Executive Board

President's memorandum

Proposed additional financing to

Republic of Malawi

Financial Access for Rural Markets, Smallholders and Enterprise Programme

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Action: The Executive Board is invited to approve the recommendation for the proposed additional financing contained in paragraph 72.

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Financing summary

Initiating institution:	IFAD
Borrower/recipient:	Republic of Malawi
Executing agency:	Ministry of Finance and Economic Affairs
Total programme cost:	US$102.7 million
Amount of original IFAD Debt Sustainability Framework Grant	US$21.0 million
Amount of original IFAD loan	US$21.0 million
Terms of original IFAD loan:	Highly concessional: 40 years, including a grace period of 10 years, with a service charge determined by the Executive Board
Amount of additional IFAD financing:	US$30.0 million
Terms of additional IFAD financing:	80% super highly concessional: 50 years, including a grace period of 10 years, with a service charge determined by the Executive Board 20% highly concessional: 40 years, including a grace period of 10 years, with a service charge determined by the Executive Board
Amount of loan on super highly concessional terms:	US$24.0 million
Amount of loan on highly concessional terms:	US$6 million
Cofinancier(s):	Private sector Food and Agriculture Organization of the United Nations (FAO) and Green Climate Fund (GCF), pending approval
Amount of additional cofinancing:	Private sector: US$6.94 million GCF: US$1.8 million
Terms of cofinancing:	GCF: grant financing Private sector: in-kind partners' contributions
Additional contribution of borrower/recipient:	US$4.62 million
Amount of IFAD climate finance:	US$1,689,000
Cooperating institution:	IFAD

I. Background and programme description

A. Background

1. The Financial Access for Rural Markets, Smallholders and Enterprise Programme (FARMSE) in the Republic of Malawi was approved by the Executive Board in December 2017. The financing agreement was signed and became effective on 6 June 2018. FARMSE's completion date is 30 June 2025, and financial closing is scheduled for 31 December 2028. The total programme cost is US$58.135 million, including IFAD original financing amounting to US$42 million, provided 50 per cent as a highly concessional loan and 50 per cent a Debt Sustainability Framework (DSF) grant; US$15.7 million in contributions from the Government of Malawi and domestic private sector; and grant cofinancing of US$435,000 from the Norwegian Agency for Development Cooperation (NORAD). As at 31 July 2022, 61 per cent of the IFAD loan and 61 per cent of the IFAD DSF grant financing had been disbursed.

2. In October 2021, the Government of Malawi requested additional financing of US$30 million from IFAD for FARMSE for a three-year extension of the programme completion and closing dates, to 30 June 2025 and 31 December 2028 respectively. The proposed additional financing will be provided as follows: 80 per cent in the form of a super highly concessional loan and 20 per cent in the form of a highly concessional loan, from the performance-based allocation for the Twelfth Replenishment of IFAD's Resources (IFAD12) period for Malawi. The objective of the proposed additional financing is to scale up and consolidate FARMSE operations.

B. Original programme description

3. FARMSE's overall goal is to reduce poverty, improve livelihoods and enhance the resilience of rural households on a sustainable basis. Its development objective is to increase access to a range of sustainable financial services by rural households and micro, small and medium-sized enterprises (MSMEs).

4. The main expected outcomes include: (i) improved capacity of ultra-poor households to graduate from poverty, improve food security and secure livelihood opportunities; (ii) improved access to financial services provided by structured and sustainable community-based financial organizations (CBFOs); (iii) enhanced capacity of financial service providers (FSPs) to deliver demand-driven services in rural areas; (iv) enhanced multi-ministerial coordination and capacity to manage poverty graduation programmes; (v) strengthened institutions, policies and regulations supporting greater financial sector outreach and innovation; and (vi) increased capacity and knowledge among rural finance sector support organizations.

II. Rationale for additional financing

A. Rationale

5. FARMSE's midterm review (MTR), conducted in November 2021, rated the programme's performance as satisfactory and on track to achieve and potentially surpass its development objectives.

6. All components were assessed as performing well, with overall well-performing implementing partners. The MTR and supervision missions observed significant programme impact on beneficiaries' economic activities and financial inclusion, resulting in improved livelihoods. Significant achievements have also been observed for all mainstreaming areas.

7. The programme is effectively reaching an estimated 844,621 beneficiaries (79 per cent of the current end target) across all its interventions, with 68 per cent women and 32 per cent youth. Under component 1, FARMSE has reached out to

22,680 beneficiaries of the Social Cash Transfer Programme, of whom 20,800 received a full package of graduation interventions.

9. Under subcomponent 2.1, 547,220 beneficiaries have been supported to access financial services from 26,239 restructured or newly established CBFOs, and have received capacity-building in various areas to improve their benefits from financial services. However, the exit strategy needs to be strengthened with improved sustainability models.

10. Under subcomponent 2.2, 381,379 persons have accessed formal financial services from a wide range of financial institutions. FSPs have been supported to: (i) scale up digital savings accounts and rural banking agents; (ii) expand geographical outreach for various products; (iii) scale up digitalized training; (iv) promote market linkages; and (v) develop a mobile transaction platform. However, key gaps in access to financial services (for instance, smallholder and MSME financing, crop and livestock insurance) have either not been addressed fully or not at all.

11. Under component 3, FARMSE is supporting the development of an ultra-poor graduation (UPG) strategy, has made good progress in the development of various instruments to create a conducive environment for improving rural financial inclusion, and has engaged with four strategic partners to support various initiatives to enhance financial inclusion.

12. Based on this positive assessment, including of FARMSE's capacity to act in the medium and long term as a strategic rural financing facilitator for Malawi, and following the official request of the Government for additional financing of US$30 million, the MTR recommended a programme extension of three years. The additional financing will cover the period July 2025 to June 2028, since the outstanding balance of US$17.5 million from the original financing will cover the programme funding needs until June 2025.

13. The activities to be conducted up to June 2025 will be a combination of consolidating current achievements and scaling up the different components, as well as strengthening mainstreaming areas.

14. Under the additional financing, the key objectives of each component will be as follows:

- Component 1 will scale up the current approach and increase outreach to UPG beneficiaries by 20,000, bringing the total number of beneficiaries to 50,000.
- Subcomponent 2.1 will focus on increasing the number of CBFO members supported while ensuring sustainability of the CBFOs and of outcomes at member level, with sustainability models in place.
- Subcomponent 2.2 will focus: (i) from 2022 to June 2025 on piloting innovations, in particular regarding the financial inclusion of smallholder farmers, while continuing to expand outreach; and (ii) during the additional financing period, on scaling up tested and successful pilots.
- Support to strategic partners under component 3 will be determined based on actual needs in the market.

15. The Food and Agriculture Organization of the United Nations (FAO) is designing a six-year project (2023–2029), to be funded by the Green Climate Fund (GCF), named Ecosystems-based Adaptation for Resilient Watersheds and Communities in Malawi (EbAM). EbAM's objective is to build climate change resilience among the most vulnerable rural communities in Malawi. Consultations have been held between FAO and FARMSE/IFAD for a collaboration on the EbAM subcomponent 2.3 on access to finance for climate-resilient investment solutions, entailing the following, to be confirmed during formulation of EbAM by the end of 2022:

(i) matching FARMSE and EbAM intervention areas to consolidate and expand the ongoing work of FARMSE with FSPs; and (ii) engaging the Ministry of Finance and Economic Affairs (as lead agency for FARMSE) as an executing entity of EbAM, to support the financial inclusion of the EbAM beneficiaries with climate-adaptive financial products for up to US$3 million (of which US$1.8 million for the additional financing).

Special aspects relating to IFAD's corporate mainstreaming priorities

16. In line with IFAD's mainstreaming commitments, the programme has been validated as:

☒ Including climate finance;
☒ Gender transformational;
☒ Nutrition-sensitive.

17. **Gender.** Malawi has made important improvements in several key development outcomes and in narrowing gender gaps. Despite these improvements, Malawi has a gender inequality index value of 0.565,[1] ranking it 142nd of 162 countries. In spite of their higher participation rates in agriculture, women tend to be less productive than men as a result of their limited ownership of assets and access to credit and other inputs.

18. Under the additional financing, FARMSE will promote gender equality and women's empowerment through the Gender Action Learning System.

19. **Youth.** 46 per cent of the Malawi population is below age 15, and young people between the ages of 15 and 29 account for more than one quarter of the population. Young people face multiple interconnected obstacles and challenges and thus suffer simultaneous deprivations including in health care, education, access to employment and lack of recognition.

20. Under the additional financing, the focus on youth will expand to 30 per cent from 20 per cent, with specific concrete pathways to socio-economic activities through skills development for employment, enterprise development or service provision along the agricultural value chains, leveraging innovations around appropriate financial products, and business assistance and support services.

21. **Nutrition.** Malnutrition in women and children remains a persistent public health and development challenge in Malawi. Under the additional financing, the programme will: (i) continue to interrupt the intergenerational transmission of stunting by prioritizing women's health and nutrition; and (ii) improve livelihoods and resilience to promote access to and consumption of diverse diets through strategies that promote food security, dietary diversification and healthier environments.

22. **Climate change.** The maximum temperature is expected to increase by 0.3 to 3°C under the Representative Concentration Pathway (RCP) 4.5 but could increase more than 4° C under RCP 8.5 by the end of the century. Rainfall variability is expected to increase in all timescales as is the frequency of droughts and floods. Crop productivity is likely to fall as a result of the projected future climate trends. The programme is currently addressing climate vulnerability through various climate-smart agricultural practices and off-farm livelihood diversification options.

23. Under the additional financing, a comprehensive climate resilience and climate finance action plan will be developed to consolidate climate-mainstreaming activities. The focus will be on enhanced disaster risk management mechanisms and supporting additional climate-smart activities such as access to climate information, renewable energy, management of community woodlots and weather index insurance.

[1] United Nations Development Programme, 2021. Malawi National Human Development Report.

B. Description of geographical area and target groups

24. FARMSE will remain a nationwide programme. Component 1 will target ultra-poor households in five new districts and will pursue investments in seven of the current districts. Component 2 will have nationwide coverage, with a focus on participation by women and youth and on financially excluded areas.

25. The original financing revised outreach target at MTR was 1,064,622. The programme will target an additional 440,000 households, increasing the final outreach to 1,504,622 households (30 per cent youth and 50 per cent women).

