

How Can Matching Grants in Agriculture Facilitate Access to Finance?

Lessons Learned from World Bank Group's Experience



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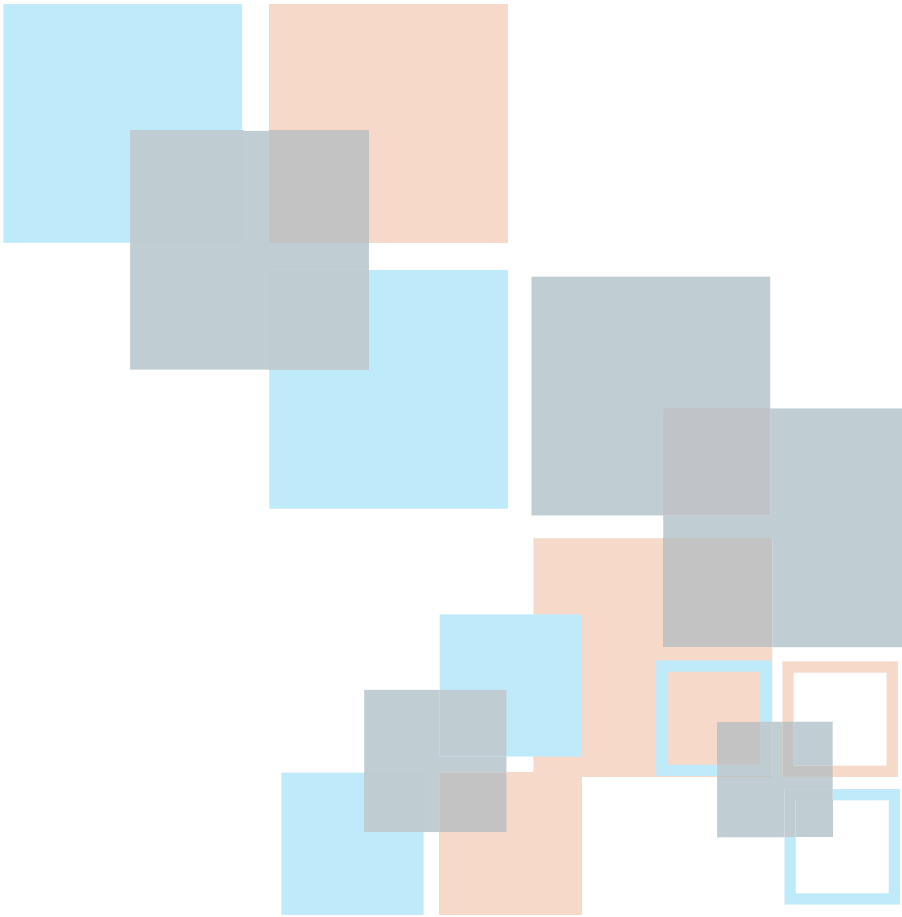




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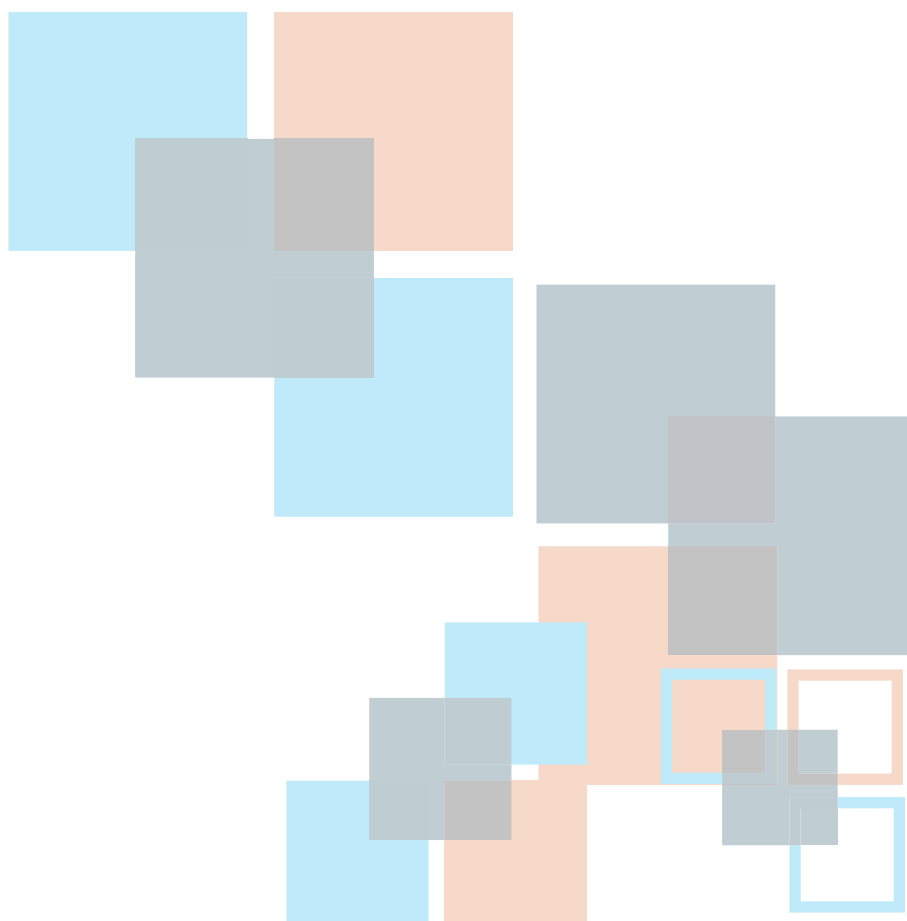
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Abbreviations and Acronyms

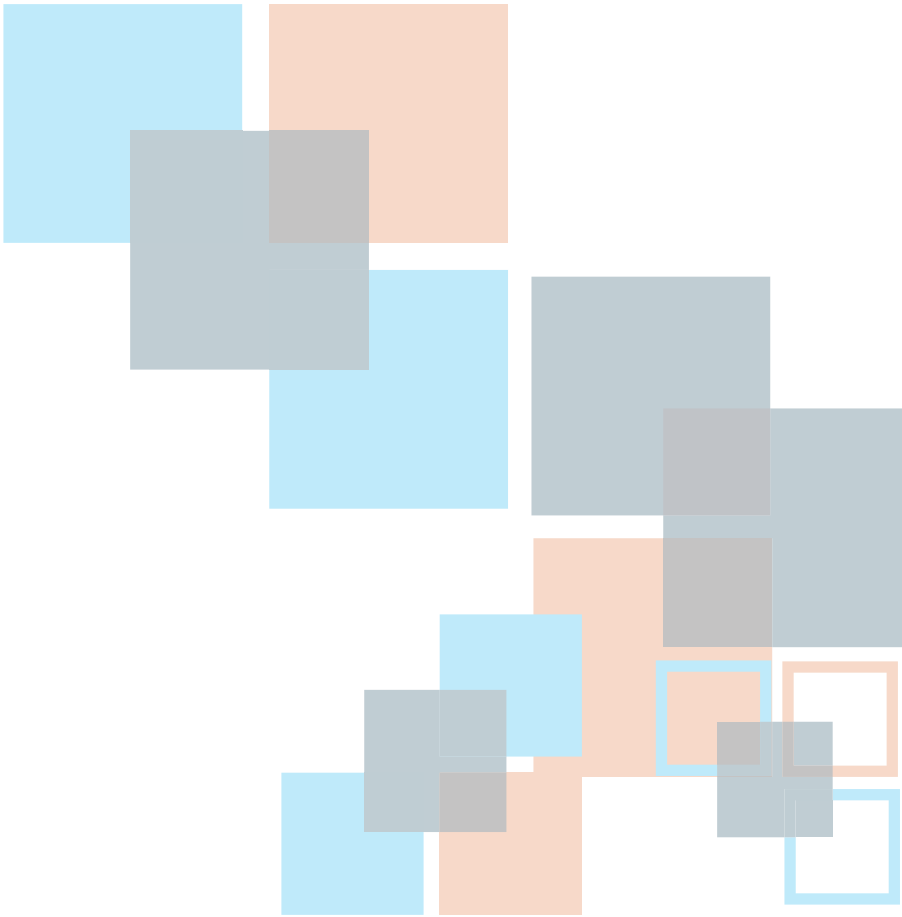
BDS	Business Development Services
CIG	Common Interest Group
CSA	Climate-Smart Agriculture
ECA	Europe and Central Asia
FFCA	Fadama Farmers Community Association
FUEF	Fadama Users' Equity Fund
FUG	Fadama User Group
ICR	Implementation Completion and Results Report
IDA	Individual Development Account
IE	Impact Evaluation
IEG	Independent Evaluation Group
LAC	Latin America and the Caribbean
MG	Matching Grants
PCG	Partial Credit Guarantee
PIU	Project Implementation Unit
RCT	Randomized Controlled Trial
SMEs	Small and Medium Enterprises
TA	Technical Assistance
WBG	World Bank Group
WTO	World Trade Organization





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Introduction

Matching grants are an instrument aimed at promoting private sector development that have been used extensively over the past years, in particular for agriculture development. A matching grant is defined as “a one-off, non-reimbursable transfer to project beneficiaries, for a specific purpose, based on the condition that the recipient makes a contribution for the same purpose.”¹ These grants can be used for a variety of activities, including technical assistance, investment in assets, or financing of working capital. A recent review² showed that the World Bank Group (WBG) had supported 106 private sector development matching grant projects over the past decades, including 21 in the agriculture sector. While agriculture projects account for a small portion of the total number of projects, total grant financing dedicated to agriculture reached US\$650 million, or almost twice the volume of that outside of agriculture.³ In addition, the proportion of matching grants projects supporting agriculture has significantly increased in the 2000s. Recent interest for this instrument to support agriculture might be due both to growing concerns about forms of support which distort financial markets, such as interest rate subsidies, and to the compatibility of such agricultural subsidies with World Trade Organization (WTO) requirements.⁴

However, there is very limited rigorous evidence on the effectiveness of matching grants—specifically, on their additionality or sustainability impact. The issue of additionality can be summarized thus: “Do matching grants crowd out private investment by subsidizing investment that would have been made anyway?” On the other hand, the issue of sustainability addresses this question: “Can supported projects be self-sufficient after the matching grants project closes?” The conclusion from the recent WBG review⁵ is that *“experience has shown that matching grants rarely yield the type of broad and durable economic benefits that would justify the subsidization of private enterprises with public funds.”*⁶

While matching grants are often used as substitutes for well-functioning financial markets, literature suggests that matching grants do not sufficiently work as enablers of financial markets. Indeed, while the primary objective of matching grants is often to increase the income of beneficiaries in the absence

of well-functioning financial markets, matching grants should also be designed in a way that helps beneficiaries build relationships with financial institutions so that their future expenses and investments can be undertaken without the need for grants.⁷ However, a recent report on matching grants for productive alliances in Latin America and the Caribbean (LAC) indicates that *“In their design, almost all Productive Alliance projects mention the goal of enhancing producers’ access to commercial financial services to complement project grant financing and beneficiary contributions, but in practice few such linkages have materialized.”*⁸

Building on previous literature as well as a detailed analysis of WBG agriculture matching grants projects, this paper focuses on three specific issues: (1) What is the rationale for using matching grants in agriculture and why does the financial sector matter? (2) What has been the specific experience with WBG matching grants for agriculture and what are the key drivers of success? (3) What are the various models of linkages with financial institutions and how can matching grants be used to promote financial inclusion? Based on this analysis, this paper suggests emerging good practice on when to use matching grants for agriculture, and how to design them in a way that promotes sustainable impact and linkages with the financial sector.



1. Why Using Matching Grants and Why Engaging the Financial Sector May Matter

Summary: Based on a literature review as well as an analysis of WBG matching grants projects, this section analyzes the rationale for matching grants projects and the role of matching grants in addressing agriculture and rural finance constraints. It shows that WBG matching grants generally lack proper identification of a market failure, thereby leading to suboptimal objective setting and limited long-term impact. This analysis suggests that when a market failure related to the lack of access to finance is identified, matching grants projects should include the improvement of access to financial services as a project objective. Matching grants may however not always be the most cost-effective instruments to help farmers invest in productive activities when rural financial markets are limited, and it is recommended that constraints to agriculture and rural finance are systematically assessed before setting up a matching grants project. Finally, in order to avoid misallocation and market distortions, matching grants should be designed to exclude bankable segments and bankable projects, and to offer tailored features by type of segment and type of project.

1.1 The Rationale for Matching Grants and the Limited Evidence on Their Impact

Matching grants may stimulate market development and innovation and promote asset building among low-income segments. Matching grants may help foster private investments and push investors towards underserved markets by addressing specific barriers to market development. Matching grants may help farmers and agricultural small and medium enterprises (SMEs) invest in activities that have great potential to generate growth—activities that under other circumstances they would be unwilling or unable to finance due to various constraints (internal or external, financial or nonfinancial). In particular, matching grants are often used as a way to stimulate innovation or technology adoption, as investors might be reluctant to invest due to high risks. For instance, a large matching grant program managed by the Colombian innovation agency COLCIENCIAS provides evidence that, over the period 1995–2007, COLCIENCIAS funding had an average impact on labor productivity of 15%.⁹ In some cases matching grants mainly promote asset building as an objective in itself, as the experience

in the United States suggests (see box 1). Building assets can provide a vital financial cushion against poverty when shocks happen, but can also serve as a springboard for investments.

