOR THE ORGANIZATION CULTURE FOR PRICE RISK MANAGEMENT COMPETENCY (BASELINE ONLY)



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For more information, contact Sarah Page sarah.page@crs.org.