C. Components, outcomes and activities

26. The additional financing will be implemented with the same components as the original financing.

27. **Component 1 – Graduation of ultra-poor households** – aims at supporting ongoing efforts by the Government in developing and delivering effective graduation programmes in rural areas to reduce extreme poverty levels, by developing and testing at scale a cost-effective, replicable graduation model.

28. The additional financing will continue with current UPG interventions for an additional 20,000 UPG beneficiaries, taking the total length of programme (LoP) outreach to 50,000 beneficiaries by June 2028.

29. **Component 2 – Support for financial innovation and outreach** – aims at overcoming numerous barriers to financial services for the rural poor. It supports the development of informal and formal financial services best suited to target groups.

30. **Subcomponent 2.1 – Community-based financial organization support** – supports the strengthening and consolidation of existing CBFOs and the formation of new ones. The additional financing will focus on increasing the number of CBFO members supported while ensuring sustainability of the CBFOs and of outcomes at member level, with sustainability models in place. A total of 275,000 additional CBFO members will be targeted, in addition to the 747,220 targeted by June 2025, bringing the LoP target to 1,022,220.

31. **Subcomponent 2.2 – Innovation and Outreach Facility (IOF)** – supports formal financial institutions (FFIs) wishing to enter and expand outreach in rural areas through the IOF windows: (i) market research and feasibility studies; (ii) pilot testing of product innovations and delivery mechanisms; and (iii) expanding outreach of piloted products and services and their delivery mechanisms. The additional financing strategy will be to focus on scaling up tested and successful pilots financed between 2022 and June 2025, with key areas of innovation being agricultural value chain financing targeting smallholder farmers and MSMEs, climate finance in partnership with EbAM, digital products and processes including weather index insurance, and agritech platforms. Special attention will be given to improving the actual usage of the services promoted since inception of the programme. The additional financing will also be used to strengthen the positioning of FARMSE as a strategic rural financing facilitator for Malawi, including for the mobilization of funds from blended financial instruments. An additional 250,000 clients accessing formal financial services will be targeted, bringing the LoP target to 745,793.

32. **Component 3 – Strategic partnerships, knowledge generation and policy** – aims at increasing the capacity and knowledge bases of rural financial sector support organizations, and has three objectives: (i) strengthen macro-level regulatory and financial sector policy and institutional capacity; (ii) strengthen financial sector organizations and infrastructure; and (iii) produce and distribute rural finance sector knowledge products that enhance the outreach and innovation potential of sector stakeholders.

33. **Subcomponent 3.1 – Support for poverty graduation policy and systems**. FARMSE will continue to provide support to the Poverty Reduction and Social Protection Division in the Ministry of Finance and Economic Affairs for the development of UPG policies and systems.

34. **Subcomponent 3.2 – Support for development and review of broader and inclusive rural finance policies and strategy**. Identified opportunities for additional support under the additional financing are: (i) capacity-building for various concepts introduced, such as crowdfunding officers at the Reserve Bank of Malawi or commercial banks; (ii) development of policies and strategies to promote rural deepening of banking agents; (iii) review of the directive on inclusive insurance; and (iv) review of other legal and regulatory frameworks. This list will be updated regularly by FARMSE, in line with the sector's evolution and available resources.

35. **Component 4 – Programme management and coordination**. FARMSE will continue to be managed as at present, with the key bodies being the programme steering committee (PSC), the programme technical committee (PTC) and the programme management unit (PMU).

D. Costs, benefits and financing

Programme costs

36. Original programme costs were estimated at US$57.7 million. Component 1 comprises US$15.8 million (27.4 per cent of total costs); component 2 comprises US$34.0 million (58.9 per cent of total costs); component 3 comprises US$1.8 million (3.1 per cent of total costs); and component 4 comprises US$6.1 million (10.5 per cent of total costs). Additional grant cofinancing of US$435,000 from NORAD effective in October 2021 brought the total FARMSE budget to US$58.135 million. Proposed FAO and GCF funding of US$1.2million under the original financing phase is expected to be in place in the second half of 2023.

37. Total costs for the additional financing are US$43.3 million. Component 1 comprises US$17.2 million (39.7 per cent of total costs); component 2 comprises US$20.3 million (46.7 per cent of total costs); component 3 comprises US$1.5 million (3.4 per cent of total costs) and component 4 comprises US$4.4 million (10.1 per cent of total costs). The new total including original financing will be US$102.7million.

Table 1
Original and additional financing summary
(Thousands of United States dollars)

	Original financing	*Additional financing*	*Total*
IFAD loan	21 000	30 000	51 000
IFAD grant	21 000	-	21 000
Other cofinanciers	1 635	1 800	3 435
Private sector	6 150	6 941	13 091
Borrower/recipient	9 579	4 622	14 201
Total	**59 365**	**43 363**	**102 728**

Table 2
Additional financing: programme costs by component (and subcomponent) and financier
(Thousands of United States dollars)

	Additional IFAD loan		Additional: Other cofinanciers – FAO/GCF		Additional: Private sector		Additional: Borrower/recipient			Total
Component/subcomponent	*Amount*	*%*	*Amount*	*%*	*In-kind*	*%*	*Cash*	*In-kind*	*%*	*Amount*
1. Graduation of ultra-poor households	11 137	37	-	-	1 192	17	4000	120	89	16 450
1.2. Strengthening nutrition through additional grant	749	2	-	-	-	0	-	-	0	749
2.1. Community-based financial organization support	6 041	20	-	-	2 406	35	-	69	1	8 516
2.2. Innovation and Outreach Facility	6 599	22	1 800	100	3 343	48	-	2	0	11 744
3. Strategic partnerships, knowledge generation and policy	1 500	5	-	-	-	-	-	41	1	1 541
4. Programme management and coordination	3 974	13	-	-	-	-	-	390	8	4 364
Total	**30 000**	**69**	**1 800**	**4**	**6 941**	**16**	**4000**	**622**	**11**	**43 363**

Table 3
Additional financing: programme costs by expenditure category and financier
(Thousands of United States dollars)

	Additional IFAD loan		Additional: Other cofinanciers – FAO/GCF		Additional: Private sector		Additional: Borrower/recipient			Total
Expenditure category	*Amount*	*%*	*Amount*	*%*	*In-kind*	*%*	*Cash*	*In-kind*	*%*	*Amount*
1. Vehicles	210	1	-	-	-	-	-	210	5	420
2. Equipment and materials	23	0	-	-	-	-	-	5	0	27
3. Studies and consultancies	10 652	36	1 800	100	4 242	61	-	101	2	16 794
4. Training and workshops	699	2	-	-	-	-	-	23	0	722
5. Goods, services and inputs	14 605	49	-	-	2 699	39	-	171	4	17 475
6. Grants and subsidies	-	-	-	-	-	-	4 000	-	87	4 000
7. Operations and maintenance	693	2	-	-	-	-	-	113	2	806
8. Salaries and allowances	3 118	10	-	-	-	-	-	-	-	3 118
Total	**30 000**	**69**	**1 800**	**4**	**6 941**	**16**	**4 000**	**622**	**11**	**43 363**

Table 4
Additional financing: programme costs by component and programme year (PY)
(Thousands of United States dollars)

	PY1		PY2		PY3		Total
Component/subcomponent	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*
1. Graduation of ultra-poor households	6 369	41	5 384	38	4 697	35	16 450
1.2. Strengthening nutrition through additional grant	250	2	250	2	250	2	749
2.1. Community-based financial organization support	2 845	18	2 845	20	2 826	21	8 516
2.2. Innovation and Outreach Facility	3 943	25	3 943	28	3 857	29	11 744
3. Strategic partnerships, knowledge generation and policy	520	3	520	4	500	4	1 541
4. Programme management and coordination	1 798	11	1 351	9	1 215	9	4 364
Total	**15 725**	**36**	**14 293**	**33**	**13 345**	**31**	**43 363**

Financing and cofinancing strategy and plan

38. The Government of Malawi originally provided US$9.6 million (17 per cent of total costs). Private sector sources contributed US$6.1 million (11 per cent of total costs), while IFAD financed US$42 million (73 per cent of total costs, 50 per cent in the form of a loan and 50 per cent in the form of a grant). The proposed FAO and GCF contributions total US$1.2 million.

39. Total additional financing is US$43.4 million, including US$4.6 million (11 per cent of total costs) from the Government, US$1.8 million (4 per cent of total costs) from FAO/GCF, US$6.9 million (16 per cent of total costs) from the private sector and US$30.0 million (69 per cent of total costs) from IFAD on super highly concessional (80 per cent) and highly concessional (20 per cent) terms.

Disbursement

40. The additional financing will be disbursed on a quarterly basis in accordance with the report-based approach, using the existing designated accounts and with the 2025/26, 2026/27 and 2027/28 financial years being apportioned on the basis of cash flow projections, expected to be 36 per cent, 33 per cent and 31 per cent respectively. The projected average annual disbursements by IFAD of US$10 million are deemed to be feasible in line with IFAD’s Liquidity Policy.

Summary of benefits and economic analysis

41. The financial profitability of FARMSE was estimated by building financial models for farm and crop budgets and livestock production, representing the predominant production activities. The potential investment choices of target beneficiaries are illustrated with five smallholder household models. All the agricultural models show positive results, with incremental gross margins ranging from US$55/ha to US$742/ha. All the household models show positive incremental margins. Expected increases in yields, production and sales show a high impact on household incomes and self-consumption.

42. For the economic analysis, only incremental economic benefits and costs were considered, with aggregated models valued at economic prices, conservative adoption rates ranging from 15 per cent to 25 per cent and a gradual approach to the increase in yields. Net incremental benefits were calculated for a period of 16 years, aggregating each model's total number of beneficiaries. The economic internal rate of return (EIRR) for the additional financing is 26.8 per cent and net present value (NPV) is US$37.5 million, with a discount rate of 15 per cent.

43. Sensitivity analysis shows that the programme's EIRR and NPV continue to be positive and robust under all the scenarios tested.

Exit strategy and sustainability

44. Elements of an exit strategy exist but need to be refined to ensure the long-term sustainability of programme outcomes. This additional financing provides an opportunity to do so, and one of the key objectives of the PMU and supervision missions during the additional financing period will be to ensure that the exit strategy is adequate and implemented as planned. Under component 1, implementing partners mobilize the ultra-poor households into CBFOs, which can continue to support the members with financial services and linkages with FFIs beyond the life of the programme. The additional financing will provide an opportunity to develop a more comprehensive exit strategy.