However, matching grants can also potentially be misallocated—if public resources are used for projects that are nonviable investments or captured by elites—and can also distort markets—if they substitute savings or commercial credit. The use of grants can be justified to address market failures or on poverty grounds. Literature suggests that matching grants are least controversial

when used to support public goods (e.g., agricultural research and development, agriculture extension) or semi-public goods (irrigation schemes, climate-smart agricultural investments, or market facilities benefiting several members of a community). In particular, support to semi-public goods can be justified by positive externalities (e.g., job creation in rural areas, increased food safety) and spillover effects (e.g., support to technology adoption among beneficiaries may lead to further adoption by non-beneficiaries, training of beneficiaries may then benefit non-beneficiaries).

Box 1. Experience in United States with Support for Asset Building Through Matched Savings

Background

Since the 1990s, various U.S. states have promoted Individual Development Accounts (IDAs) as an asset-building strategy among low-income families. IDAs are savings accounts held by low-income individuals generally used to purchase a home, pay for post-secondary educational expenses, or start a business. IDA holders make monthly contributions to an account where funds are matched by public or private sources (or a combination of both) at a predetermined rate.

Outcome and impact

Over the last decade, more than 85,000 IDAs have been opened. The impact of this initiative has resulted in more than 9,400 new homeowners, 7,200 educational purchases, and 6,400 small business start-up and expansion purchases.

Impact evaluation suggests statistically significant effects of the program on the three major forms of asset ownership.^a IDA participants were 35% more likely to be homeowners, 84% more likely to own businesses, and 95% more likely to pursue post-secondary education than nonparticipants.

Research also suggests that IDA participants not only are likely to become homebuyers earlier than other low-income persons, but also tend to be more successful homeowners and less vulnerable to shocks.^b Compared to other low-income homebuyers who purchased homes in the same communities and over the same time period, IDA homebuyers obtained significantly preferable mortgage loan terms, with only 1.5% having high-interest mortgage rates, compared to 20% of the broader sample; and were two to three times less likely to lose their homes to foreclosure. This study provides the first evidence available on loan terms and foreclosure outcomes of IDA homebuyers. The findings suggest that participation in an IDA program with its related services and restrictions can improve homeownership outcomes for low-income households.

a. Mills et al. (2008).

b. Rademacher et al. (2010).

Matching grants should only be used when they are determined to be the most adapted and least-cost tool to achieve broad and durable impact.¹⁰ The recent WBG review of matching grants indicates that without a rigorous economic analysis of the market failure, use of matching grants might lead to *“limited additionality and spillovers, weak demand and disbursements, unintended consequences on the business development services market or nonsustainable impact if the project does not address binding constraints for SMEs (e.g. access to credit).”*¹¹ Matching grants are not a sustainable financing instrument, but their objective should be to support sustainable investments. Indicators of sustainable investments suggested by the International Fund for Agricultural Development (IFAD) include *“improved access to financial services by the beneficiary”* and *“replacement or expansion of the productive asset by the beneficiary over time.”*¹²

However, WBG matching grants generally lack proper identification of a market failure, thereby leading to suboptimal objective setting and limited long-term impact. More than a decade ago, a WBG review of matching grants indicated: *“Loose claims of market failure can easily result in misguided interventions with grants (...) The fact that the private sector does not invest in certain fields is not necessarily a sign of market failure.”*¹³ Unfortunately, a more recent review highlights the same weaknesses in WBG projects: *“The justification for the use of this instrument is rarely well articulated in the reviewed projects and (...) a quarter of the projects in the sample had no meaningful indicator with which to gauge success.”*¹⁴ One of the key conclusions of this report is that *“matching grants rarely yield the type of broad and durable economic benefits that*

*would justify the subsidization of private enterprises with public funds.”*¹⁵ Ideally, matching grants for agriculture should support investments that improve product quality, reduce post-harvest losses, and/or enhance productivity on a long-term basis.

Overall, literature suggests that there is limited rigorous evidence on the effectiveness of matching grants. Most studies only compare beneficiaries before and after matching grants, and only a few randomized controlled trials (RCTs) have been undertaken. In addition, most studies track one specific indicator (increase in sales, increase in productivity) without analyzing broader measures of impact (increase in income, profits, number of people employed, etc.). One completed study is an RCT of a government-led matching grant scheme in Mexico.¹⁶ The results on one-year impacts show positive effects on return on assets and total factor productivity.¹⁷ A study in Yemen, which was interrupted due to eruption of civil conflict, showed that in the first year after the program, the matching grant was found to have led to more product innovation, along with firms upgrading their accounting systems, marketing more, making more capital investments, and being more likely to report their sales grew.¹⁸ A meta-analysis of 20 individual assessments of matching grants suggests a positive impact on firms’ performance and employment.¹⁹ Attempts were made to conduct seven RCTs in six countries in Africa, but they proved not possible to implement for political and technical reasons.²⁰ While the RCT method could not be used, an impact evaluation (IE) in Mozambique suggested that matching grants had led to an increase in sales of beneficiary firms above 20% but not to an increase in profits.

1.2 How Matching Grants Can Help Address Constraints to Access to Finance

1.2.1 Matching grants, when? Analyzing constraints to agriculture and rural finance and comparing matching grants to alternative instruments

Matching grants for agriculture may be used to address a variety of market failures. These include demand-side constraints both nonfinancial (e.g., lack of willingness to invest in business development services, or in technology which has unproven results) and financial (e.g., lack of trust in financial institutions). These also include supply-side constraints both nonfinancial (e.g., lack of supply of business development services providers) and financial (limited supply of rural finance). Additionally, financial supply-side constraints may themselves be due to a variety of factors, including lack of information, lack of know-how, lack of liquidity, or high risks and costs associated with rural finance.

Most WBG matching grants projects identify the lack of rural finance as a sufficient rationale for matching grants, without fully identifying the specific market failure and whether other instruments might be more appropriate to unlock rural and agriculture finance. As an example, the use of matching grants in the Nigeria Fadama III Development Project (P096572) is justified in the Project Appraisal Document as follows: *“This approach to financing is adopted due to the low performance of rural financial markets in Nigeria, which are particularly deficient and limited in terms of outreach in the rural areas.”*

Matching grants are a temporary instrument but can help address a variety of demand-side and supply-side constraints to agriculture finance. Some of these benefits are only applicable during the course of the project (e.g., reduction of risks and costs associated with financing farmers), while others are sustainable after the project ends (e.g., generation of trust, knowledge, and skills).²¹ In figure 1 below, the first category of constraints and benefits is highlighted in light blue boxes, and the second category is highlighted in deep blue boxes.

Figure 1. Demand-side and Supply-side Constraints That Can be Addressed with Matching Grants

Demand-side Constraints That Can be Addressed with Matching Grants

Lack of Willingness to Invest	<ul style="list-style-type: none"> • Matching grants can promote demand for credit by demonstrating to farmers the profitability of agricultural investments (e.g., see in Colombia, more than 11,000 rural households that were not beneficiaries of matching grants nevertheless adopted at their own expense improved practices promoted through the project).
Lack of Skills to Invest	<ul style="list-style-type: none"> • Matching grants can help farmers and SMEs develop skills to prepare business plans (both for current project and future activities).
Lack of Trust Towards Financial Institutions	<ul style="list-style-type: none"> • When matching grants projects require beneficiaries to save a specific amount at a specific frequency, matching grants projects can build financial capacity and trust towards financial institutions.

Supply-side Constraints That Can be Addressed with Matching Grants

Lack of Information on Farmers and Investments	<ul style="list-style-type: none"> • When matching grants projects require beneficiaries to save at a financial institution, financial institutions can capture information on farmers and the cash flow patterns and profitability.
Lack of know-how on Agriculture Finance	<ul style="list-style-type: none"> • When matching grants projects include financial institutions (in particular when they are required or incentivized to fund part of the investment), financial institutions can gain know-how on agriculture credit methodologies.
Lack of Collateral*	<ul style="list-style-type: none"> • When matching grants support the acquisition of assets, these assets can serve as collateral for current and future projects of beneficiaries.
Risks	<ul style="list-style-type: none"> • By increasing the repayment capacity of beneficiaries, matching grants reduce the risks of investments that financial institutions co-finance.
Costs	<ul style="list-style-type: none"> • By screening a variety of projects, matching grants can signal project viability to financial institutions, therefore reducing the appraisal costs for financial institutions.
Lack of Long-term Liquidity	<ul style="list-style-type: none"> • Matching grants reduce the amounts of financing required from financial institutions.

- Constraint addressed in the long term (and also potentially for non-beneficiaries)
- Constraint addressed only during the course of the project and for project beneficiaries

*In this example, the lack of collateral is classified as a supply-side constraint—although collateral is required by most financial institutions for access to credit—because some financial institutions manage risks in a different manner. Lack of collateral is a constraint that can sustainably be addressed through matching grants, but only for project beneficiaries.

However, matching grants may not always be the most cost-effective instruments to help farmers invest in productive activities when rural financial markets are limited, and it is therefore recommended that constraints to agriculture and rural finance are systematically assessed before setting up a matching grants project. Indeed, some constraints to agriculture and rural finance may be addressed on a more sustainable basis through other instruments (e.g., high risks, costs, and lack of long-term liquidity), while others cannot be addressed with matching grants at all (e.g., policy and regulatory environment). These alternative instruments are detailed in figure 2 below. According to the WBG analysis of

matching grants for productive alliances in LAC,²² almost all productive alliance projects have aimed to enhance producers' access to commercial finance, but these efforts have rarely been successful. Such difficulties might be due to constraints affecting rural financial markets that could not be addressed through matching grants on their own (e.g., regulatory issues that prevent financial institutions from making loans to groups of producers, etc.). The WBG has recently designed an agriculture finance diagnostic tool²³ which aims at providing guidance to governments on key constraints and opportunities for the development of agriculture and rural finance. Such an approach may help policy makers make more effective choices of public instruments to support

Figure 2. Agriculture Finance Constraints that Can be Addressed with Alternative Instruments

Constraints That Can be addressed with alternative instruments

Lack of Know-how on Agriculture finance	<ul style="list-style-type: none"> • Offer technical assistance to develop lending methodologies with improved risk management.
Lack of Collateral*	<ul style="list-style-type: none"> • Develop alternative forms of collateral recognized by central bank regulations including warehouse receipts systems (benefits all segments of the economy).
Risks	<ul style="list-style-type: none"> • Establish a Partial Credit Guarantee (sustainable). • Support the development of agricultural insurance (might require long-term subsidies).
Costs	<ul style="list-style-type: none"> • Offer technical assistance to develop lending methodologies with improved risk management (sustainable). • Promote the use of digital finance/agent banking (sustainable). • Subsidize start-up costs to open branches in rural areas (might require long-term subsidies).
Lack of Long-term Liquidity	<ul style="list-style-type: none"> • Support the mobilization of long term savings (sustainable). • Support credit lines for long-term funding (temporary).
Policy and Regulatory Environment	<ul style="list-style-type: none"> • Revise elements in the policy and regulatory environment that may hinder the supply of financial services (e.g., interest rate cap, loan forgiveness programs etc.).

- Constraint that can **sustainably** be addressed by matching grants
- Constraint that can be **temporarily** addressed by matching grants
- Constraint that **cannot** be addressed by matching grants

* Lack of collateral is a constraint that can sustainably be addressed through matching grants, but only for project beneficiaries.

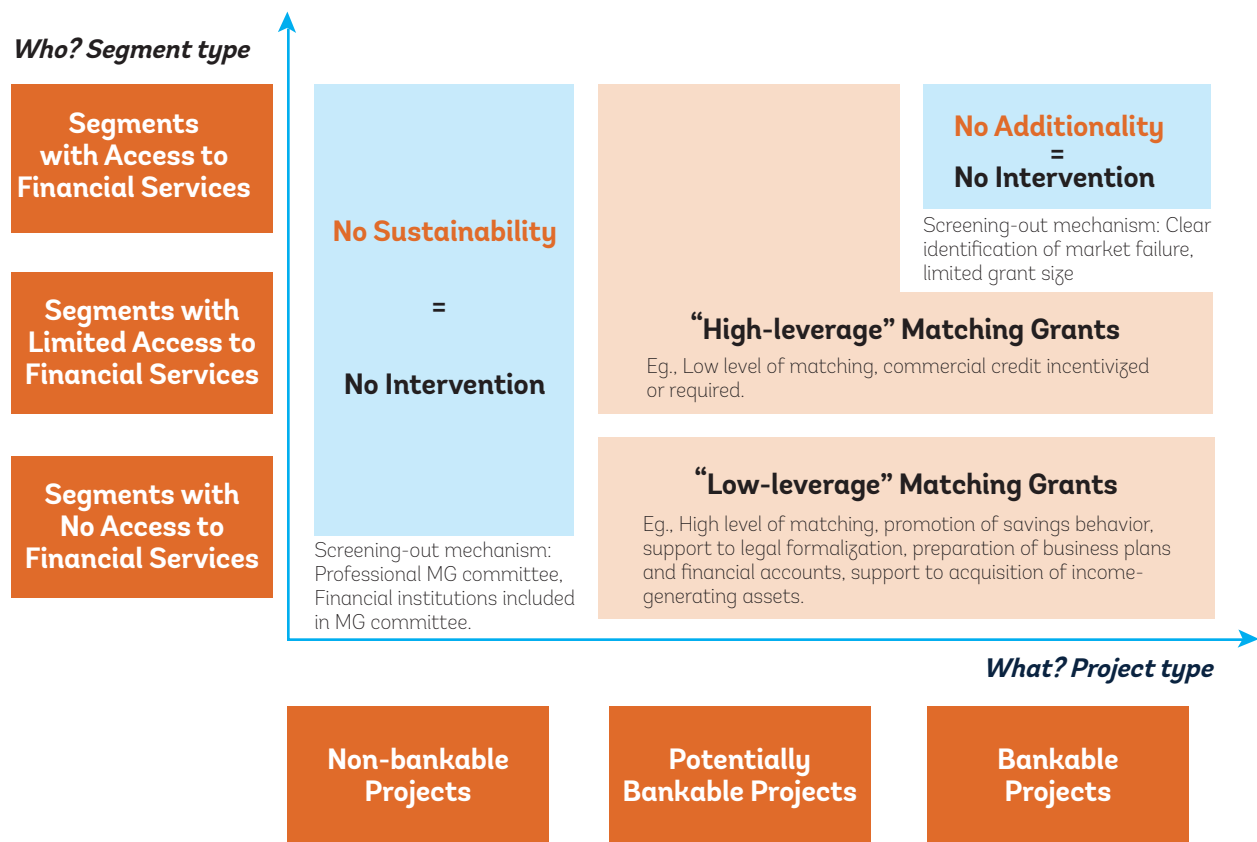
agriculture finance. Similarly, key constraints to agricultural competitiveness may lie in the broader policy environment related to land regulation, trade policies (e.g., imports restrictions), and agricultural support policies (e.g., input subsidies only available to a specific segment of the population creating distortions for other market players). Such constraints cannot be addressed with matching grants.