45. Under subcomponent 2.1, the exit strategy of the implementing partners builds on: (i) involvement of community structures and district councils; (ii) linkages with FFIs, markets and service providers; and (iii) community facilitators. Experience in other contexts shows that it might not be sufficient to ensure sustainability of the CBFOs, which need permanent quality services and supervision. Through the additional financing, sustainability models developed in other contexts will be analysed and tailored for adapted implementation.

46. Under subcomponent 2.2, financial services are delivered by FSPs, which are expected to maintain or scale up in the long run the relevant and profitable services to the programme target groups. This long-run scaling up will be aided by the extended length of the programme. The linkage with EbAM will also contribute to the sustainability of impact under this component.

III. Risk management

A. Risks and mitigation measures

47. Key risks include the effects of climate change, unstable macroeconomic factors, political instability, a lack of appetite by the financial sector to finance target groups, and inadequate institutional capacity to implement and coordinate activities, including for mainstreaming areas. Mitigation measures will include promoting climate-resilient practices, linking FFIs to blended financial instruments, recruiting a nutrition and social inclusion specialist and contracting an environment and climate change consultant, and improved coordination at district level.

B. Environment and social category

48. The programme presents few environmental and social risks provided certain safeguards are adopted and therefore falls under the **moderate** risk category. Some subprojects may have adverse environmental or social impacts, but the impacts are site-specific, few are irreversible in nature and they can be readily remedied by appropriate measures. The majority of FARMSE activities do not require additional environmental analysis because the activities have either positive or minimally adverse environmental impacts. A Social, Environmental and Climate Assessment Procedures (SECAP) review note was updated for the FARMSE additional financing. FARMSE also developed an Environment Social and Climate Management Framework (ESCMF) to ensure that investments are implemented in an environmentally and socially sustainable manner.

C. Climate risk classification

49. The targeted group is susceptible to climate hazards, which poses a risk to the programme achieving its objectives. Accordingly, climate issues need to be considered during the programme extension phase. Climate variability is a significant factor affecting agricultural productivity and major events such as droughts or floods may disturb the expected development trajectory of farmers under the graduation model or negatively affect loan repayment. The climate risk category is therefore assessed as moderate. The programme has opportunities to strengthen climate risk management capabilities in its core activities and to integrate climate resilience aspects through policy dialogue.

50. Climate risk mapping and any investment in high-risk areas should consider the main climate hazards and risks. An in-depth climate vulnerability analysis undertaken by the University of Cape Town with financing from phase two of the Adaptation for Smallholder Agriculture Programme (ASAP2) will inform the selection of activities and value chains, and in particular geographical areas. Specific measures to promote climate change adaptation and mitigation benefits have been integrated into the ESCMF and the SECAP review note in order to reduce programme climate risks.

51. IFAD will seek additional climate finance resources from EbAM to provide technical support to FSPs to design and deliver products to finance climate-resilient investments for smallholder farmers and MSMEs. The programme will also link FSPs to the Africa Rural Climate Adaptation Finance Mechanism; a non-sovereign operation currently under design to mainstream adaptation finance to transform the agricultural sectors in targeted countries in East and Southern Africa, including Malawi.

Debt sustainability

52. Malawi’s external debt is assessed as at high risk of distress. Fiscal discipline should be strengthened to avoid an accumulation of domestic debt at high interest rates. To enhance resilience, efforts should be made to further diversify the economy, broaden the revenue base and strengthen public financial management.[2]

IV. Implementation

A. Compliance with IFAD policies

53. Implementation of the original FARMSE and the additional financing is in line with the country strategic opportunities programme for 2023-2030, approved by the Operational Strategy and Policy Guidance Committee for presentation to the Executive Board in September 2022. The programme is also aligned with the development assistance strategy and all other IFAD policies on financial management and procurement.

54. FARMSE will be implemented in line with the IFAD Inclusive Rural Finance Policy, IFAD’s Strategy and Action Plan on Environment and Climate Change 2019-2025: Results Management Framework, and the 2017 SECAP guidelines, and procedures and guidelines regarding the core mainstreaming themes of nutrition, youth and gender equality and women’s empowerment. In line with the IFAD Policy on Gender Equality and Women's Empowerment, FARMSE has demonstrated notable progress towards gender transformation and has as such been reclassified as a gender-transformative programme. The increased focus on youth is in line with the IFAD Rural Youth Action Plan 2019-2021.

B. Organizational framework

Management and coordination

55. FARMSE is implemented by the Ministry of Finance and Economic Affairs. Direct management of the programme on a day-to-day basis is the responsibility of the PMU, hosted by the Department of Pensions and Financial Sector Policy Division.

56. Programme oversight, direction and guidance is the responsibility of the PSC, which reviews and approves annual workplans and budgets (AWPBs), financial and progress reports, and all major programme decisions. The PTC provides technical support to the PSC.

57. Activities for components 1 and 2 will continue to be carried out by implementing partners selected on a competitive basis. Activities for component 3 will be implemented by strategic partners.

Financial management, procurement and governance

58. The FARMSE financial management function is properly organized in terms of staffing and systems. Since start-up, financial management performance has ranged between satisfactory and moderately satisfactory. The programme finance team is equipped to manage the additional financing without requiring any major adjustments.

59. The external audit of the programme is performed by the National Audit Office of Malawi. Financial audit reports are submitted on time and the quality is in line with IFAD standards. The audit report for the 2021 fiscal year gave the programme an unqualified opinion.

60. Procurement of goods and consulting services under the additional financing will be carried out in accordance with the IFAD Project Procurement Guidelines. National procurement procedures, processes and regulations will be applied to the extent that they are consistent with the IFAD guidelines. The PMU will ensure that the

[2] International Development Association and the International Monetary Fund. Malawi: Joint Bank-Debt Sustainability Analysis – 2018 Update.

Internal Procurement and Disposal Committee authorizations are granted in a timely manner to mitigate delays in obtaining approvals.

C. Monitoring and evaluation, learning, knowledge management and strategic communication

Monitoring and evaluation

61. **Planning.** The programme planning cycle is led by the PMU and follows the Government's planning and budgeting cycle. The cycle commences with preparation of the AWPB as a key instrument for implementation and operational control. The AWPB is submitted to the PSC for review and approval and shared with IFAD for no objection.

62. **Monitoring and evaluation (M&E).** An M&E system coordinated by the PMU is in place and conforms to IFAD's new Operational Results Management System as well as existing M&E arrangements of the Government.

63. The logical framework is and will continue to be the foundation for the programme M&E system. The M&E plan in place will be updated with a framework to achieve specific targets throughout the programme life. Specific component performance metrics will be developed and included in the performance contracts of implementing partners.

64. Given that the logical framework includes a number of core indicators, the programme will undertake two core indicator surveys, one at the beginning of implementation of the additional financing phase and another upon completion.

65. IFAD will jointly undertake periodic monitoring, evaluation and supervision missions to assess the status of programme implementation and evaluate programme direction with respect to its objectives and outputs.

Learning and knowledge management

66. Capturing and documenting lessons and innovations through ongoing data collection and monthly or semi-annual reports will remain an integral part of the FARMSE learning and knowledge management, while the focus on thematic reporting and studies will be strengthened. Disseminating reports and studies will enable sharing of information and facilitate dialogue with stakeholders. FARMSE will also continue to have biannual and annual review meetings and cross-learning workshops to report on and leverage programme progress, lessons learned, challenges and solutions to implementation constraints. The programme will continuously monitor knowledge management achievements using a comprehensive knowledge management and communication action plan.

67. FARMSE will support the creation of replicable and scalable approaches to graduation, and the development of several innovative rural financial products, services and delivery mechanisms. The programme will strengthen the focus on scaling up rural finance innovations. The knowledge management function of the M&E system will be used to document and share knowledge. The programme will also pursue wider participation in regional and thematic knowledge-sharing networks such as IFADAfrica.

D. Proposed amendments to the financing agreement

68. The financing agreement will be amended to incorporate the additional financing of US$30 million, which together with the original financing amounts to US$102.7 million contributed by IFAD, the Government of Malawi, other cofinanciers and the private sector.

V. Legal instruments and authority

69. A financing agreement between the Republic of Malawi and IFAD will constitute the legal instrument for extending the proposed financing to the borrower/recipient.

The original signed financing agreement will be amended following approval of the additional financing.

70. The Republic of Malawi is empowered under its laws to receive financing from IFAD.

71. I am satisfied that the proposed additional financing will comply with the Agreement Establishing IFAD and the Policies and Criteria for IFAD Financing.

VI. Recommendation

72. I recommend that the Executive Board approve additional financing in terms of the following resolution:

RESOLVED: that the Fund shall provide a loan on super highly concessional terms to the Republic of Malawi in an amount of twenty-four million United States dollars (US$24,000,000) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

RESOLVED FURTHER: that the Fund shall provide a loan on highly concessional terms to the Republic of Malawi in an amount of six million United States dollars (US$6,000,000) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

Alvaro Lario
President

Updated logical framework incorporating the additional financing

Results Hierarchy	*Indicators*								*Means of Verification*			*Assumptions / Risks*
	Name	*Baseline*	*Mid-Term*	*Original End Target*	*Revised Original End Target at MTR*	*Revised Original end Target at March 2022 SM*	*Target for Additional Financing*	*Total End Target*	*Source*	*Frequency*	*Responsibility*	
Outreach	**1. Persons receiving services promoted or supported by the project**								IPs & PMU progress reports	Annual	IPs & PMU	Stable political environment (A)
	Females - Number		169,530	194,748	596,154	502,378	264,000	766,378				
	Males - Number		207,204	238,026	676,859	562,243	176,000	738,243				
	Young - Number		75,347	86,554	254,598	214,420	110,000	324,420				
	Not Young - Number		301,387	346,220	1,018,415	850,202	330,000	1,180,202				
	Total number of persons receiving services - Number of people		376,734	432,774	1,273,013	1,064,622	440,000	1,504,622				
	1.a Corresponding number of households reached								IPs & PMU progress reports	Annual	IPs & PMU	
	Women-headed households - Number		169,530	194,748	596,154	500,378	110,000	610,372				
	Non-women-headed households - Number		207,204	238,026	676,859	564,243	330,000	894,250				
	Households - Number		376,734	432,774	1,273,013	1,064,622	440,000	1,504,622				
	1.b Estimated corresponding total number of household members								IPs & PMU progress reports	Annual	IPs & PMU	
	Household members - Number of people		1,657,630	1,904,205	5,601,257	4,684,337	1,936,000	6,620,337				
Programme Goal To reduce poverty, improve livelihoods and enhance the resilience of rural households on a sustainable basis	**Reduced prevalence of chronic malnutrition among under five children by at least 15%**								Mid-term evaluation and end of programme impact assessment	Third year and ninth year	PMU	Stable political & macroeconomic environment (A)
	Share of children under five nationally	37%			30%	30%	30%	30%				
	Improved households' assets ownership index by at least 20%											
	Percent of households	36%			50%	50%	50%	50%				
Development Objective Increased access to and use of a range of sustainable financial	**Graduation strategy and systems developed, tested at scale, and approved by GOM**								PMU Progress reports	Annual	PMU	Stable political & macroeconomic environment; GOM monetary/fiscal and macro-economic reforms are
	Systems - Number		1	1	1	1	-	1				

Results Hierarchy	*Indicators*								*Means of Verification*			*Assumptions / Risks*
	Name	*Baseline*	*Mid-Term*	*Original End Target*	*Revised Original End Target at MTR*	*Revised Original end Target at March 2022 SM*	*Target for Additional Financing*	*Total End Target*	*Source*	*Frequency*	*Responsibility*	
services by rural households and micro, small, and medium enterprises.	**Improved outreach of sustainable rural financial services to rural poor**								IPs & PMU progress reports	Annual	PMU	conducive to poverty reduction; Commitment of stakeholders (GOM, donors & private sector) to participate in poverty reduction efforts (A)
	Persons - Number		328,000	417,774	1,273,013	1,064,622	440,000	1,474,622				
	Females - Number		147,600	187,998	596,154	502,378	264,000	745,078				
	Males - Number		180,400	229,776	676,859	562,243	176,000	729,543				
	Young - Number		65,600	83,555	254,598	214,420	110,000	316,920				
	Not Young - Number		262,400	334,219	1,018,415	850,202	330,000	1,157,702				
	Number of persons/households reporting using rural financial services (1.2.5)								IPs & PMU progress reports	Annual	PMU	
	Households - Number		328,000	417,774	1,273,013	1,064,622	440,000	1,474,622				
	Females - Number		147,600	187,998	596,154	502,378	264,000	745,078				
	Males - Number		180,400	229,776	676,859	562,243	176,000	729,543				
	Young - Number		65,600	83,555	254,598	214,420	110,000	316,920				
	Not Young - Number		262,400	334,219	1,018,415	850,202	330,000	1,157,702				
	IE.2.1 Individuals demonstrating an improvement in empowerment								COI survey	At completion	PMU	Individuals take part in the programme interventions and are impacted in different aspects of their lives
	Percentage of persons demonstrating an Improvement in Empowerment assumed to be 25%						25%	25%				
	Number of Persons Demonstrating an Improvement in Empowerment						110,000	376,156				
	Number of females						66,000	191,595				
	Percentage of females						15%	13%				
	Number of males						44,000	184,561				
	Percentage of males						10%	12%				
	CI 2.2.1: Persons with new jobs/employment opportunities								COI survey	At completion	PMU	Individuals are able to create new employment opportunities through programme interventions
	New Jobs - Number (assumed to be 25% of total outreach)						110,000	376,156				
	Number of Job owners - Females						55,000	206,203				
	Number of Job owners - Males						55,000	206,203				
	Number of Job owners - Young						22,000	75,231				
	CI 2.2.2 Supported rural enterprises reporting an increase in profit											

Results Hierarchy	*Indicators*								*Means of Verification*			*Assumptions / Risks*
	Name	*Baseline*	*Mid-Term*	*Original End Target*	*Revised Original End Target at MTR*	*Revised Original end Target at March 2022 SM*	*Target for Additional Financing*	*Total End Target*	*Source*	*Frequency*	*Responsibility*	
	Number of enterprises						5,790[3]	13,020	COI survey	At completion	PMU	
	Percentage of enterprises						30%	30%				
Outcome Outcome 1.1: Capacity of ultra-poor households to graduate from poverty, improve food security and secure livelihood opportunities is improved	**At least 80% of targeted households attain food security**								Mid-term evaluation and end of programme impact assessment	Third year and ninth year	PMU	Stakeholders agree to roll out GOM graduation model (A); no effective strategy in place targeting women and youths (R)
	Households - Percentage (%)	9%	60	80	80	80	80	80				
	Women reporting minimum dietary diversity (MDDW) (1.2.8)											
	Females - Percentage (%)	9.6%	65	75	75	75	75	75				
Output Output 1.1.1: Government graduation model rolled out	**Number of households reached with graduation activities**								IPs & PMU progress reports	Annual	PMU	Stakeholders agree to roll out GOM graduation model (A); no effective strategy in place targeting women and youths (R)
	Households - Number		15,000	15,000	30,000	30,000	20,000	50,000		At completion		
	Females - Number		6,750	6,750	21,300	21,300	14,000	35,300				
	Males - Number		8,250	8,250	8,700	8,700	6,000	14,700				
	Young - Number		3,000	3,000	6,000	6,000	6,300	12,300				
	Not Young - Number		12,000	12,000	24,000	24,000	13,700	37,700				
	Number of persons/households provided with targeted support to improve nutrition (1.1.8)											
	Total persons participating - Number of people		15,000	15,000	30,000	30,000	20,000	50,000				
	Females - Number		6,750	6,750	21,300	21,300	14,000	35,300				
	Males - Number		8,250	8,250	8,700	8,700	6,000	14,700				
	Household members benefitted - Number of people		66,000	66,000	132,000	132,000	88,000	220,000				
	Young - Number		3,000	3,000	6,000	6,000	6,300	12,300				
	Not Young - Number		12,000	12,000	24,000	24,000	13,700	37,700				
	Persons in rural areas trained in financial literacy and/or use of financial products and services (1.1.7)											
	Persons - Number		15,000	15,000	30,000	30,000	20,000	50,000				

[3] Of the Value chain groups and CBFOs that are linked to markets and formal financial institutions

Results Hierarchy	*Indicators*								*Means of Verification*			*Assumptions / Risks*
	Name	*Baseline*	*Mid-Term*	*Original End Target*	*Revised Original End Target at MTR*	*Revised Original end Target at March 2022 SM*	*Target for Additional Financing*	*Total End Target*	*Source*	*Frequency*	*Responsibility*	
	Females - Number		6,750	6,750	21,300	21,300	14,000	35,300				
	Males - Number		8,250	8,250	8,700	8,700	6,000	14,700				
	Young - Number		3,000	3,000	6,000	6,000	6,300	12,300				
	Not Young - Number		12,000	12,000	24,000	24,000	13,700	37,700				
Outcome Outcome 2.1: Improved access to structured and sustainable CBFO financial services	**Number of retrained CBFO members**								IPs & PMU progress reports	Annual	PMU	Sufficient demand from CBFO support organisations (A) Poor level of client uptake (R)
	Number of retrained CBFO members - Number		277,200	290,574	577,402	577,402	220,000	797,402				
	Females - Number		124,740	130,578	271,810	271,810	132,000	403,810				
	Males - Number		152,460	159,996	305,592	305,592	88,000	393,592				
	Young - Number		55,440	58,114	115,480	115,480	55,000	170,480				
	Not Young - Number		221,760	232,460	461,922	461,922	165,000	626,922				
	Number of increment rural CBFO members											
	Number of increment rural CBFO members - Number		72,000	90,000	169,818	169,818	55,000	224,818				
	Females - Number		32,400	40,500	79,938	79,938	33,000	112,938				
	Males - Number		39,600	49,500	89,880	89,880	22,000	111,880				
	Young - Number		14,400	18,000	33,960	33,960	13,750	47,710				
	Not Young - Number		57,600	72,000	135,858	135,858	41,250	177.108				
Output Output 2.1.1: CFBO support organizations expand network of CFBO groups	**Number of persons in rural areas accessing financial services (CFBO +FSPs) (1.1.5)**								IPs & PMU progress reports	Annual	PMU	Sufficient demand from CBFO support organisations (A) Poor level of client uptake (R)
	Number of persons - Number		328,000	417,774	1,243,013	1,034,622	420,000	1,454,622				
	Females - Number		147,600	187,998	574,854	481,078	252,000	733,078				
	Males - Number		180,400	229,776	668,159	553,543	168,000	721,543				
	Young - Number		65,600	83,555	248,598	206,920	105,000	311,920				
	Not Young - Number		262,400	334,219	994,415	827,702	315,000	1,142,702				
	Number of persons in rural areas accessing CFBO financial services											
	Number of persons - Number		350,574	380,574	747,220	747,220	275,000	1,022,220				

Results Hierarchy	Indicators								Means of Verification			Assumptions / Risks
	Name	Baseline	Mid-Term	Original End Target	Revised Original End Target at MTR	Revised Original end Target at March 2022 SM	Target for Additional Financing	Total End Target	Source	Frequency	Responsibility	
	Females - Number		157,758	171,258	351,748	351,748	189,000	540,748				
	Males - Number		192,816	209,316	395,472	395,472	81,000	476,472				
	Young - Number		70,115	76,115	149,440	149,440	54,000	203,440				
	Not Young - Number		280,459	304,459	597,780	597,780	216,000	813,780				
	No. of existing groups restructured											
	No. groups - Number		15,400	16,143	29,000	29,000	12,941	41,941				
	No. of CBFO groups linked to formal financial institutions											
	No. CBFO groups - Number		2,000	10,000	15,000	15,000	4,000	19,000				
	No. of new CBFOs formed											
	No. of new CBFOs formed - Number		2000	5,000	8,802	8,802	2,941	11,743				
	Number of value chain groups/CBFO linked to markets											
	Number - groups		1,000	2,000	2,500	2,500	2,000	4,500				
	Persons in rural areas trained in financial literacy and/or use of financial products and services											
	Persons - Number		350,574	380,574	697,220	747,220	275,000	1,022,220				
	Females - Number		157,758	171,258	313,748	351,748	189,000	540,748				
	Males - Number		192,816	209,316	383,472	395,472	81,000	476,472				
	Young - Number		70,115	76,115	139,443	149,440	54,000	203,440				
	Not Young - Number		280,459	304,459	557,777	597,780	216,000	813,780				
	Number of persons/households provided with targeted support to improve nutrition (1.1.8)											
	Total persons participating - Number of people				200,000	747,220	275,000	1,022,220				
	Females - Number				170,000	351,748	165,000	516,748				
	Males - Number				30,000	395,472	110,000	505,472				
	Household members benefitted - Number of people				880,000	3,287,768	1,210,000	4,497,768				
	Young - Number				60,000	149,440	54,000	203,440				
	Not Young - Number				140,000	597,780	216,000	813,780				