1.2.2 Matching grants for whom and for what? Balancing sustainability with additionality

Matching grants should be designed in a way that excludes both fully bankable projects (additionality) and nonviable projects

(sustainability). “Fully bankable” projects can be defined as projects that have sufficient collateral, future cash flow, and high probability of success to be acceptable to institutional lenders for financing. “Potentially bankable” projects are projects that have growth potential but do not fully present these features.²⁴ Projects that may be supported by matching grants include bankable or “potentially bankable”²⁵ projects undertaken by segments with limited or no access to financial services. On the other hand, segments that already have access to financial services (e.g., SMEs) should only be supported for potentially bankable projects. This “do no harm” approach aiming at avoiding misallocation is represented in figure 3 below.

Figure 3. Matching Grants and Financial Services—The “Do No Harm” Approach



Balancing additionality with sustainability also requires introducing different design features depending on segment type and project type.

Segments that already have access to financial services should be granted “high-leverage grants,” which require high levels of financial discipline,

while segments with very limited access to financial services should receive “low-leverage grants,” which offer higher levels of matching but gradually pave the way for higher financial inclusion. Such design features are described in more detail in section 2 (see boxes 2 and 3).



2. WBG Experience with Matching Grants in Agriculture and Drivers of Success

Summary: The quantitative analysis below builds on the recent WBG analysis of 106 matching grants projects for private sector development²⁶ by focusing on the 21 agriculture projects. It describes the specificities of agriculture matching grants compared to other sectors and analyzes whether specific features are associated with success. The referenced report analyzed all WBG active and closed lending operations including a matching grant component, and it assigned “implied ratings” for the matching grant component based on information provided in Implementation Completion and Results reports (ICRs) and Independent Evaluation Group (IEG) evaluations. Among the sample of 21 agriculture projects, most of the quantitative analysis addressing drivers of success focuses on the 15 closed projects which have implied ratings.²⁷ Some of the analysis also includes an additional sample of seven projects which are not specifically focused on agriculture but include agriculture as one of their priority sectors. This analysis shows that the proportion of matching grants projects supporting agriculture has significantly increased in the 2000s, and that most agriculture projects have focused on the Africa region, although Latin America and the Caribbean is the first region by volume of matching grants components. Matching grants for agriculture are generally more successful and larger than outside of agriculture. Two notable specificities of agriculture projects are that all of them allow groups to benefit from matching grants,²⁸ and that they allow the purchase of equipment.²⁹ While the eligibility of groups can yield several advantages, allowing the purchase of equipment has been the subject of much debate. The provision of technical assistance,³⁰ the availability of various levels of matching depending on beneficiary type or activity type, and the linkage of matching grants with an “access to finance” component seem to be important features for agriculture matching grants projects. Although no causal relationship is established, these modalities appear to be emerging good practices.

2.1 Use of Matching Grants in Agriculture and Regional Distribution at the WBG

The proportion of matching grants projects supporting agriculture has significantly increased in the 2000s, although the number of such projects

seems to have declined in more recent years (figure 4). Over the period 1996–2015, most agriculture projects have focused on the Africa region, although Latin America and the Caribbean is the first region by volume of matching grants components (figure 5).

Figure 4. Approval of World Bank Projects with Matching Grant Component (Fiscal Years)

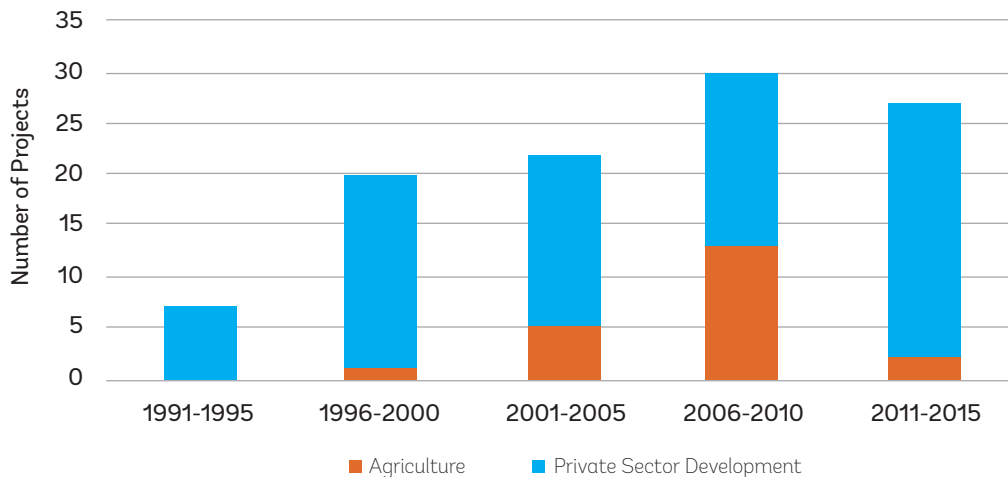
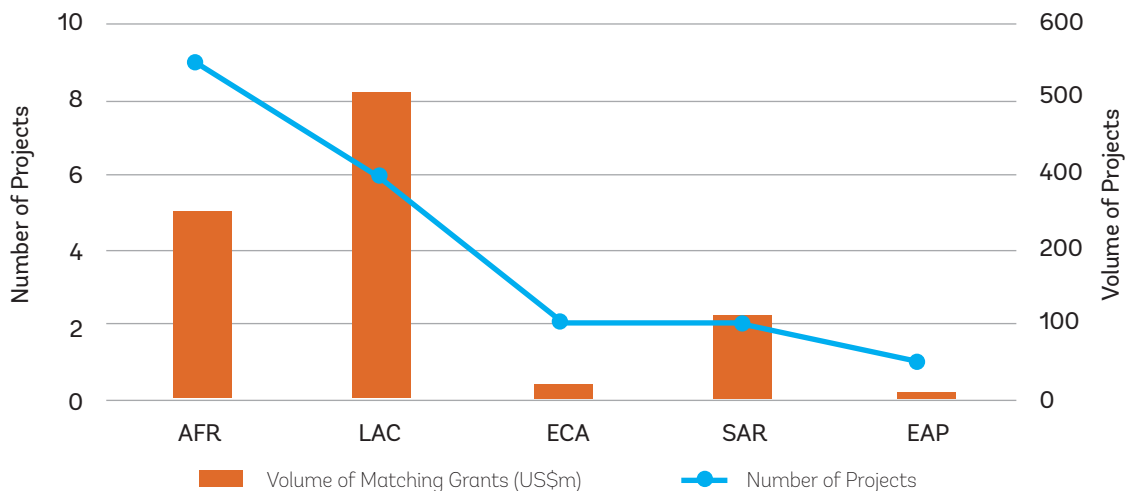


Figure 5. Number and Volume of Projects by Region



Note: AFR = Africa; LAC = Latin America and Caribbean; ECA = Europe and Central Asia; SAR = South Asia; EAP = East Asia and Pacific.

There is no apparent learning curve in the design of matching grants projects, as most recent projects do not have higher ratings on their matching grants component than older projects. Such a result is unexpected given that several good practices were established for matching grants

projects in the early 2000s. However, such a result might also be linked to the fact that indicators are more sophisticated over time and new variables get measured to assess success. The list of 15 closed matching grants projects in agriculture is provided in table 1 below.

Figure 6. Success Rate by Year of Approval (Fiscal Year)

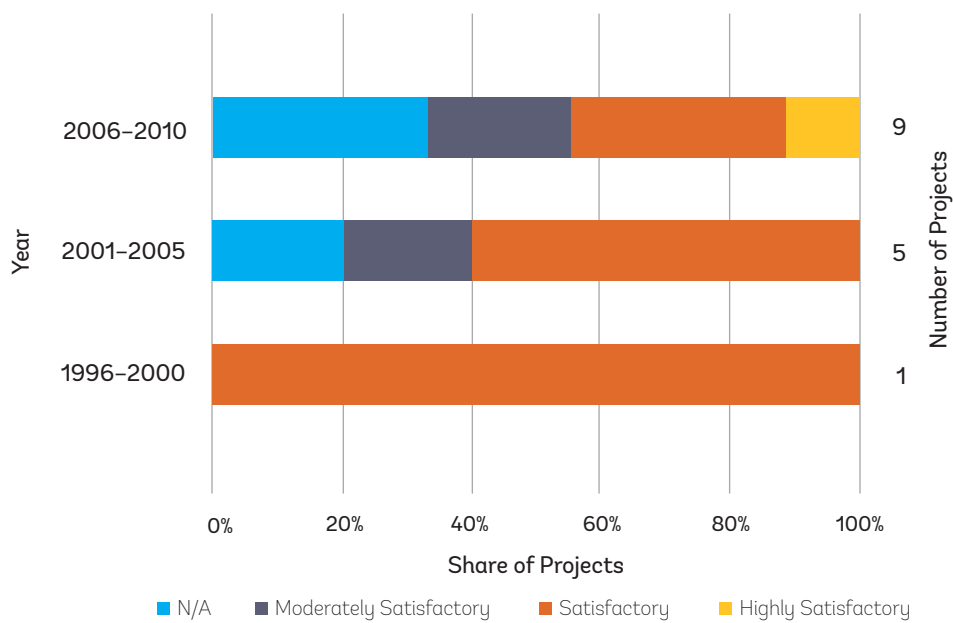


Table 1. List of 15 Closed Matching Grants Projects in Agriculture

Project ID	Project Name	Fiscal Year Approved	Country	Matching grant fund amount (US\$m) (number)	Expected number of beneficiaries	Is there an access to finance component (Y/N)	Percent of match (%) (fill in)	Implied MG component rating
P048505	MX-Agricultural Product	1999	Mexico	343	“Irrigation: 33,000 small individual producers Dairy: 10,000 groups and 51,000 producers Improed pasture: 110,000 producers 750,000 poor and small producers”	No	50% for small farmers, 70% for poverty targeted rural development program	Satisfactory
P076467	IN: Chatt DRPP	2003	India	53	“20k community investment projects, 2k Panchayat (village) plans supported”	No	95% Moderately Satisfactory	
P63622	NG-Fadama SIL 2 (FY04)	2004	Nigeria	58.2		No	“90% for rural infrastructure development (beneficiaries to contribute 10% in cash or kind) 60% for Productive Asset Acquisition (increased to 70% during implementation)”	Satisfactory
P084792	IN-Assam Agric Competitiveness	2005	India	37.8	“80k groups of 3-4 farmers for irrigation projects 2.2k groups of 10-20 farmers for mechanization projects 15k farm families for micro-watershed drainage projects”	No	50% for irrigation and mechanization (initially 30%, 70% for drainage, 50 to 90% for fisheries	Satisfactory
P049721	Agricompetitiveness	2005	Kazakhstan	26.69	800 subprojects	No	40% for post-harvest infra projects,	Moderately Satisfactory
P104567	CO-Second Rural Productive Partnerships	2008	Colombia	24.8	300 PP with 25,300 farmers	No	40 Satisfactory	
P064918	PA Rural Productivity (former 2nd Rur Po)	2007	Panama	19.8	70 business plans of rural producer associations, representing 5,000 small-scale producers	No	90% max Satisfactory (association provides minimum 10% in cash or in kind)	

2. WBG EXPERIENCE WITH MATCHING GRANTS IN AGRICULTURE AND DRIVERS OF SUCCESS

Table 1. List of 15 Closed Matching Grants Projects in Agriculture (continued)

Project ID	Project Name	Fiscal Year Approved	Country	Matching grant fund amount (US\$m) (number)	Expected number of beneficiaries	Is there an access to finance component (Y/N)	Percent of match (%) (fill in)	Implied MG component rating
P108885	VN-Agriculture Competitiveness Project	2009	Vietnam	10.6	100 partnerships	No	40%	Moderately Satisfactory
P081704	ML-Agr Compet & Diversif (FY06)-(PCDA)	2006	Mali	9.9	550	Yes	67%	Highly Satisfactory
P096105	SL-Rural Dev & Priv Sec Dev SIL	2007	Sierra Leone	8		No	75% for domestic market improvement component, 50% for agricultural export promotion, 90% for support to farmers associations	
P087925	BO Land for Agricultural Dev	2008	Bolivia	7.8	2,200 families	Yes	80%	Moderately Satisfactory
P070063	ZM-Agr Dev Support Program (FY06)	2006	Zambia	3	40k beneficiaries, 40 projects	Yes	“50% (Extension and technology development) 60% (Studies and pilot) 75% (Support to smallholder producer organizations)”	Satisfactory
P049724	Agribusiness & Marketing	2005	Kyrgyz Republic	1.3		Yes	30% match to cooperatives, the other 70% loan from PFIs who administer program - match only paid after loan is repaid	Satisfactory
P110588	Sudan Gum Arabic Export Marketing Projec	2010	Sudan	0.75	30 producer associations	No	33% for private companies and 67% for public agencies/ producer associations	Satisfactory
P083609	SN-Agr Markets & Agribus Dev (FY06)	2006	Senegal			No	Variable for small producers and SMEs. Business partnerships: 80% for smallholders, 50% for SMEs. Irrigation: 50% for family-farms, 20% for SMEs. Red meat 50%	

2.2 Characteristics of Agriculture Matching Grants Projects and Success Factors

2.2.1 Performance of matching grants projects in agriculture compared to other sectors

Matching grant projects for agriculture generally have higher ratings than non-agriculture projects. Indeed, among rated matching grant projects for agriculture, 73% had ratings for the matching grant component of satisfactory and above, compared to 47% for non-agriculture projects.

When including in the sample matching grant projects which target several specific sectors, including agriculture, the difference in ratings becomes lower. “Broad agriculture” projects are matching grant projects that are not solely focused on agriculture but target a few specific sectors (e.g., construction, tourism, etc.) which include agriculture. Among rated “broad agriculture” matching grant projects, 56% had ratings for the matching grant component of satisfactory and above, compared to 50% for other projects.

However, ratings reflect achievements of initial objectives rather than long-term impact. Indeed, ratings strictly reflect the achievements of initial objectives, which often have a limited scope and do not take into account the improvement of access to financial services (see section 3.1). In addition, these objectives are sometimes only partially achieved.³¹

2.2.2 Size of matching grants projects in agriculture compared to other sectors

Agriculture projects have matching grants components which, on average, are more than five times larger than in other sectors. Indeed, the average fund amount is US\$46 million for closed agriculture projects, compared to US\$8 million for closed non-agriculture projects. Such a difference is linked to the fact that most agriculture matching grants allow the purchase of equipment, which is described below in subsection 2.2.4 on eligible expenses. As a result, although agriculture projects account for a small portion of total number of closed projects (25%), total grant financing dedicated to these projects reaches almost twice the volume of grant financing outside of agriculture.

Figure 7. Success Rate of Core Agriculture vs Non-agriculture Projects

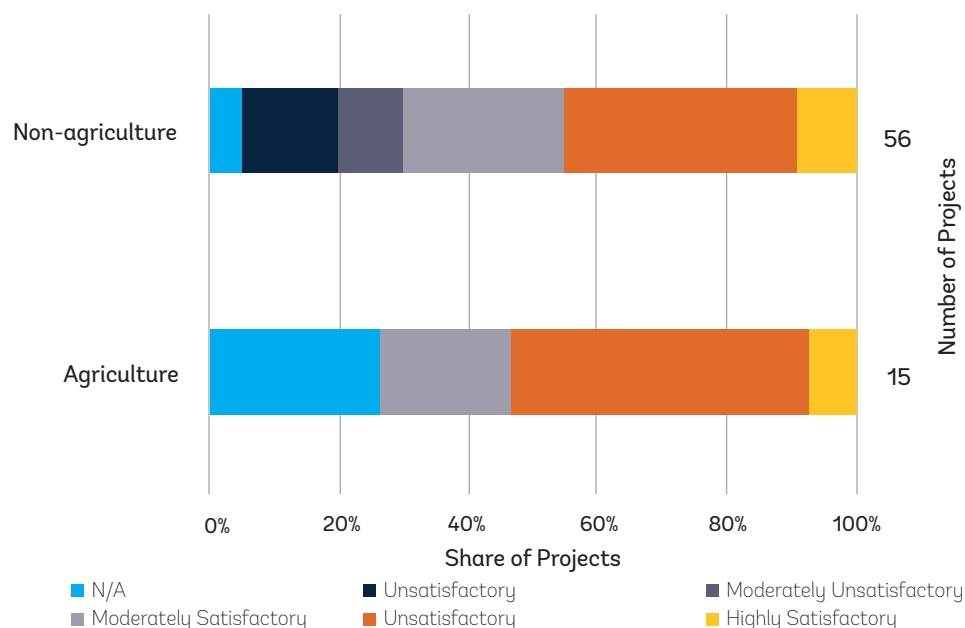


Figure 8. Success Rate of Broad Agriculture vs Non-agriculture Projects

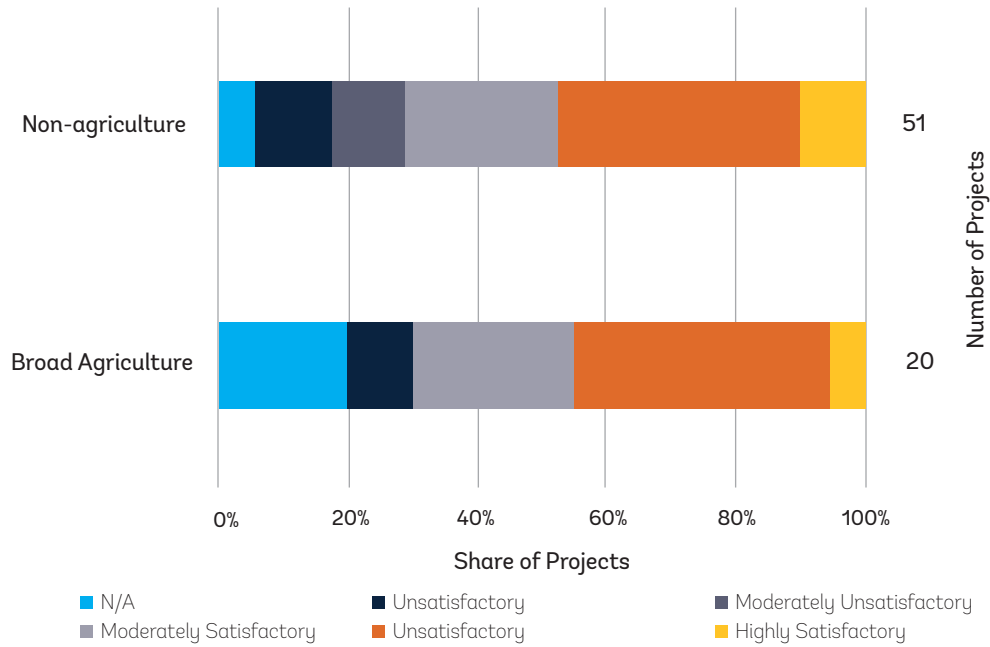
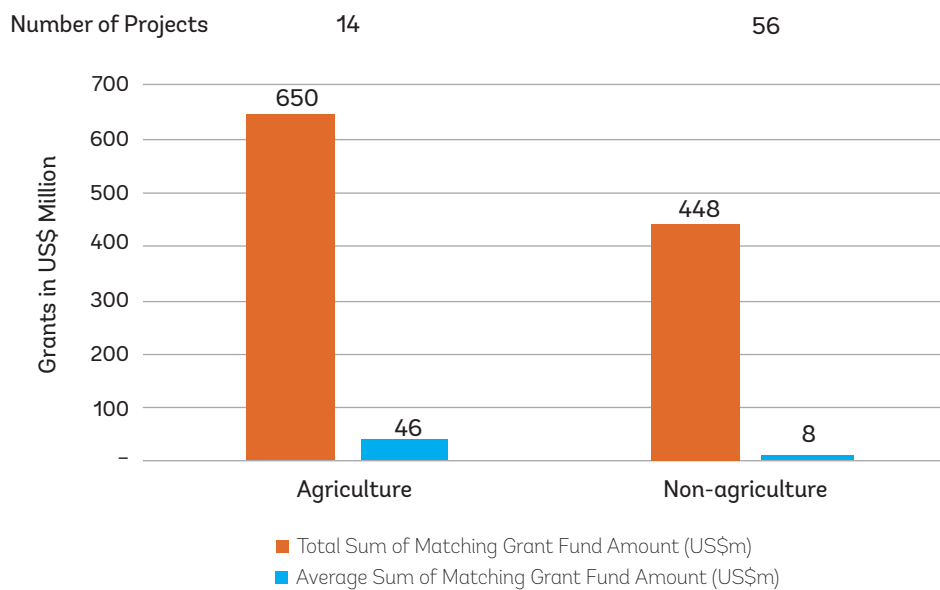


Figure 9. Volume of Matching Grant Components by Sector



2.2.3 Rationale and objectives

The 15 closed agriculture projects used a total of 31 indicators, 60% of which were output indicators such as number of funded projects or beneficiaries. Table 2 below presents the frequency of use of each of the indicators.

2.2.4 Eligible expenses

All projects in the sample allowed the purchase of equipment through matching grants. Agriculture matching grants include a variety of eligible expenses, including fixed capital, working capital, and technical assistance (both to prepare and implement business plans). Allowing the purchase of equipment is quite unusual (31%) for non-agriculture projects. This feature is due to the fact that while investments in equipment (e.g., irrigation infrastructure, storage or processing facilities) are some of the investments most needed by farmers and agricultural SMEs, there is generally no commercial funding available for them due to their long-term and risky nature. For instance, the Mali Agriculture Competitiveness and Diversification Project (P081704) mainly supports investments in irrigation equipment.

Using matching grants for equipment has often been considered both unjustified and risky. Indeed, as argued by Phillips,³² the fact that a market failure in financing of fixed assets is less likely than in financing of know-how, the high appropriability of the return on physical assets, and the limited public good aspect would traditionally not justify a subsidy. The paper therefore recommends “unbundling” equipment loans by offering grants for know-how with a public goods element combined with commercial credit for bankable equipment investments. Another concern commonly identified with equipment is the risk of abuse, as equipment could be resold for profit.

However, agricultural equipment might often be considered a semi-public good, and there are effective ways to reduce the risk of grant misuse and equipment resale as part of matching grants projects. Indeed, it can be argued that investments in fixed assets are often semi-public as they are often allowed for village groups and cooperatives, and also can have spillover effects on the economy (generating higher demand and higher supply of credit for equipment). In addition, specific types

Table 2. List and Frequency of Use of M&E Indicators for Agriculture Matching Grants Projects

Output	Outcome	Beneficiary-level Impact	Financial Inclusion Objective
<ul style="list-style-type: none"> • Number of funded projects/beneficiaries 13 • Value of dollars disbursed 2 • Number of assets purchased with the grant 2 	<ul style="list-style-type: none"> • Share of beneficiaries satisfied with the grant 2 • Increase in land under perennial crops by organized producers in the project area 1 • Number of productive alliances created 1 • Percentage of women benefiting from the matching grant 1 	<ul style="list-style-type: none"> • Increased sales 4 • Increase in the quality of as measured by price premium of produce 1 • Increased productivity 1 • Increased income/profit 1 	<ul style="list-style-type: none"> • Beneficiaries maintain a system of accounts 1 • Revolving fund in continuous rotation 1

of climate-smart investments can also be justified by their positive externalities on the environment. Moreover, there are effective ways to mitigate risks associated with equipment. These include (1) ensuring that the equipment is linked to a specific objective of the project and provides value to beneficiaries, (2) ensuring good practices within the Project Implementation Unit (PIU) through tight selection, training, and supervision of PIU members, (3) facilitating supervision of beneficiaries through an up-to-date database of beneficiaries, including their names, address, photo ID, and GPS location, (4) transferring funds to providers of goods and services rather than beneficiaries (once beneficiaries have paid their share of the investment and show receipts), and (5) creating accountability mechanisms among beneficiaries, for instance through a strong communication plan and visibility through local radio and television.

Assets that are accepted as collateral by financial institutions, such as land, are sometimes excluded from matching grants so as not to crowd out commercial credit. For instance, the Bolivia Land for Agricultural Development Project (P087925) excludes land purchase from eligible expenses for matching grants.³³ Similarly, the Angola Local Development Project (P105101) excludes from eligible expenses all assets that commercial banks accept as collateral.

Some projects cap the amount of working capital which can be supported through matching grants. For instance, the Angola Agriculture Commercialization Project (P159052) considers capping working capital expenditures at 25% of the grant amount. The rationale for such an approach is that, as one-off interventions, matching grants should promote investments that can improve agriculture profitability in a sustainable manner rather than support recurring expenditures. However, experience from Niger,³⁴ where working capital was capped at 20%, shows that such practice may not be suited to

all crops. Indeed, working capital requirements may be much higher than investments for some crops.