Results Hierarchy	*Indicators*								*Means of Verification*			*Assumptions / Risks*
	Name	*Baseline*	*Mid-Term*	*Original End Target*	*Revised Original End Target at MTR*	*Revised Original end Target at March 2022 SM*	*Target for Additional Financing*	*Total End Target*	*Source*	*Frequency*	*Responsibility*	
Outcome Outcome 2.2: Enhanced capacity of FSPs to deliver demand-driven services in rural areas	**Percentage of partner financial service providers with portfolio-at-risk ≥30 days below 5% (1.2.6)**								IPs & PMU progress reports	Annual	PMU	High effective demand from rural clients (A); inappropriate financial products from FSPs (R)
	% Providers - Percentage (%)		50%	100%	90%	90%	100%	100%				
	Percentage of partner financial services providers with operational self-sufficiency above 100% (1.2.7)											
	% Providers - Percentage (%)		70%	100%	100%	100%	100%	100%				
	Number of incremental rural clients accessing formal financial services or products by partner FSPs											
	No. Clients - Number		11,160	37,200	495,793	495,793	250,000	745,793				
	Females - Number		5,022	16,740	223,106	223,106	150,000	373,106				
	Males - Number		6,138	20,460	272,687	272,687	100,000	372,687				
	Young - Number		2,232	7,440	99,158	99,158	62,500	161,658				
	Not Young - Number		8,928	29,760	396,635	396,635	187,500	584,135				
	Number of CBFOs linked to markets/FSPs											
	Number - groups		6,000	13,000	14,000	15,000	4000	18,000				
	CI 3.2.2: Households reporting adoption of environmentally sustainable and climate-resilient technologies and practices								COI Survey	Baseline, Midterm and Completion	PMU	Households access climate information service and other promoted technologies and use them
	Households-Number						220,000	752,311				
	Households – Percentage						50%	50%				
	Household Members						968,000	3,310,168				
Output Output 2.2.1: Innovative and demand-driven rural financial products/ services or low-cost delivery mechanisms for targeted low-income households designed and introduced	**Number of financial service providers supported in designing and introducing innovative and demand-driven rural financial products/services or low- cost delivery mechanisms**								IPs & PMU progress reports	Annual	PMU	High effective demand from rural clients (A); inappropriate financial products from FSPs (R)
	Number of providers		2	2	2	6	2	8				
	At least two new/improved sustainable financial products/services or low-cost delivery mechanisms developed and rolled out											
	Number of new/improved products/services		2	2	4	6	2	8				
Output Output 2.2.2: Existing proven innovative rural	**Number of financial service providers supported in delivering outreach strategies, financial products and services to rural areas (1.1.6)**								PMU progress reports	Annual	PMU	High effective demand from rural clients (A); inappropriate financial products from FSPs (R)

Results Hierarchy	*Indicators*								*Means of Verification*			*Assumptions / Risks*
	Name	*Baseline*	*Mid-Term*	*Original End Target*	*Revised Original End Target at MTR*	*Revised Original end Target at March 2022 SM*	*Target for Additional Financing*	*Total End Target*	*Source*	*Frequency*	*Responsibility*	
financial products/services and low-cost delivery mechanisms for targeted low-income households scaled up	Number of providers		8	8	8	11	6	17				
	Number of existing proven innovative rural financial products/services and low-cost delivery mechanisms for targeted low-income households scaled up								IPs & PMU progress reports	Annual	PMU	
	Financial products/services and low-cost delivery mechanisms - Number		5	5	6	11	6	17				
Outcome 2..2.3 Access climate finance promoted	**CI 3.1.2:** Persons provided with climate information services								PMU progress reports	Annual	PMU	Climate Information services will be promoted to all project beneficiaries
	Persons						440,000	1,505,622				
	Females- Number						264,000	902,773				
	Males- Number						176,000	601,849				
	Young- Number						110,000	376,156				
	Not Young-Number						330,000	1,128,467				
Outcome Outcome 3.1: Multi-ministerial coordination and capacity to manage poverty graduation programmes are enhanced	**Number of functioning graduation multi-stakeholder platforms supported (Policy 2)**								PMU progress reports	Annual	PMU	Organizations with key contributions can be identified and have sufficient capacity to undertake assignments (A) Stakeholders unwilling to work cooperatively (R)
	Number of platforms under ultra-poor graduation		1	1	1	1	0	1				
Output Output 3.1.1: Support for development of Poverty Graduation Policy/Strategy and Systems	**Number of policy forums/workshops held on developing graduation system**								PMU progress reports	Annual	PMU	
	Number of policy forums/workshops		9	12	12	12	6	18				
Outcome Outcome 3.2: Institutions,	**Number of existing/new laws, regulations, policies or strategies proposed to policy makers for approval, ratification or amendment (Policy 3)**								PMU progress reports	Annual	PMU	

Results Hierarchy	*Indicators*								*Means of Verification*			*Assumptions / Risks*
	Name	*Baseline*	*Mid-Term*	*Original End Target*	*Revised Original End Target at MTR*	*Revised Original end Target at March 2022 SM*	*Target for Additional Financing*	*Total End Target*	*Source*	*Frequency*	*Responsibility*	
policies and regulations supporting greater financial sector outreach and innovation are strengthened	Number of existing/new laws, regulations, policies or strategies		1	2	5	5	2	7				
Output Output 3.2.1: Enhanced financial sector regulatory, policy and institutional capacity	**Number of functioning multi-stakeholder platforms supported (Policy 2)**								PMU progress reports	Annual	PMU	
	Number of rural finance platforms		3	3	3	3	-	3				
Outcome Outcome 3.3: Rural finance sector support organizations capacity and knowledge increased	**Number/Percentage of rural finance support organizations with improved rural inclusive finance good practice knowledge**								PMU progress reports	Annual	PMU	
	Number of organisations		5	10	5	5	2	7				
Output Output 3.3.1: Rural inclusive finance good practice and knowledge produced and disseminated	**Policy relevant knowledge products completed (Policy1)**								PMU progress reports	Annual	PMU	
	Number of knowledge products/services		5	5	5	5	6	11				

Updated summary of the economic and financial analysis

Table A

Financial cash flow models

Table A summarizes the most representative financial models including the cash flow for 10 years (in local currency) and profitability indicators.

A)		Farm Models Incremental Benefits (MK)					Crop/Livestock Models Incremental Benefits (MK)					
FINANCIAL ANALYSIS		Ultra-poor labour unconstrained HH	Poor HH- accessing informal financial services - VSLA	Poor HH- accessing informal financial services (VSLA) and formal financial services	Vulnerable HH- accessing informal financial services - VSLA	Vulnerable HH- accessing informal financial services (VSLA) and formal financial services	Maize	Soybean	Groundnuts	Potato - rainfed	Potato- irrigated	Goats rearing (2 Goats)
	PY1	-21,638	-69,515	-191,972	-133,477	-264,258	-54,975	-28,900	-106,556	-220,700	-398,900	-121,779
	PY2	155,005	17,261	1,064	60,813	244,005	-38,758	30,765	39,704	75,033	120,767	-60,590
	PY3	166,099	23,129	112,959	158,607	113,493	41,156	-9,302	-4,284	-122,727	-13,233	49,458
	PY4	15,288	97,337	175,999	168,062	-46,754	90,979	30,765	39,704	75,033	-390,180	52,258
	PY5	-18,816	13,219	104,398	140,075	231,845	16,244	10,731	-26,279	75,033	310,700	52,258
	PY6	11,371	87,033	169,719	149,307	199,465	66,067	10,731	17,710	-23,847	40,487	52,258
	PY7	26,465	86,217	167,499	153,208	341,189	90,979	30,765	39,704	75,033	335,653	52,258
	PY8	26,465	72,817	155,579	188,375	331,529	90,979	30,765	39,704	75,033	305,600	52,258
	PY9	26,465	70,537	152,159	173,458	329,249	90,979	30,765	39,704	75,033	305,600	52,258
	PY10	26,465	70,537	152,159	173,458	329,249	90,979	30,765	39,704	75,033	305,600	52,258
Financial NPV (MK)		352,676	348,468	737,864	938,794	1,335,906	352,224	124,242	70,680	70,274	569,707	149,695
Financial NPV (USD)		437	431	914	1,162	1,654	436	154	88	87	705	185
FIRR		712%	57%	47%	85%	65%	48%	62%	15%	9%	18%	13%
Return on Investment (ROI)							55%	59%	93%	51%	57%	141%
Incremental Gross Margin(USD)		(27)	137	233	215	444	113	38	49	93	378	288

Table B

Programme costs and logframe targets

Table B provides information on total project costs (broken down by component) and beneficiaries (broken down by category). This table also includes logframe targets as per the EFA.

B)					
PROJECT COSTS AND INDICATORS FOR LOGFRAME					
TOTAL PROJECT COSTS		(in million USD)	**43.36**	PMU	**4.36**
Beneficiaries	**440,000**	households			
Cost per beneficiary	**99**	USD x households		**Adoption rates**	**30%-50%**
Components and Cost (USD million)		**Outcomes and Indicators**			
1. Graduation of Ultra-Poor Households	17.2	Ulta-poor graduation model developed and testing at scale and strenghtening nutrition Strenthening nutrition through assitional grant	20,000 households on government graduation model supported 20,000 UPG and 275,000 CBFO households supported to improve nutrition		
2. Support to Financial Innovation and Outreach	20.3	Improved access to structured and sustainable CBFO financial services	220,000 existing and 55,000 new CBFO members reached 290,000 rural clients accessing formal financial services by partner FSPs		
3. Strategic Partnerships, Knowledge Generation, and Policy	1.5	Enhanced multi-ministerial coordination and capacity to manage poverty graduation programmes	Rural finance support organizations with improved rural inclusive finance good practice knowledge		
4. Programme management and coordination	4.4	PMU			

Table C

Main assumptions and shadow prices

Table C shows the basic assumptions on yields and process for the main inputs and outputs. The economic section shows shadow prices used in the conversion.