Matching grants projects in agriculture generally support two types of activities: investments in infrastructure and development of productive alliances. Productive alliances are defined as partnerships between producers or between producers and buyers which can help farmers upgrade their production facilities and skills to strengthen their linkage to the market.³⁵ Such projects may also support partnerships between farmers and input suppliers, so that farmers can obtain better prices and more stable market relationships. Productive alliances have been widely promoted in LAC in the past few years and are now being experimented with in other regions. For instance, the Panama Rural Productivity Project (P064918) supported rural producer associations which had an alliance with at least one agro-processor, wholesaler, or other commercial partner. Eligible expenses included fixed capital (plant and equipment, minor infrastructure), working capital, and technical assistance.

2.2.5 Groups of beneficiaries

While private sector development projects sometimes restrict eligibility to single firms,³⁶ all of the agriculture projects in the sample allow groups of farmers or SMEs to apply for a common project or to benefit jointly from business development services (BDS). This modality has the advantage of fostering linkages between groups, as well as reducing program administration costs when individual grants are small. Such an arrangement can sometimes take the form of a productive alliance between a lead agribusiness and producers groups.

2.2.6 Levels of matching and availability of different levels of matching

A majority of all projects in the sample (60%) offered a level of matching of 50% or above, and a majority of projects (60%) offered different levels of matching depending on beneficiary or

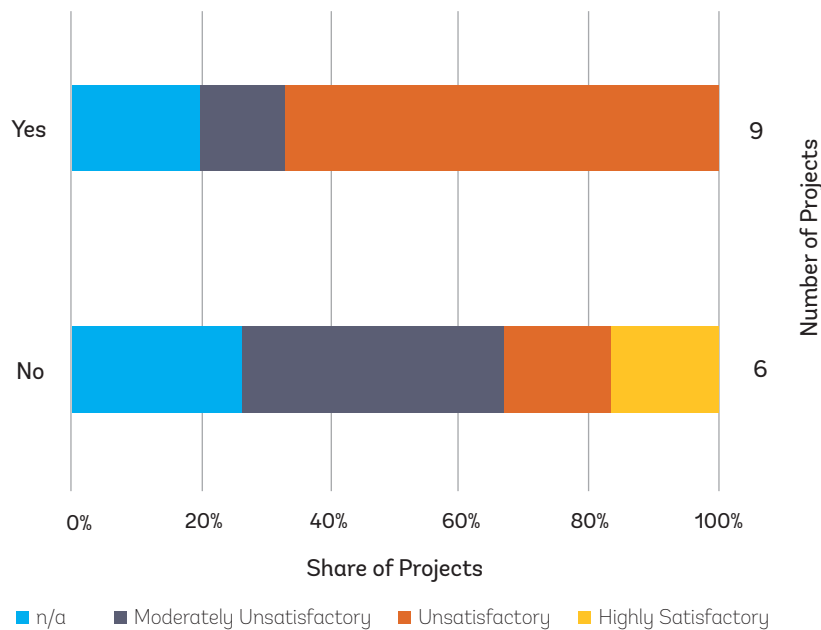
activity. While most projects that had various levels of matching offered levels of matching in the same range (above or below 50%), two projects in the sample had a level of matching for small producers above 50% and a level of matching for SMEs below 50%. These two projects are displayed as “variable for small producers and SMEs” in the figures below.

Offering a variety of matching levels depending on beneficiary or activity type seems to be linked to positive outcomes. A majority of rated projects which had various levels of matching (86%) have ratings of satisfactory and above, compared to 50% for projects which had a single level of matching.

Though the sample size is small, 83% of rated projects that had a level of matching above 50% have ratings of satisfactory and above (compared to 50% for projects that had a level of matching under 50%). This might be due to a higher level of disbursements for matching grants projects with high levels of matching.

In general, literature suggests that the level of matching should be as low as possible so as to encourage ownership and commitment from beneficiaries; however, “as low as possible” can vary widely depending on segments and country context. Technical guidance from IFAD, for instance, suggests that matching grants for private or semi-private benefit should be in the range of 10% to 60% of the investment.³⁷ The sample of WBG agriculture projects shows levels of matching going from 30% (Kyrgyz Republic) to 95% (India Chhattisgarh). The impact evaluation of the matching grants in India, however, indicates that 30% of common interest groups supported with matching grants failed to function effectively and were considered unsustainable at the end of the project, which raises the question of whether the level of required contribution (5% cash) was sufficient to ensure project ownership.

Figure 10. Success Rate by Availability of Various Levels of Matching



There appears to be no connection between the level of matching with the penetration of rural financial services at country level. Penetration of rural financial services is estimated by Findex data on the percentage of adults in rural areas with an

account. One outlier seems to emerge in the case of the Kyrgyz Republic, where the penetration of rural financial services was very low (less than 2%) and where the level of matching offered to rural cooperatives was significantly low as well (30%).³⁸

Figure 11. Success Rate by Level of Matching

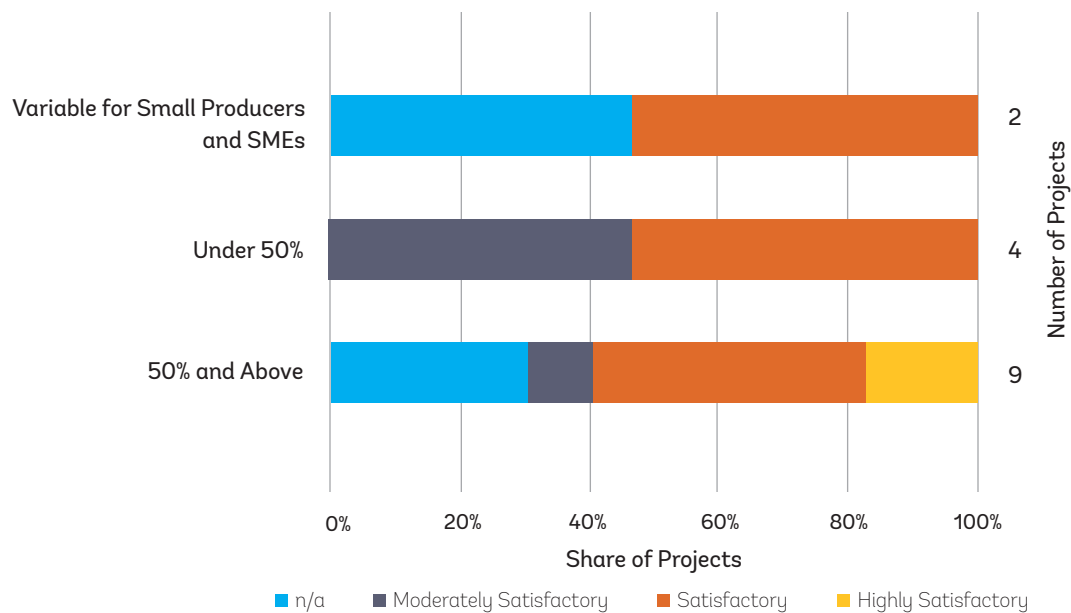
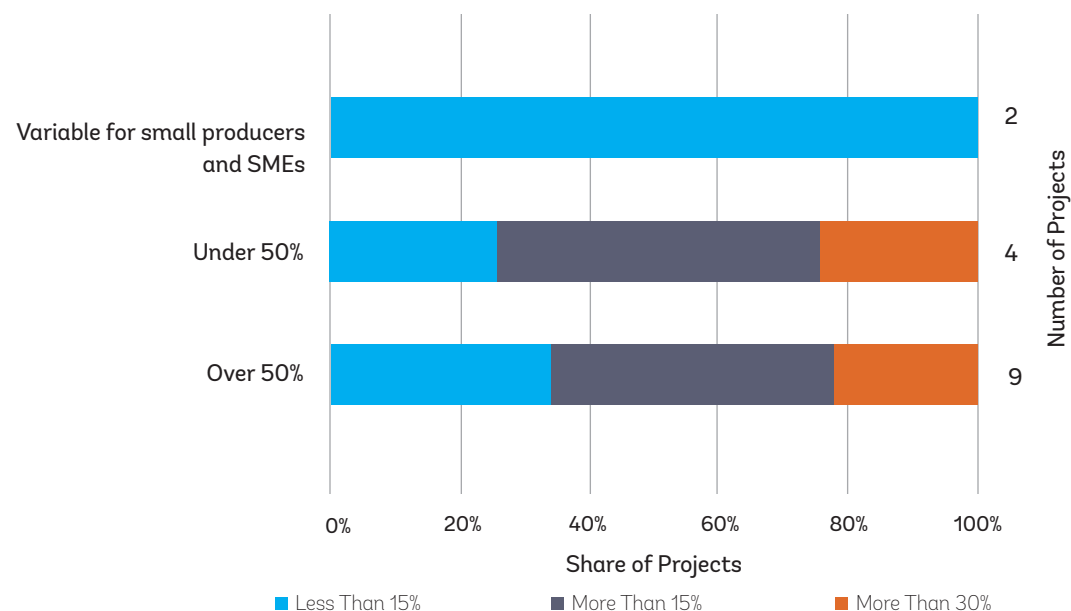


Figure 12. Level of Matching by Penetration of Rural Financial Services



2.2.7 Provision of diagnostics and technical assistance (TA)

A majority of projects (73%) offered a form of diagnostic or technical assistance which could take place before and/or after the matching grant application. Such support includes mandatory initial diagnostic to verify eligibility, TA to prepare sound business plans provided freely or for a fee, a complementary project component to create a pipeline of applicants, and continuous provision of TA to support beneficiaries from application to implementation. The recent WBG review of 106 projects³⁹ shows that this feature is the design modality which seems to be most often correlated to positive outcomes, and our sample also shows that 70% of rated agriculture matching grants projects which include diagnostics and/or TA are rated satisfactory and above.

2.2.8 Selection mechanism

A vast majority of projects (86%) used a “first come, first served” selection mechanism as opposed to a “competitive” selection mechanism

(figure 14). Eighty percent of “first come, first served” projects have ratings satisfactory and above, but given the small number of “competitive” projects, it is hard to determine whether the choice of selection mechanism brings any systematic benefits.

2.2.9 Access to finance component and combining matching grants with other instruments

Although matching grant components are generally part of larger projects with other components, a minority of agriculture matching grants projects include an access to finance component. Only 27% of agriculture matching grants projects included an access to finance component, compared to 34% for all WBG projects, including non-agriculture projects. This specific component generally includes setting up a line of credit for financial institutions, establishing a Partial Credit Guarantee (PCG), and providing technical assistance to financial institutions, but it can also include support to an equity financing, or promoting of risk mitigating financial instruments.⁴⁰ By addressing the

Figure 13. Success Rate by Provision of Diagnostic

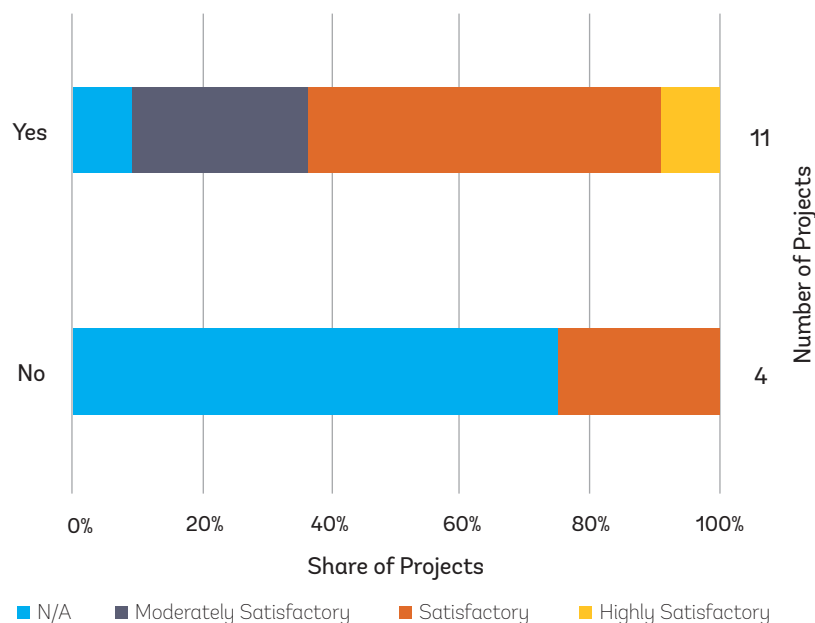
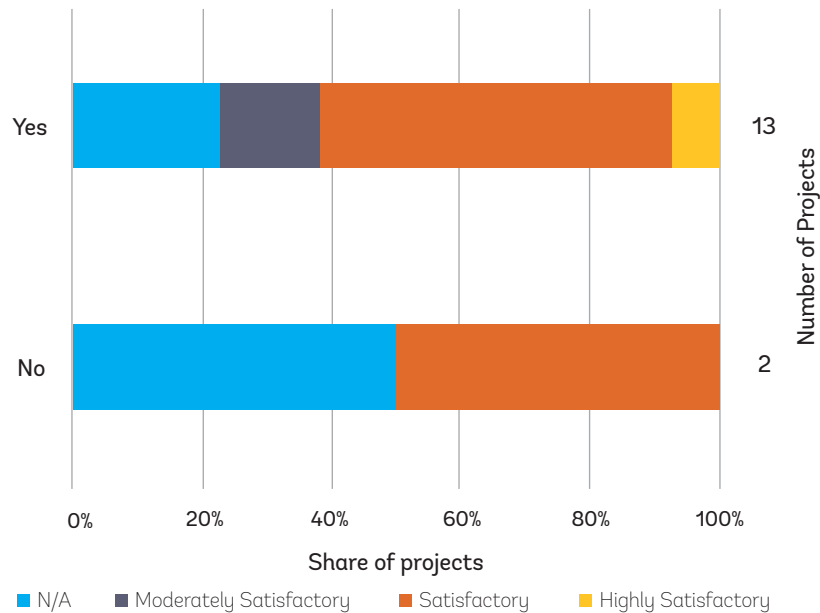


Figure 14. Success Rate by Selection Mechanism



root cause of the lack of agriculture and rural finance, such a feature can be very effective at ensuring the sustainability of matching grants projects.