C)	**MAIN ASSUMPTIONS & SHADOW PRICES**			
FINANCIAL	**Output**	**% Increase in yields**	**Input prices(per KG)**	**Price (MK)**
	Maize	70%	NPK	920
	Soybean	35%	Urea	990
	Groundnuts	50%	Maize seed	2,000
	Potato - rainfed	50%	Fungicide (e.g. Dithane M45)	12,620
	Potato - irrigated	63%		
ECONOMIC	Official Exchange rate (OER)	808	Economic discount rate	15%
	Shadow Exchange rate (SER)	853	Financial discount rate	4.0%
	Standard Conversion Factor	1.06	Non tradable goods CF	1.00
	Input Conversion factor	0.96	Labour Conversion Factor	0.65

Table D

Beneficiary adoption rates and phasing

Table D shows the total number of project beneficiaries, subdivided into activities and phased following the inclusion pattern envisaged by the project and reflected in the EFA and COSTAB.

D)	Beneficiaries, Adoption Rate, Phasing in									
Item		Target HH	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7	Total
Ultra Poor Household (Graduation)		**20,000**								
Coverage rate			0%	11%	22%	31%	27%	9%	0%	
Adoption rate	**50%**		50%	50%	50%	50%	50%	50%	50%	
No. of HH		10,000	*0*	*1,111*	*2,222*	*3,111*	*2,667*	*889*	-	**10,000**
Cummulative no. of HH			**0**	**1,111**	**3,333**	**6,444**	**9,111**	**10,000**	**10,000**	
Poor Household (VSLA)		**137,500**								
Coverage rate			0%	12%	18%	18%	18%	18%	17%	
adoption rate	**30%**		30%	30%	30%	30%	30%	30%	30%	
no. of HH			*0*	*5,073*	*7,277*	*7,277*	*7,277*	*7,277*	*7,068*	**41,250**
Cummulative no. of HH			**0**	**5,073**	**12,350**	**19,627**	**26,904**	**34,182**	**41,250**	
Poor household (VSLA and FFS)		**72,500**								
Coverage rate			0%	18%	14%	18%	16%	20%	14%	
Adoption rate	**50%**		50%	50%	50%	50%	50%	50%	50%	
no. of HH			-	*6,458*	*5,010*	*6,520*	*5,916*	*7,427*	*4,918*	**36,250**
Cummulative no. of HH			**-**	**6,458**	**11,468**	**17,989**	**23,905**	**31,332**	**36,250**	
Vulnerable Household (VSLA and FFS)		**72,500**								
Coverage rate			0%	18%	14%	18%	16%	20%	14%	
Adoption rate	**50%**		50%	50%	50%	50%	50%	50%	50%	
no. of HH			*0*	6,458	5,010	6,520	5,916	7,427	4,918	**36,250**
Cummulative no. of HH			**0**	**6,458**	**11,468**	**17,989**	**23,905**	**31,332**	**36,250**	
Vulnerable Household (VSLA)		**137,500**								
Coverage rate			0%	12%	18%	18%	18%	18%	17%	
Adoption rate	**30%**		30%	30%	30%	30%	30%	30%	30%	
no. of HH			*0*	5,073	7,277	7,277	7,277	7,277	7,068	**41,250**
Cummulative no. of HH			**0**	**5,073**	**12,350**	**19,627**	**26,904**	**34,182**	**41,250**	
Total no. oh HH			*0*	**24,172**	**26,797**	**30,707**	**29,054**	**30,297**	**23,974**	**165,000**
Total cummulative no. of HH		440,000	**0**	24,172	50,969	81,676	110,730	141,026	165,000	

Table E

Economic cash flow

Table E presents the overall project aggregation. Include the net incremental benefits of each financial model in economic terms, converted using shadow prices (table C) and multiplied by the number of beneficiaries (table D). Net incremental costs are to present all additional project costs. Last column indicates net cash flow to be used to calculate project profitability indicators such as economic NPV and economic IRR (EIRR).

E)										
In 000 USD										
Economic Analysis	**PY1**	**PY2**	**PY3**	**PY4**	**PY5**	**PY6**	**PY7**	**PY8**	**PY9**	**PY10**
Total programme Incremental benefits (US$;	**$ -**	**$ -**	**-$ 3,447**	**$ 272**	**$ 5,610**	**$ 11,641**	**$ 16,602**	**$ 25,052**	**$ 36,528**	**$ 40,256**
Total Benefits	**$ -**	**$ -**	**-$ 3,447**	**$ 272**	**$ 5,610**	**$ 11,641**	**$ 16,602**	**$ 25,052**	**$ 36,528**	**$ 40,256**
Total Incremental Costs	$ 15,932	$ 12,920	$ 11,973	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Benefits-Costs	-$ 15,932	-$ 12,920	-$ 15,419	$ 272	$ 5,610	$ 11,641	$ 16,602	$ 25,052	$ 36,528	$ 40,256
Economic IRR	**26.8%**									
Economic NPV USD'000 @15%	**$ 37,470**									

Table F

Sensitivity analysis

The results show that the additional finance phase can face significant drops in benefits and still be highly profitable. As an example, a drop of 50% in benefits would take the IRR to 23%.

SENSITIVITY ANALYSIS (SA)				
		Δ%	IRR (%)	NPV (USD M)
Base scenario			26.8%	37.47
Project costs +10%		-10%	25.2%	34.32
Project costs +20%		-20%	23.2%	31.17
Projectc costs +50%		-50%	16.3%	21.72
Project benefits +10%		10%	28.3%	44.37
Project benefits +20%		20%	29.7%	51.26
Project benefits -10%		-10%	25.2%	30.57
Project benefits -20%		-20%	23.9%	23.68
Project benefits -50%		-50%	20.5%	2.99
1 year lag in ben.			23.3%	27.79
2 years lag in ben.			20.5%	18.49

Economic and Financial Analysis

I. Introduction

1. The current appendix summarizes the main assumptions, hypothesis and results of the FARMSE additional financing´s economic and financial analysis. The profitability indicators are calculated taking into account the project´s reported outputs and outcomes for each component during the project´s implementation period and foreseen for the project lifetime.

2. The economic and financial analysis for the additional financing consists of comparing the overall project´s costs with the verified and expected impacts during the project´s lifetime, calculated as benefits for the main promoted activities. It is done from the point of view of each beneficiary (financial analysis) but also aggregating beneficiaries per model, calculating the benefits for the economy of Malawi as a whole.

3. The information was obtained from the M&E system, consultations during field visits, outcome reports and surveys and impact assessments. The resulting figures were double-checked with the local technical specialist for each source of benefits.

4. Both in the financial and economic analysis, each initiative will be considered profitable if cash flow´s additional benefits surpass investment and recurrent costs at a cut-off rate. As a result, profitability indicators will be the Net Present Value (NPV, economic and financial), the Internal Rate of Return (IRR, economic and financial), the

Benefit-costs ratio (B/C, both economic and financial). The sensitivity analysis will test vulnerability or robustness of obtained results for the economic profitability indicators.

The first part of the document summarizes the financial analysis main assumptions and hypothesis and will analyze the proposed models and the corresponding expected benefits, with an assessment related to the impacts on household incomes and the self-consumption estimates. In the end, aggregated benefits (with externalities included) will determine the overall profitability and the sensibility of results in face of negative shocks affecting costs, prices and yields.

II. FINANCIAL ANALYSIS

5. **Objectives**. The objectives of the financial analysis are: (i) to assess the financial viability of the development interventions promoted under the FARMSE'S Programme; (ii) to examine the impact of Programme interventions on households' income (HHs). This serves to verify the incentive for the target group for engaging in the proposed activities and (iii) to establish the framework for the economic analysis of the Programme, which will complement the financial analysis to assess the justification from the overall economic perspective.

6. **Methodology and financial models.** The analysis was developed by building financial models for farm budgets, crops budgets and livestock. Incremental benefits were estimated based on actual physical outputs and likely chances of building up incremental benefits during the remainder of the project life period and considering production foregone. Prices for inputs and outputs crop yields data were obtained from different sources. To determine the "Without project" scenario, the most relevant were the Baseline Report, the Mid-Term Report and the information provided by the technicians.

7. The financial analysis assessed potential incremental costs and benefits projected to (i) ultrapoor labour unconstrained households participating in graduation model who would receive capacity building support and asset transfer funds to be invested in productive assets and income generating activities; and (ii) poor but food insecure households, households vulnerable to poverty and households resilient to poverty whose improved access to formal and informal financial services and products would result in increased investments in productive and income generating activities.

8. Incremental benefits to the programme investments are estimated by comparing the future without programme (WoP) and future with programme (WiP) net margins. The overall programme impact is calculated by aggregating benefits to the investments in the graduation models and rural finance outreach. The benefits were assessed for a period of 10 years, a period that allows capturing potential benefits to all households targeted during the entire programme implementation period.

Opportunity cost of capital. The discount rate was estimated at 4.0%, the rate paid by Saving Bonds, the type of deposit that offers the highest Savings Deposit Rate in the National Bank of Malawi[4].

9. There is difference between the financial discount rate of 4% and the social discount rate of 15% is attributed to the strong inflationary pressure the Malawi economy is experiencing due to largely the impact of rising global energy and food prices and the impact of unfavorable weather conditions during the 2021/22 agricultural season. Annual inflation quickened to a near five-year high of 14.1% in March 2022. The saving deposit rates are yet to adjust because it is linked to the policy interest rate which remained

[4] https://natbank.co.mw/rates-tariffs/interest-rates

unchanged to allow for economic recovery while the treasury bond rates might have already aligned to the current economic reality.

10. **Labour.** In general, there is no shortage of labour for agricultural activities in rural Malawi. In terms of the programme households, ultra-poor labour unconstrained households expected to have sufficient family labour for own farming activities and earn income through casual labour. Similarly all the targeted beneficiaries do not use hired labour during any time of the cultivation season. There has been a slight reduction in proportion of sampled beneficiary household involved in casual labour (from 16.6% at baseline to 15.3% at MTE). The additional finance phase EFA analysis has maintained the baseline parameters on casual labour.

11. **Production models.** The analysis developed five crop and two livestock production models to represent predominant production activities. Crop models demonstrate intensified production of: (i) rainfed maize; (ii) rainfed groundnuts; (iii) rainfed soya bean; (iv) rain-fed potato; and (v) irrigated potato through investment in a low-cost treadle pump. Livestock production models demonstrate investments in purchase of two goats.

12. In the WoP situation, the crop models present the current productivity and profitability levels that are much below optimum due to combination of factors including use of poor quality seeds, application of minimum levels of or no use of fertilizers and agrochemicals, inadequate farm practices and technologies that do not respond to increasing climate shocks. Similarly, present productivity levels of dairy cow and goats are very low largely because of poor animal health and nutrition, as households have limited access to animal feed, animal health services and products and use inadequate animal husbandry practices. Limited or lack of access to financial services and products for majority of rural households is a main determining factor that explain afore-discussed issues. Negative climatic events such as droughts, dry spells and erratic rainfalls frequency and severity of which are stubbornly increasing, is another contributing factor to steady declines in productivity levels leading to increases in food insecurity and prices of major food crops for human and animal consumption.

13. **Crop production models for rain fed maize, groundnuts, soya and sweet potato.** The crop models demonstrate intensification of crop production on 1.0 ha of agricultural land for individual crop through investments in higher quality seeds, fertilizer and pest control, and improved farm management and climate smart agriculture practices. Farmers are reluctant in investing in improved inputs, technology and farm practices for numbers of reasons including poor access to seeds, agrochemicals, negative climatic events, and access to finance. In the WoP scenario, (i) a smallholder household uses traditional and low input farming practices; (ii) crop yield is suboptimal iii) access to finance, quality seeds and extension services are limited; and (iv) harvest and post-harvest losses at 10 per cent due to inadequate farm practices, access to storage and market facilities and climate related shocks. The WiP scenario assumes (i) yield increases (ii) production losses declines to 5 per cent due to (iii) timely and adequate application of improved seeds, agrochemicals; and (iii) use of improved farm practices.

14. **Irrigated potato production model.** Additional to the improved agricultural practices stated above, this model illustrates investments in a treadle pump irrigation, improved agricultural inputs and farm practices that would allow switching form production of rain -fed potato to irrigated potato on 1.0 ha land.

15. **Goat rearing model.** This model describes investments in purchase of two goats of traditional breed and improved animal husbandry practices. The model assumes purchase

of two does and maintenance of the herd size at two does. Birth rates assumed at 1.5 per kidding with three kidding in two years and mortality rates 7 per cent for mature goats and 12 per cent per kids. One year-old kids assumed to weigh 15 kg and does 25 kg. Flock size expected to stabilize at six does.

Table 1: Agricultural models. WOP and WP case. kg/ha

Crop	Post-harvest yields		
	WoP	WP (at full development)	Increment
Maize (rainfed)	1,700	2,890	70%
Soybean (rainfed)	950	1,283	35%
Groundnuts (rainfed)	800	1,200	50%
Potato (rainfed)	8,000	12,000	50%
Potato (irrigated)	8,000	13,000	63%

Table 2: Financial margins, under the WOP and WP scenarios

CROP MODELS RESULTS (Financial prices ,USD) -1 ha at full development						
	Gross margin		Incremental gross margin	Incremental costs	Return to labor (USD)	
	WoP	WP			WoP	WP
Maize (rainfed)	152	265	113	164	1.9	3.6
Soybean (rainfed)	212	250	38	139	2.0	3.0
Groundnuts (rainfed)	504	553	49	241	4.1	5.3
Potato (rainfed)	870	963	93	485	19.3	19.2
Potato (irrigated)	744	1,123	378	616	16.5	16.6
Goat rearing (2 goats)	-	288	288	204	-	2.4

16. Increased production could either be sold on the market (with positive effects on HHs incomes and access to food) or self-consumed (with positive effects on food security) and the value is considered to be similar for both cases. In the case of maize, the main crop, it is estimated that almost 84% of the incremental production is for self-consumption.

Table 3: Incremental Self Consumption

Crop	Expected incremental production (kg/ha)	Quantity self-consumed (kg/ha)	Incremental Self consumption ratio per household
Maize (rainfed)	1,190	1000	84%
Soybean (rainfed)	380	35	9%
Groundnuts (rainfed)	400	70	18%
Potato (rainfed)	4,000	500	13%
Potato (irrigated)	5,000	500	10%

17. **Household models.** Potential FARMSE beneficiaries fall into five broad categories of poverty that represent various levels of endowment, monetary poverty, food security, family labour availability, vulnerability, and resilience to poverty. These categories are: (i) ultra-poor labour constrained; (ii) ultra-poor labour unconstrained; (iii) poor but food-

secure; (iv) vulnerable to poverty; and (v) resilient to poverty. To simplify, the analysis grouped them into (i) ultra-poor; (ii) poor; and (iii) vulnerable.

18. Potential investment choices of target beneficiaries are illustrated through five indicative smallholder household models with different types and scales of assets. The models are summarized below and presented in Table 4.

19. **Ultra-poor labour unconstrained households** receiving capacity building support and one time lump sum seed capital of around USD 300 are presented through indicative investments models for a smallholder farming household operating 0.40 ha of rainfed land, of which 0.1 ha is currently not operated due to lack of financial resources, and investing in (i) improved production of maize (0.20 ha) and groundnuts (0.2 ha) and (ii) improved husbandry of two goats.

20. **Poor** households gaining access to informal financial services and products through its membership in the **VSLA**, are illustrated through a smallholder household model operating 0.70 ha of rain-fed land and investing in intensified production of maize, groundnuts, and soybean.

21. **Poor** households gaining access to both informal and formal financial services and products delivered by **FSPs and VSLAs**, are illustrated through a smallholder farm household model operating 0.70 ha of rain-fed land and investing in (i) intensification of rain-fed maize, soybean, groundnut, and potato production; and (ii) purchase of two goats.

22. **Vulnerable** households accessing finance through its membership in **VSLAs** are presented through a smallholder farm household model operating 0.80 ha of rain-fed land and investing in (i) intensification of maize, groundnuts, soybean and potato production; and (ii) increasing existing goat herd by one goat

23. **Vulnerable** households accessing financial resources and products through the **VSLAs and FSPs** are presented through a smallholder farm household model operating 0.80 ha of rain-fed land and investing in (i) a treadle pump irrigation to produce irrigated potato on 0.50 ha of land; (ii) intensification of rain-fed maize, groundnuts and soybean on 0.20 ha of rain-fed land; (iii) one goat;

Table 4: Summary of With and Without Project Situations per Household

Production activities	Unit	Ultra-poor (graduation)		Poor (VSLA)		Poor (VSLA & FSP)		Vulnerable (VSLA)		Vulnerable (VSLA & FPS)	
		WOP	WIP	WOP	WIP	WOP	WIP	WOP	WIP	WOP	WIP
Crop production Maize (rainfed)	ha	0.2	0.2	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.15
Maize (rainfed, rented land)	ha	0.1	0.2		0	0	0				
Groundnut (rainfed)	ha			0.2	0.15	0.15	0.2	0.25	0.3	0.15	0.1
Soybean (rainfed)	ha			0.1	0.15	0.15	0.2	0.2	0.15	0.15	0.05
Potato (rainfed)	ha							0.15	0.15	0.3	0
Potato (irrigated)	ha									0	0.5
Total area	**ha**	**0.3**	**0.4**	**0.7**	**0.7**	**0.7**	**0.7**	**0.8**	**0.8**	**0.8**	**0.8**
Livestock Goat (new investment)	head						2		1		1
Goat (improved husbandry)	head		2				0		1		1

24. **Household cash flow analysis**. The analysis of the cash flows after financing for all household models indicate that participating households will be substantially better off because of programme interventions. The analysis indicates that if households can muster sufficient savings through CBFO groups and can access adequate financing products through the formal financial sector, the proposed investments are financially sustainable. This is summarized in Table 4

25. Financing requirements for each household type have been estimated as a function of total incremental production costs and beneficiary contribution. For households benefiting under Component 1.0, it is assumed that financing requirements will be met through a grant (the seed capital paid under of the graduation programme). For households benefitting only from subcomponent 2.1 (CBFOs), it is assumed that all financing requirements are met through beneficiary contribution (i.e. savings accumulated through group participation). For households benefiting from both subcomponents 2.1 and 2.2, it is assumed that 50% of financing requirements are met though savings and the remaining 50% through loans

26. Financing requirements for investment activities will vary from one household to another depending on investment choices. As presented in Table 14, financial needs of ultra-poor labour unconstrained households will be around USD 175 to be financed from the asset transfer grants of USD 300. Investment choices of those households, who access only VSLA loans, are expected to require relatively modest amounts of investments. Poor households, for instance, are assumed to opt for less capital-intensive investment activities (crop production) that require investment at USD 121 to be funded from VSLA loans of USD 60 and household contribution of USD 60. Similarly, investment options of vulnerable households assumed to require USD264 to be funded from VSLA loans of USD 72 and household contribution of USD191. Highest loan amounts are expected for investments choices of vulnerable households gaining access to both informal and formal financial services. Respective financial requirements of vulnerable households expected at USD at USD 694 to be financed from loan amount of USD 292 and household contribution of USD 402. It should however be noted that these financial requirements of households represent only the first year financial needs and some households are expected to receive loans in following years depending on their cash flows.

27. **Table 5: summary of household models profitability indicators ,financing requirement and return to family labour (USD)**

Household type	Net income after financing		Incremental income after financing	Incremental production costs	Beneficiary contribution	Household loan requirements	Return to family labour - Incremental Annual Income Per HH	Return to Family labour - Comparison with the Malawian Poverty National Line
	WoP	WP						
Ultra Poor Household (Graduation)	181	226	45	175	175	-	107	52%
Poor Household (VSLA)	358	496	137	121	60	60	53	26%
Poor household (VSLA and FFS)	352	585	233	264	191	72	154	75%
Vulnerable Household (VSLA)	602	817	215	259	342	(83)	177	86%
Vulnerable Household (VSLA and FFS)	768	1,211	444	694	402	292	408	199%

28. A sustainability analysis for the enterprise models was undertaken based on the loan amount determined for a particular enterprise or a household model. For loans from informal service providers , an assumed of interest rate 10% per month was used according to the prevailing rates while the interest rate on loans from formal financial

service providers is assumed at 25% per annum being the current policy rate of 14% plus 11% margin. This analysis aims to demonstrate whether the beneficiaries, who are willing to accept loans that would be provided by the AF facility, will have a positive cash flow from farming that is sufficient to repay the loan installments with interest and still has cash for livelihood.