The volume and scope of the access to finance complementing matching grants can vary widely depending on projects. For instance, the Zambia Irrigation Development and Support Project (P102459) included a rather small access to finance component (4% of budget dedicated to matching grants) aimed at improving access to long and short-term financing. This component included a line of credit for financial institutions, technical assistance to financial institutions, and technical assistance to agricultural cooperatives to ensure linkages with financial institutions. By contrast, the Zambia Agricultural Development Program (P070063) included an access component which had twice the budget of the matching grants component. This component also included a line of credit as well as technical assistance to financial institutions.

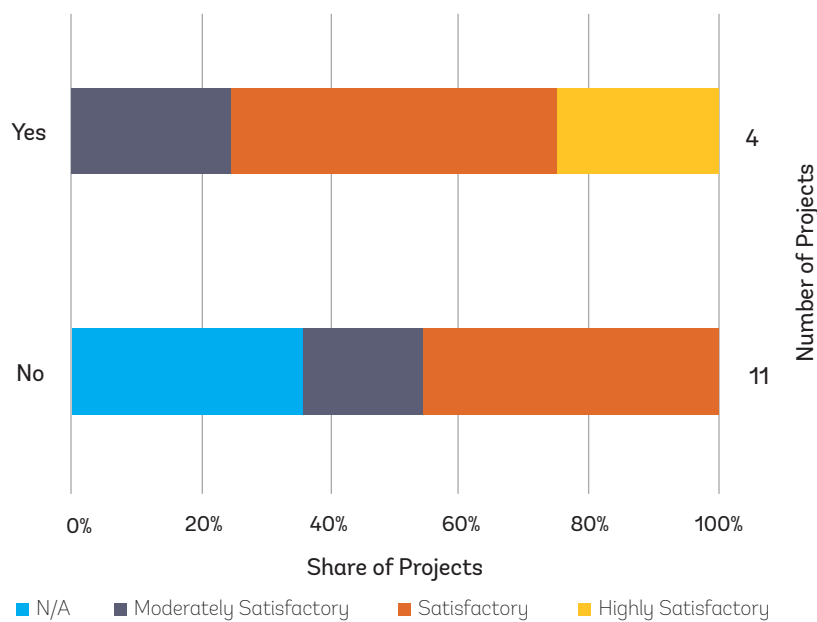
Such a feature also seems to be associated with positive outcomes, as 75% of rated projects which included an access to finance component had ratings satisfactory and above (figure 15). However, as we will show in section 3, including an access to finance component is not necessarily the only way to ensure linkages with the financial sector.

Complementing matching grants with other instruments may indeed offer a holistic solution to the various constraints that often hamper agriculture finance, and help combine short-term with long-term benefits. Agriculture and rural finance is often constrained by a variety of factors, which often need to be addressed in parallel to effectively increase access to and usage of financial services by farmers and agricultural SMEs. As described in section 1, matching grants can be effective at addressing several of these constraints, both on the demand side (e.g., lack of willingness to invest, lack of trust, etc.), and on the supply

side (e.g., lack of information on farmers, lack of collateral, etc.), but they fail to address other key constraints such as policy and regulatory constraints, risks, or lack of liquidity. In addition, complementing matching grants with other instruments may allow combining short-term with long-term benefits.

Indeed, setting up a sustainable PCG or reforming the regulation of interest rates may generate profound changes in rural financial markets, but such projects might take time. By contrast, matching grants are a temporary subsidy that can quickly help underserved segments access resources for their projects.

Figure 15. Success Rate by Existence of Access to Finance Component





3. Promoting Access to Finance Through Grants and the Four Roles of Financial Institutions

Summary: This section is based on a qualitative analysis of six case studies stemming from projects reviewed in section 2, as well as three other relevant case studies from the literature review and interviews with experts. In particular, all Project Appraisal Documents, ICRs, and IEG reviews of agriculture matching grants projects have been reviewed to identify potential linkages with financial institutions. This analysis shows that none of the reviewed projects included the improvement of access to financial services as one of their objectives, which calls into question the sustainability of supported investments. However, several projects include some form of linkage with the financial sector, through the inclusion of an “access to finance” component and/or through specific design features. These specific design features have taken four major forms: (1) financial institutions are deposit takers, (2) financial institutions are funders, (3) financial institutions are managers of grants, or (4) financial institutions are advisors. This section analyses the advantages and challenges associated with each of these four roles.

3.1 Matching Grants Projects and Financial Inclusion

None of the reviewed projects included the improvement of access to financial services as one of their objectives, which calls into question the sustainability of supported investments. Indeed, while most projects identify the lack of access to credit as the market failure justifying the use of matching grants, none of the projects include the improvement of rural financial markets as one of their project development objectives. The challenges associated with such an approach are highlighted in the ICR for the Vietnam Agriculture Competitiveness Project (P108885): “There are limits on the scalability of matching grants and it is important to build in an ‘exit’ strategy, in the form of improved farmer group access to commercial financial services. Even if the Partnership scheme does not involve distinctive activities to link the farmer organizations with commercial banks, a project should at least prepare farmer organizations to access credit once project support is completed.”

Several projects, however, include some form of linkage with the financial sector, through the inclusion of a specific access to finance component and/or through specific design features. The inclusion of an access to finance

component in the project refers to the setting up of complementary instruments (e.g., PCG, lines of credit) and the introduction of legal reforms (see section 2.2.9).

Some projects have promoted linkages with financial institutions, through specific design features which can take four major forms. As illustrated in figure 16 below, by order of frequency among projects, the four major roles that financial institutions can play in such projects are as follows: (1) financial institutions are deposit takers, as beneficiaries are encouraged to save (a specific amount and/or at a specific frequency) from the proceeds of their activities, (2) financial institutions

are required or incentivized to provide credit to finance part of the activities, (3) financial institutions are involved in the management of grants, including the appraisal and disbursement of grants, and (4) financial institutions advise beneficiaries in the preparation of their business plans.

These four models can also be summarized in two types of approaches: “high-leverage” matching grants blended with credit, for segments with some access to formal financial services; and “low-leverage” matching grants, incentivizing savings for segments with no access to financial services. These two approaches are described further in boxes 2 and 3.

Figure 16. Financial Institutions have Four Potential Roles as Part of Matching Grants Projects



Note: Countries displayed in brown refer to projects that are not part of the initial project sample but stem from the literature review or interviews with experts. In some projects, financial institutions are in more than one of the four categories. Financial institutions may also move over time from one category to another.

Box 2. The Experience with High-leverage Matching Grants in Europe and Central Asia (ECA)

The model which blends matching grants with commercial credit for rural beneficiaries was implemented successfully in the mid-1990s and early 2000s in various countries in ECA. In this model, the level of matching is relatively low (about 20–30%), and grants are granted to beneficiaries who obtain access to a loan. In some projects, in case of non-repayment of the credit portion, the grant is canceled and becomes a loan. Countries that have experimented with high-leverage grants include the Kyrgyz Republic (see details in section 3.3), Moldova (matching grant for start-ups, for groups of farmers, or after agricultural shocks), Latvia (matching grant for start-ups), and Uzbekistan (matching grant for silk producers). This model is currently being replicated beyond ECA, for instance in India (project P157702 under preparation in Tamil Nadu).

In this approach, financial institutions generally play the role of both funders and “core managers” of grants. In general, high-leverage matching grants are combined with other instruments to promote rural finance such as credit lines and Partial Credit Guarantees.

Such a model can potentially help financial institutions serve rural markets. It is suitable to segments that have some access to financial services and have potentially bankable projects that banks are nonetheless reluctant to serve, as they are not aware of market opportunities. For instance, farmer groups may be composed of farmers who individually have access to finance, but still have difficulties accessing finance as a group.

This model reduces collateral requirements for beneficiaries, but does not eliminate them completely. Indeed, due to the uncertainty on the value of rural assets, lenders generally have collateral requirements that are above the value of the asset. In addition, due to a timing issue (the asset needs to be registered before the loan is approved), beneficiaries need to provide collateral for the time period between loan approval and asset registration.

Pros and cons for financial institutions:

- **Advantage:** The matching grant design provides strong incentives for clients to repay on time, which acts as an implicit guarantee. In addition, such a model creates an opportunity for financial institutions to serve a new segment that has benefited from technical assistance prior to the loan application.
- **Disadvantage:** The grant cannot be used to cover losses for the lender as the grant portion is returned to the project management unit (lender has to rely on collateral). In addition, interest income is lower if beneficiaries repay loan portion on time.

Positive sustainable impact: This model increases access to finance for beneficiaries, as repayment rates are high, and most beneficiaries manage to access loans on their own after the project closes. In the case of Moldova Rural Investment and Services Project (P060434), the high-leverage matching grants led to over 700 enterprises created and financed, creating on average four jobs each, and an average increase of 55% in salary income. The six participating financial institutions increased their lending to rural clients by 39% as a share of their portfolio while maintaining an acceptable recovery rate of 96%.

Box 3. The Experience with Low-leverage Matching Grants in Africa

Low-leverage grants are matching grants with high levels of matching (above 50%) which are designed in a way that facilitates the entry of beneficiaries into the formal financial system. Such an approach includes business development services, incentives to save at a financial institution, (e.g., a specific amount, at a specific frequency), and support to business formalization.

In this approach, financial institutions generally play the role of deposit takers. Financial institutions may also play the role of “light managers” or advisors.

This approach has been successfully implemented with individual savings accounts in Angola (see details in section below). It has also been used to promote collective savings in a revolving fund (see Nigeria example below).

Facilitating the path to financial inclusion may require additional support measures both to beneficiaries and partner financial institutions. Such support may include financial literacy trainings for beneficiaries, as well as technical assistance for partner financial institutions to ensure that processes are in place to deal with this new segment of clientele (e.g., simplified processes for deposits, trainings for beneficiaries on how to access loans, etc.). Partnerships with financial institutions which offer no-maintenance-fee transaction accounts, or temporary financial support to waive account maintenance fees, may also be considered. Stronger support measures include setting up credit lines or PCGs for financial institutions.

3.2. Financial Institutions as Deposit Takers

Under this scheme, beneficiaries are required or incentivized over the course of the project to set aside—either individually or collectively—part of revenues generated from the matching grant-financed activities. The “deposit-taking” role for financial institutions is the most common role for financial institutions when engaged in matching grants projects. Two different approaches have been experimented with: (1) each producer group sets aside money in a revolving fund, or (2) each individual sets aside money in a savings account. This section builds on case studies from Colombia, Nigeria, India, and Angola (described in detail in annex 1).

The revolving fund model—used in Colombia, Nigeria, and India—can help producer groups get better access to finance as well as their members.⁴¹ For instance, the Colombia Second Rural Productive Partnerships Project (P104567) required producer organizations to set aside 70% of the grant received in a revolving fund. The objective of the revolving funds was to allow producer organizations to continue their operations after the project, as well as build up their creditworthiness, in order to enable them to obtain commercial financial credit. The impact evaluation shows that—compared to control group producers—more beneficiary producers have obtained credit for productive investments, and more of them reinvest part of their net revenues in their agricultural production. Similarly, the Nigeria

Fadama III Development Project (P096572) introduced a savings mechanism called Fadama Users' Equity Fund (FUEF). Indeed, the project required that 10% of the replacement value of the common assets used for income-generating activities of Fadama User Groups (FUG) be saved annually (with effect from year 2). This feature served as a sustainability provision of the project and aimed at facilitating the observed desire of participants to continue investment after completion of the matching grant. With the project support, a total of 37 Fadama Farmers Community Association (FFCA) groups were created, one for each state and the Federal Capital Territory, with the objective of transforming some of the vibrant FFCAs into self-sustaining institutions. Of them, seven institutions have generated enough capital and expertise to have applied for a license to operate as a microfinance bank, and one of them obtained a banking license in 2015. Finally, the India Chhattisgarh District Rural Poverty Project (P076467) required community members to place 10% of the matching grant amount into a village fund (Apna Kosh) as a condition for the release of the second tranche of the subprojects. The fund was aimed at covering operation and maintenance costs and further village development beyond the lifetime of the project. The IE showed that project beneficiaries had more confidence in dealings with banks, had access to bigger loans, and displayed stronger savings discipline. Indeed, beneficiaries, especially women, highlighted a considerable increase in their confidence in dealing with banks. While the IE did not show a significant difference in the share of Common Interest Group (CIG) beneficiaries with bank accounts compared to control areas, it did find that more CIG members with bank accounts succeeded in taking loans compared to the situation in control villages (48% v. 37%), and that in control areas more still used money lenders. Also, the total amount of loans taken by CIG households was 30% higher than the amount borrowed by non-CIG households.

However, setting up revolving funds among producer groups requires caution and clear communication. Indeed, such a design feature can only work in contexts where producer groups are well-managed and members trust that the revolving fund will be used in a way that benefits them. It also requires that groups have sound governance as well as some expertise in managing loans and financial accounts. When this is the case, farmer groups can grow into viable financial institutions, as the experience of Raiffeisen in Germany shows.⁴² In the case of Nigeria, one institution obtained a banking license; however, less than half of the state-level institutions created as part of the project were still in operation by the end of the project, which confirms challenges related to financial capability and governance of producer groups. In addition, in cases where most of the grant portion needs to be repaid in a collective revolving fund, it might be confusing to label the support as a grant.⁴³

The individual savings account approach—used in Angola—can be an effective instrument to pave the way for farmers and agricultural processors to enter the financial system. For instance, the Angola Local Development Project incentivizes each individual within beneficiary producer groups to save 20% of the grant amount in a savings account over the course of the project, with monthly deposits.⁴⁴ Beneficiaries receive small rewards for each monthly deposit made on time (phone cards with airtime). On the one hand, such requirements and incentives can foster savings discipline among beneficiaries. On the other hand, as these segments build a transaction history, this requirement can foster better knowledge of farmers and agricultural SMEs among financial institutions. The impact evaluation shows that beneficiaries gradually fulfilled financial institutions' requirements through the project (e.g., had an active account, had collateral, were formal enterprises), and some of them managed to access loans from financial institutions.

Regardless of the choice of an individual or collective approach, requiring matching grant beneficiaries to save money can be an effective instrument to pave the way for financial inclusion, but it also requires caution related to feasibility and additionality. Requiring high levels of savings might not be feasible, in particular for farmers involved in long production cycles and/or facing significant production risks. For instance, in Colombia, only 50% of producer organizations managed to reach the required recovery rate of 70%. In particular, farmers involved in perennial crops (e.g., cacao, forestry, mango), which have long gestation periods, had limited capacity to repay quickly. In addition, unusually adverse weather significantly affected a large number of beneficiary producers, who suffered significant losses during the project and therefore were unable to repay into their revolving funds. Such difficulties in accumulating savings show that such a requirement might have the advantage of strengthening financial discipline without exposing project beneficiaries to challenges associated with non-repayment of formal credit. However, by contrast, the fact that some beneficiaries manage to “repay” a large portion of their grant into a savings account or a revolving fund raises the question of the additionality of matching grants. Indeed, it is possible that the 50% of producer organizations that managed to obtain a recovery rate of 70% could have financed their project from commercial credit. Such a model illustrates the trade-off between the need to ensure additionality (channeling grants only to segments who are not able to finance their investments through credit) and the need to promote sustainability (channeling grants in such a way that beneficiaries do not need grants for their future investments).

3.3 Financial Institutions as Funders

Under this scheme, matching grants beneficiaries are either required or incentivized to secure a loan from a financial institution to cover part of the investments. The “funding” role for financial institutions is the second-most common role for financial institutions when engaged in matching grants projects. This section builds on case studies from the Kyrgyz Republic, Honduras, India, and Colombia (more detail is in annex 2).

In some cases, such as in Colombia, blending grants with commercial credit is only incentivized. Indeed, in the Colombia Second Rural Productive Partnerships Project (P104567), the levels of matching and ceiling grant amounts were higher for beneficiaries who managed to obtain credit.⁴⁵ For example, if the partnership obtained a credit of Col\$100,000 per household, the government financial incentive could be increased by Col\$100,000 per household. This 1:1 relationship would be respected up to a maximum of Col\$2 million per household. Similarly, in all matching grants projects where the level of matching is low, beneficiaries have an implicit incentive to seek commercial credit, as they might not be able to fund their required contributions from their own funds only. Furthermore, another way to incentivize commercial credit is to restrict grants to expenses that financial institutions are reluctant to finance (assets, technical assistance) and limit the use of matching grants for working capital so as to crowd in commercial credit.⁴⁶ A recent matching grants project in Argentina also incentivized commercial credit through (1) referrals to credit institutions when semi-capitalized family farmers present a subproject to the PIU, and (2) varying levels of matching depending of the level of capitalization of farmers (see box 4).

Box 4. Incentivizing Commercial Credit in Argentina for Climate-smart Agriculture Investments⁴⁷

Context: Most vulnerable family farmers in Argentina have limited access to formal financing through banks or other financial institutions. In addition, some of the climate-smart agriculture (CSA) technologies are innovative and/or have significant positive externalities, so farmers require an incentive to try them.

Targeted investments and segments: Matching grants are offered to encourage farm-level adoption of validated CSA technologies and risk management instruments. The project also includes special incentives for matching grants to groups that include women farmers (additional scores for prioritizing matching grant proposals and higher percentage of matching grants).

Linkage with financial institutions: Matching grants are intended to help vulnerable family farmers integrate into the formal financial system. Key features to facilitate financial inclusion are as follows: **(1) depending on the level of capitalization of farmers, the level of matching varies and the process for obtaining matching grants may include banks; and (2) commercial banks, which may not be familiar with complex CSA technologies, receive support from the PIU for such complex investments.**

The mechanisms for obtaining and disbursing grants for family farmers to invest in CSA technologies differ depending on whether the technology is simple or complex:

- Some CSA and risk management practices and technologies consist of **specific, simple solutions** that are well known and relatively easy to evaluate, such as irrigation systems, direct sowing, and nets to prevent hail from damaging crops. Farmers can apply for such grants directly at a bank, or they may be referred to commercial banks if they have applied to the PIU and lack sufficient resources to provide the counterpart funding for these investments. If banks cannot finance the counterpart resources requested by these farmers, they may approach local or provincial funds or other non-bank sources of credit.
- **For complex CSA technologies and practices**, which rely on multiple complementary practices and inputs to produce farm-level changes, banks and other formal financial institutions generally lack the capacity or experience to advise or assess them. These interventions are prepared by farmers supported by expert consultants, and submitted for evaluation and approval to the PIU with tranches of the grant disbursed through the beneficiaries' bank accounts. In piloting, local banks may opt to provide financing if beneficiaries require a loan to pay the counterpart portion of the investment.

In other cases, such as in the Kyrgyz Republic and Honduras, blending grants with commercial credit is required.

The Kyrgyz Republic Agribusiness & Marketing Project (P049724) had the highest requirements for commercial credit, as it required that 63% of the investment is provided as a loan from a financial institution⁴⁸ and that the matching grant component is converted into a loan if the loan portion is not repaid in full and on time. In this case the matching grant instrument was combined with three other instruments aimed at increasing the supply of agriculture finance services: a credit line to participating financial institutions for agribusiness lending, technical assistance to loan officers to broaden the base of eligible borrowers, and training of agricultural cooperatives to strengthen their management skills and allow them to apply for financing. While the project was small in scale,⁴⁹ it had a positive impact on the economic activities of beneficiaries (such as increases in sales, profits, and market share), and all beneficiaries were able to reimburse their loans. In a similar approach, the Honduras COMRURAL Project (P101209) required that subproject beneficiaries secure a loan from a financial institution, covering at least 30% of total subproject investment costs. The matching grant instrument was combined with a Partial Credit Guarantee fund to increase the supply of agriculture finance services. As a result of their participation in the project, various producer organizations have received further loans.

Involving financial institutions as funders can be an effective way to deepen financial inclusion of segments who already have some access to formal financial institutions, but it requires a rigorous initial assessment of beneficiaries' financial capacity as well as a transparent communication plan. For segments who already have some access to formal financial institutions (e.g., have an account and access to small loans), blending grants with

commercial credit can potentially help beneficiaries access new types of loans (e.g., longer maturity, larger volume, etc.). However, if beneficiaries' financial capacity is overestimated, such an approach might jeopardize project disbursements and/or create challenges for borrowers. Indeed, the India Assam Agricultural Competitiveness Project (P084792) initially required that commercial banks cover 50% of the investments; but it had to be restructured due to slow disbursements, and it dropped the mandatory commercial bank linkage. Moreover, requiring segments that are excluded from financial services to use commercial credit could lead to defaults and exclusion from the financial system.⁵⁰ In addition, while such a challenge has not been documented in the impact evaluation of these projects, a model whereby financial institutions channel both grants and loans can potentially create confusion among beneficiaries. In such an arrangement, it is important to raise awareness among beneficiaries about the difference between grants and loans. It is also important to provide financial institutions with technical assistance on credit risk management and loan collection procedures. Indeed, experience with matching grants in Niger,⁵¹ where financial institutions were required to provide 50% of investments, shows that financial institutions did not have the financial and technical capacity to grant such loans, and that the quality of the agriculture credit portfolio declined as a result.

3.4 Financial Institutions as Managers

Under this scheme, financial institutions play a role—either “light” or “core”—in the management of matching grants. The “managing” role for financial institutions is the third-most common role for financial institutions when engaged in matching grants projects. This section builds on cases studies from the Kyrgyz Republic, Vietnam, and Burundi (more detail is in annex 3).

Under the “light management” approach, financial institutions play a role in the selection or pre-identification of matching grants beneficiaries, which can ensure that only financially viable projects are selected while building agriculture finance knowledge among financial institutions at the same time. For instance, in the Vietnam Agriculture Competitiveness Project (P108885) as well as in the Burundi Keeping Good Firms Alive & Well: Phased E-matching Grants to Tackle Debt Overhang and Recreate Credit Histories project,⁵² the evaluation committee for the matching grants business proposals includes representation of the commercial banking sector.⁵³ In the Burundi case, financial institutions are also involved at a more upstream level, during the pre-identification phase of SMEs. Indeed, partner financial institutions are asked to identify some of their client SMEs that have overdue loans but that could potentially have their loans restructured and access new loans with matching grant support. Another design element is partial debt forgiveness from outstanding arrears. While this project is still in the early stage of implementation, such an approach might be an innovative way to reintegrate in the formal financial system segments that have lost access to it due to exogenous price fluctuations and a general economic crisis. In addition, including financial institutions in the matching grants committee offers the double advantage of ensuring that only financially viable projects are selected, while building agriculture finance knowledge among financial institutions at the same time. Indeed, instead of sharing knowledge of agricultural investments and profitability only among members of a PIU, which is time-bound, this approach allows financial institutions to gain valuable knowledge about the relative profitability of various agricultural investments. While none of the projects include such a feature, publishing a briefing note to all financial institutions summarizing the relative performance of matching grants-supported agricultural investments (by type, by value chain,

by region, etc.) could also be an effective way to capitalize on lessons learned and promote better knowledge of agricultural investments among financial institutions.

Under the “core management” approach, such as in the Kyrgyz Republic, financial institutions both select beneficiaries and channel grants, which can simplify the investment process but also potentially create confusion for beneficiaries. Such a model makes sense in the Kyrgyz Republic Agribusiness and Marketing Project (P049724), where financial institutions bear most of the financial risk (63% of the investment). This approach can also speed up and simplify the investment process, as matching grants applicants only need to have their investment project approved by a financial institution rather than applying both for a grant and for a loan. Such an approach may however generate confusion among borrowers as regards the nature of the support they receive.

3.5 Financial Institutions as Advisors

Under this scheme, financial institutions advise matching grants applicants on the preparation of their business plans. The “advising” role for financial institutions is extremely rare, and this section only builds on the example of one ongoing project in Mexico (detailed in annex 4). The Mexico Sustainable Production Systems and Biodiversity Project (P121116) establishes commercial financial institutions as key technical service providers which are hired to support the management of financial services for each producer association as well as for the preparation of business plans.

Such an arrangement might offer advantages both for financial institutions and matching grant beneficiaries. Indeed, while this project is still under implementation, such an approach might be an effective way to build knowledge among financial institutions about farmers and agricultural SMEs,

while at the same time strengthening financial skills among matching grants beneficiaries. This approach, however, exposes financial institutions to a reputation risk if financed projects are not successful and the

advice provided is perceived as suboptimal. It can also lead to a potential conflict of interest if financial institutions both help prepare business plans and then provide funding for the project.



Conclusion and Recommendations

WBG matching grants for agriculture are generally more successful than those outside of agriculture, but generally are not focused on long-term sustainability, both on their rationale and on their design:

- **Indeed, most projects identify the lack of rural finance as a sufficient rationale for matching grants, without fully identifying the market failure or whether other instruments might be more appropriate to unlock rural and agriculture finance.** Low penetration of rural financial services might be due to a wide variety of constraints, and only a subset of these can be effectively addressed with matching grants.
- **Most projects do not include an access to finance component or a design feature promoting financial inclusion.** Among 21 agriculture matching grants projects, only 6 engaged financial institutions through specific design features, and 6 included an access to finance component.⁵⁴
- **Several projects do not capture results effectively.** The 15 closed agriculture projects used a total of 31 M&E indicators, 60% of which were output indicators such as number of funded projects or beneficiaries.

Two main approaches have been used in matching grants projects to promote financial inclusion: high-leverage matching grants blended with credit for segments with some access to formal financial services, and low-leverage matching grants incentivizing savings for segments with no access to financial services. These two approaches can themselves be broken down into four roles for financial institutions, and each of them is associated with specific advantages and challenges: (1) deposit takers, (2) funders, (3) core or light managers, and (4) advisors.