29. **Table 6:a Sustainability Analysis for enterprise models (MWK)**

Household type	Determined Household loan requirements	Borrowing from formal FSP	Borrowing from Informal FSP	Estimated total annual Interest payable	Net income after financing	Net Income after loan and interest repayment	Annual food and non food Requirements for 4 member HH	Percentage of HH annual requirements met after loan service
Poor Household (VSLA)	46,982		48,839	37,174	110,737	24,724	663,516	4%
Poor household (VSLA and FFS)	58,496	29,248	29,248	26,373	187,919	103,051	663,516	16%
Vulnerable Household (VSLA and FFS)	89,888	44,944	44,944	106,446	418,430	222,096	663,516	33%

The analysis shows that beneficiaries for all the three enterprise models will have sufficient cash flow to service the loan and interest. The analysis of sustainability was based on the comparison of the remaining cash flow to the absolute poverty line. The absolute poverty line per person per year in Malawi is equivalent to MWK 165,879 (US$205.38) per person. For households with a size equivalent to 4 adult persons, the absolute poverty line would be MWK663,000. The highest household income in the sustainability analysis shows that one model for Poor HH accessing formal and informal financial services meets only 16% net incomes above the poverty line after loan repayments. The other two household models achieve net incomes significantly below the poverty line.

Following the recent 25% devaluation of the Kwacha and the general international inflationary environment, a sensitivity analysis was conducted on the impact of interest rate changes in enterprise sustainability models. The results show that while there is marginal positive contribution towards annual food requirements for all the borrowing households, the increased interest costs on borrowed funds will reduce the sustainability of the three household models

30. **Table 6b: Sensitivity analysis on impact of interest rate changes enterprise models**

Sensitivity Analaysis on interest rate changes following 25% devaluation

Sensitivity variables	HH Type	Net Income after loan and interest repayment	Percentage of HH annual requirements met after loan service
base scenario	Poor Household (VSLA)	24,724	4%
	Poor household (VSLA and FFS)	103,051	16%
	Vulnerable Household (VSLA and FFS)	222,096	33%
Interest rate +30%	Poor Household (VSLA)	13,572	2%
	Poor household (VSLA and FFS)	95,139	14%
	Vulnerable Household (VSLA and FFS)	190,163	29%
Interest rate +50%	Poor Household (VSLA)	6,137	1%
	Poor Household (VSLA)	89,864	14%
	Poor household (VSLA and FFS)	168,874	25%

III. Economic Analysis

31. **Objectives.** The economic analysis objectives are to: (i) determine the viability of the Programme as a whole, in which aggregated economic benefits are compared with total Programme costs; (ii) assess Programme impact and the overall economic internal rate of return (EIRR); and (iii) perform sensitivity analysis in order to measure the

robustness of the expected impact, and to measure variations in the overall EIRR due to unforeseen factors.

32. **Methodology and Assumptions.** The economic analysis is based on the estimation of the benefits gained from the increased economic performance of HHs and Communities targeted by the Programme. The main quantifiable economic benefits from the Programme are represented by the net incremental benefits as computed in the financial analysis, i.e. the difference between the annual net benefits in the WOP and WP scenarios. Such benefits are aggregated over the total number of beneficiaries, in accordance with their phase of incorporation into the project. The economic analysis is conducted over a 16-year period. Specifically, the HH models discussed in the financial analysis above are used to link the crop models with the number of HH beneficiaries (set as target), estimate the overall flow of benefits, and compute the EIRR and the Net Value Added.

33. **Estimation of the economic benefits.** Economic benefits are estimated using economic prices (instead of the financial ones). Financial prices of tradable goods are converted into economic ones using a Standard Conversion factor (SCF) build on the relationship between official exchange rate and shadow exchange rate. Shadow prices are also used for the exchange rate and the rural wage.

34. The fertilizer and imported inputs conversion factor was derived from estimated economic cost of imported fertilizers compared to the observed financial cost of the fertilizer on the market. The economic prices of fertilizer was based on the quarterly average prices on the World Bank Commodities Price Data (Pink Sheet) for the two quarters from Oct 2021 to March 2022. The use of two quarters data instead of four quarters data was to remove distortions arising from the huge movements in world average prices of fertilizers from US$ 463 for the quarter April –June 2021 to US$808 for the quarter Jan-March 2022 due to the COVID-19 effects and the Ukraine war.

Table 7: Standard Conversion factor (SCF) and Shadow prices used in the economic analysis

	Conversion Factors	
Standard Conversion Factor (SCF)	SCF	1.06
Conversion Factor for fertilizer and imported inputs	SCF	0.96
Shadow Exchange Rate	SER	1.54
Shadow Wage Rate Factor [5]	SWRF	0.65

[5] SWRF as used in an earlier IFAD project in Malawi

35. **Social Discount Rate**. It is established at 15%. The exercise takes an average of the interest rate paid by certain national treasury bonds, since Malawi has no bonds in the international financial markets and the Malawian currency has shown stability during the last years. [6]

36. **Adoption rates and other assumptions for the computation of the overall flow of benefits**. To compute the overall flow of direct benefits of the FARMSE Programme, the analysis calculates the actual number of beneficiaries informed by the M&E team for those HHs that are expected to be benefited by the investments planned in the additional finance phase. Adoption or success rate of 30 per cent assumed for households whose access to finance will be only through VSLAs based on average VSLA size and savings budgets. Adoption or success rate of 50 per cent applied for households who will access both informal and formal financial resources.

[6] https://mse.co.mw/index.php?route=counter/debt/listed

Table 8: Additional Finance Phase. Number of Beneficiaries per intervention

	Beneficiaries, Adoption Rate, Phasing in									
Item		**Target HH**	**Y 1**	**Y 2**	**Y 3**	**Y 4**	**Y 5**	**Y 6**	**Y 7**	**Total**
Ultra Poor Household (Graduation)		**20,000**								
Coverage rate			0%	11%	22%	31%	27%	9%	0%	
Adoption rate	50%		50%	50%	50%	50%	50%	50%	50%	
No. of HH		10,000	0	1,111	2,222	3,111	2,667	889	-	10,000
Cummulative no. of HH			**0**	**1,111**	**3,333**	**6,444**	**9,111**	**10,000**	**10,000**	
Poor Household (VSLA)		137,500								
Coverage rate			0%	12%	18%	18%	18%	18%	17%	
adoption rate	30%		30%	30%	30%	30%	30%	30%	30%	
no. of HH			0	5,073	7,277	7,277	7,277	7,277	7,068	41,250
Cummulative no. of HH			**0**	**5,073**	**12,350**	**19,627**	**26,904**	**34,182**	**41,250**	
Poor household (VSLA and FFS)		72,500								
Coverage rate			0%	18%	14%	18%	16%	20%	14%	
Adoption rate	50%		50%	50%	50%	50%	50%	50%	50%	
no. of HH			-	6,458	5,010	6,520	5,916	7,427	4,918	36,250
Cummulative no. of HH			**-**	**6,458**	**11,468**	**17,989**	**23,905**	**31,332**	**36,250**	
Vulnerable Household (VSLA and FFS)		72,500								
Coverage rate			0%	18%	14%	18%	16%	20%	14%	
Adoption rate	50%		50%	50%	50%	50%	50%	50%	50%	
no. of HH			0	6,458	5,010	6,520	5,916	7,427	4,918	36,250
Cummulative no. of HH			**0**	**6,458**	**11,468**	**17,989**	**23,905**	**31,332**	**36,250**	
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Adoption rate	30%		30%	30%	30%	30%	30%	30%	30%	
no. of HH			0	5,073	7,277	7,277	7,277	7,277	7,068	41,250
Cummulative no. of HH			0	5,073	12,350	19,627	26,904	34,182	41,250	
Total no. of HH			0	24,172	26,797	30,707	29,054	30,297	23,974	165,000
Total cummulative no. of HH		**440,000**	**0**	**24,172**	**50,969**	**81,676**	**110,730**	**141,026**	**165,000**	

37. **Economic Programme Costs.** Programme costs were considered including price and physical contingencies. To avoid double counting of the costs, only the incremental economic costs of the Programme are considered (i.e. the costs of activities funded by FARMSE. Costs that had already been included in the activity models are excluded. This is independent of the source of funding (i.e. beneficiaries, IFAD, government or private sector).

38. **Economic Internal Rate of Return (EIRR).** The EIRR of the additional finance phase is estimated at 33.2% (base case), confirming its economic justification. This EIRR is much higher than the one that at design (14.3%) due to increased number of program beneficiaries.

39. **Net Present Value (NPV).** The economic Net Present Value (NPV) is estimated at about USD 13.9 million over the 20.2-year period of the analysis. The economic discount rate adopted in the economic analysis is 15%, as discussed above

40. **Sensitivity Analysis**. To test the robustness of the above results, a sensitivity analysis has been carried out. The main risk factors that can negatively impact the profitability of the program include effects of climate change, unstable macroeconomic environment, political instability, lack of appetite of the financial sector to finance smallholder farmers and agri-MSMEs. The sensitivity analysis shows that the programme's EIRR and NPV are still positive and robust under all the scenarios tested. For example,

under a pessimistic scenario of a reduction in project benefits at around 20 per cent, EIRR would be 23.9per cent and the NPV would be US$23.7million

Table 9: Additional Finance Phase. Sensitivity analysis

	IRR	NPV (USD)	
base scenario	**26.8%**	**37,470,034**	**Identified Risk Factors**
costs +10%	25.1%	34,320,505	1 Unstable macroeconomic environment
costs +20%	23.2%	31,170,977	2. climate change, including flooding, drought, and uncertain rainfall
costs +50%	16.3%	21,722,392	
benefits +10%	28.3%	44,366,565	1. Climate change shocks
benefits +20%	29.7%	51,263,097	2. Unstable macroeconomic environment
benefits -10%	25.2%	30,573,502	3. lack of appetite of the financial sector to finance smallholder farmers and agri MSMEs
benefits -20%	23.9%	23,676,970	
benefits -50%	20.5%	2,987,375	
benefits delay 1 yr	23.3%	27,791,269	1. Political Risk
benefits delay 2 yrs	20.5%	18,486,727	2.inadequate institutional capacity to implement and coordinate activities