Available impact evaluations show that such projects are successful at improving agricultural income, but also improve access to finance in a sustainable way. For instance, a project in Kyrgyz Republic showed that among matching grants beneficiaries, 41% saw an increase in profit, 37% saw an increase in total sales, and 47% saw an increase in market share compared to before the investments. Furthermore, impact evaluation of a project in India, which required beneficiaries to save part of their proceeds at a financial institution, showed

that saving discipline among beneficiaries led to increased trust towards financial institutions and more access to loans, and that beneficiaries' loans were larger than non-beneficiaries'⁵⁵ In addition, some projects have generated large spillover effects, such as a project (Colombia Second Rural Productive Partnerships Project, P104567) in which 11,000 rural households that were not matching grants beneficiaries nevertheless adopted (at their own expense) improved practices promoted through matching grants.⁵⁶

Combining matching grants with other instruments that support commercial credit can prove impactful. A few matching grants projects are combined with other instruments aimed at addressing specific constraints to agriculture finance, such as lines of credit (to address lack of liquidity), Partial Credit Guarantees (to address exposure to agricultural risks), or technical assistance to financial institutions (to address lack of knowledge of agriculture finance). Such combinations can help address structural constraints to agriculture finance while offering immediate investment opportunities to farmers through matching grants. However, impact evaluations generally do not disaggregate the grant impact from the impact of additional instruments, making it difficult to assess the respective role of each instrument. Such an analysis may be an area for further research.

Emerging good practices to improve the financial sustainability of agriculture matching grants projects are as follows:

- 1. Before designing a matching grant project, a strong economic rationale must be established and market failures must be properly described (e.g., lack of demand for or supply of business development services, limited supply of financial services, limited bankable demand of financial services, etc.).**
- 2. If one of the identified market failures is the lack of access to finance for farmers and agricultural SMEs, improving access to agriculture and rural finance should be one of the objectives of the project, and financial sector experts should be involved in project design.**
- 3. In order to assess whether matching grants are the most cost-effective instrument to improve access to agriculture and rural finance,** constraints to agriculture and rural finance should be systematically assessed through an agriculture finance diagnostic, and various alternative instruments should be considered to replace or complement matching grants.
- 4. Matching grants design features should be determined carefully to foster linkages with the financial sector and long-term impact:**
 - **Size of the grant and level of grant matching should differ by type of beneficiary** (micro-enterprises and farmer groups, small enterprises, medium enterprises) and by type of investment (technical assistance, fixed assets, working capital) so as to ensure additionality and sustainability.
 - **Beneficiaries' contribution must be set high enough to ensure ownership and crowd in commercial credit.**
 - **For beneficiaries who have no relationships with financial institutions, a path towards financial inclusion through low-leverage matching grants should be promoted.** Such an approach would incentivize beneficiaries to save part of the proceeds in an account at a financial institution, but also support legal formalization, preparation of business plans and financial accounts, acquisition of income-generating assets, etc. This model can be an effective instrument to pave the way for financial

inclusion but also requires caution related to feasibility (in particular for farmers involved in long production cycles or farmers facing significant production risks) and additionality. Moreover, additional caution is required when savings are set aside in a collective revolving fund.

- **For beneficiaries who have limited relationships with financial institutions, high-leverage grants should be considered.** Such an approach requires stronger financial discipline from beneficiaries because it requires or incentivizes blending of matching grants with commercial credit. Opting for high-leverage grants may be effective at deepening financial inclusion but requires a solid assessment of beneficiaries' financial capacity and financial institutions' appetite. In particular, requiring a mandatory share of credit might jeopardize project disbursements and/or create challenges for borrowers. When financial institutions are involved as funders, other instruments to facilitate credit should also be considered (technical assistance, PCGs, etc.) to ensure financial institutions' participation. Moreover, involving financial institutions as "core managers" of matching may make sense when financial institutions bear most of the financial risks of supported projects. Such arrangements may simplify and speed up the investment process but require strong communication so as to avoid confusion among beneficiaries on the nature of the support.
- **For beneficiaries who have lost access to finance,** financial institutions could play a leading role in the identification and selection of matching grants beneficiaries.
- **When financial institutions' lack of information and know-how on agriculture is identified as one of the key market failures, involving financial institutions as advisors**

or "light managers" should be considered.

In addition, sharing with financial institutions a database of all agricultural investments and their relative profitability could help address their knowledge gaps.

- **Suggested M&E indicators related to financial sustainability include the following:** % of beneficiaries who have saved more than X% in their account by the end of the project, % of beneficiaries who have saved for the first time at a financial institution, % of beneficiaries who have maintained an active account by the end of the project, % of beneficiaries who have established a track record with a value chain player, % of beneficiaries who have accessed loans for working capital/further equipment from a financial institution during the project period, % of beneficiaries who have accessed loans on commercial terms after the project, % increase in share of agriculture in lending portfolio of participating financial institutions.

Other emerging practices for successful design of matching grants include the following:

- **Matching grants projects should include technical assistance to beneficiaries,** both for preparing and implementing business plans.
- **Involving the matching grants PIU in the drafting and adjustment of the matching grants manual is important to strengthen the capacity of the PIU, ensure project ownership, and ensure that processes are flexible.** Throughout the project, the matching grants manual should be a working document that can be adjusted according to circumstances. For instance, in a context of low demand for matching grants, it might be useful for the PIU to revise the selection process and switch to a "first come, first serve" selection mechanism. Similarly, in case the composition of the matching grants selection committee leads to delays in the selection process, it should be possible to

quickly change the composition of the committee so as to maintain the reputation of the project. Alternatively, switching to a virtual committee which does not require physical meetings should be possible.

- **Having a strong communication plan about matching grants from the beginning of the implementation is key to ensure equal access to grants, promote accountability, and foster spillovers.** For instance, showcasing matching grants beneficiaries on local television, radio, and social media increases project ownership and decreases the risk of grant misuse. Additionally, it can foster innovation and technology adoption among non-beneficiaries, which is a key expected impact of matching grants projects. Task team leads should work in coordination with social development specialists to ensure communication materials and information reach indigenous populations.
- **Contracts with BDS providers should be designed to ensure quality and results.** For instance, TORs may include a payment schedule where most of the payment is made at the end of the contract based on the achievement of specific objectives (e.g., productivity improved, website built, etc.)
- **Mechanisms should be put in place to avoid the risk of companies overcharging for eligible equipment.** Such mechanisms include the following: clear product specifications vetted by an independent qualified consultant; standard bid document to allow for price comparisons and promote price transparency to help farmers choose between different products; lists of pre-approved qualified vendors who have a track record where applicable; independent verification and audit of prices charged with and without subsidy, as well as sanctions (such as debarring from future bids) in case of overcharging; and (depending on amounts and complexity) an auction where several companies compete on price and quality, and project beneficiaries are only allowed to purchase equipment from approved vendors.
- **Suggested M&E indicators related to cost-efficiency include** % operative costs/total amount of matching grant, increase in beneficiaries' income linked to the subproject/total amount of matching grant, % operative costs/ increase in beneficiaries' income linked to the subproject.
- **Suggested M&E indicators to track spillovers** may include % of nearby farmers adopting promoted technology/equipment compared to a control group.



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Annex 1. Financial Institutions as Deposit Takers

Angola Local Development Project

Description

The Angola Local Development Project aims at improving business development skills and participation in markets of selected producer groups and SMEs in a few targeted sectors, including agriculture. This project includes a matching grants component for selected producer groups, SMEs, and business development service providers.

Linkage with financial institutions

In Angola, the matching grants agreement incentivizes each individual within the producer group to save 20% of the grant amount in a savings account over the course of the project, with mandatory monthly deposits.⁵⁷ Beneficiaries receive small rewards (phone cards with airtime) for each monthly deposit made on time.

Positive impact

The impact evaluation shows that beneficiaries gradually fulfilled financial institutions' requirements through the project (e.g., had an active account, had collateral, were formal enterprises). In addition, there are a few examples of beneficiaries who were able to access a loan after benefiting from matching grants. From a sample of 49 subprojects, two beneficiaries (4%) got access to a loan from a financial institution by the end of the project. The latest evaluation, from 2017, indicated that each US\$1 spent in grants generated on average US\$23 in revenues for producer groups and SMEs.

Colombia Second Rural Productive Partnerships Project

Description

The Second Rural Productive Partnerships Project (2007–2013) included a matching grants component (known as the Incentivo Modular) of US\$327.13 million (of which IBRD contributed US\$24.42 million), which was awarded to beneficiary producer organizations. Grants were available for improving on-farm infrastructure, purchasing machinery and equipment, financing consumable

inputs (such as seed, fertilizer, and veterinary supplies), or paying for hired labor. Matching grants also paid for technical advisory services, marketing studies, and training activities designed to increase the productivity and entrepreneurial capacity of the beneficiary producer organizations. The Incentivo Modular could not exceed 40% of the total partnership investment cost, and it was capped at Col\$5 million per beneficiary producer household (less than US\$2,000).

Linkage with financial institutions

This project promoted the participation of financial institutions both as funders, through the matching grant design, and as deposit takers, through the setting up of a revolving fund.

Matching grants were designed in a way that promoted commercial credit. Indeed, the level of matching and ceiling grant amounts were increased for beneficiaries who managed to obtain credit. The grant amount could be increased to a maximum of Col\$6 million per beneficiary producer household during the course of subproject implementation if the partnership could demonstrate that it had mobilized an additional Col\$2 million per household in commercial credit. For example, if the partnership obtained a credit of Col\$100,000 per household, the government financial incentive could be increased by Col\$100,000 per household. This 1:1 relationship would be respected up to a maximum of Col\$2 million per household.

Additionally, beneficiaries were required to set aside 70% of the grant received in a revolving fund. Under an earlier matching grants project, many participating producer organizations had experienced difficulty accessing commercial credit. The design for the Second Rural Productive Partnerships Project therefore included stronger measures to entice financial institutions to provide credit to the selected partnerships. Producer organizations were encouraged to use and manage their mandatory revolving fund as a tool to finance their working and investment capital requirements. The objective of the revolving funds was to allow producer organizations to continue their operations after the project, as well as build up their creditworthiness, in order to enable them to obtain commercial financial credit.

Positive impact

This project generated considerable spillover benefits that have accrued to non-beneficiary producers. More than 11,000 rural households that were not members of a producer organization enrolled in a subproject nevertheless; adopted (at their own expense) improved practices promoted through the project; or were able to benefit from collective goods paid for by the project. One significant spillover effect is the 24.4% higher gross income found for “nearby producers” compared to “distant producers,” showing that the impact of the project on Colombia’s rural sector was amplified beyond direct project beneficiaries.

There were significant improvements in beneficiaries’ savings and access to credit. The revolving funds were mainly used for (1) giving out loans to non-beneficiary producers of the same producer organization (42%), (2) financing technical assistance (25.3%), and (3) purchasing specialized machinery (20.3%). The impact evaluation shows that—compared to control group producers—beneficiary producers obtained credit for productive investments (table 3), and more of them reinvested part of their net revenues in their agricultural production compared to the control group.

Table 3. Results on Competitiveness

Producers	Project Beneficiaries (Treatment)	Non-beneficiaries (Distant Controls)	Differences in Means
With access to improved, certified inputs	7.1.7	44.1	***
With access to collection center(s)	3.5	3.3	**
Reinvesting from net revenues in their agricultural production	66.4	57.0	*
Went from not having to having a transport system for the marketing of products	19.8	8.4	***
Went from not having to having contracts or agreements for the sale of products	49.3	11.3	***
Went from not having to having credit for investments in productive activities	25.6	16.1	***

Note: Significance level: * = 10%; ** = 5%; *** = 1%.

Challenges

Requiring matching grants beneficiaries to save 70% of the grant in the revolving fund proved challenging,⁵⁸ in particular for farmers involved in long production cycles and farmers facing significant production risks:

- Of producer organizations, 50% had a recovery rate below 70%, in particular organizations involved in producing perennial crops (e.g., cacao, forestry, mango), which have long gestation periods, limiting producers' ability to repay quickly.
- In addition, production losses due to adverse weather had adverse impact on producers' ability to repay into their revolving funds. From 2009 to 2011, unusually adverse weather significantly affected a large number of beneficiary producers, who suffered significant losses during project implementation from fire (97%), flooding (87%), landslides (82%), drought (42%), and outbreaks of diseases (34%). These weather conditions had serious adverse impacts on production and sales, and on the producers' ability to repay into their revolving funds.

Such difficulties in accumulating savings show that many project beneficiaries would not have been ready to reimburse credit, and therefore that the project helped pave the way for financial inclusion in a gradual manner.

While the design of the matching grants promoted financial institutions' participation through favoring beneficiaries who had managed to obtain credit, such a model raises the question of the additionality of matching grants. Indeed, while this is not indicated in the ICR, it is possible that some of the matching grants beneficiaries could have financed their project solely from credit. Such a model illustrates the trade-off between the need to ensure additionality (channeling grants only to segments who are not able to finance their investments through credit) and the wish to promote sustainability (channeling grants in a way that beneficiaries do not need grants for their future investments).

Nigeria Third National Fadama Development Project

Description

The Third National Fadama⁵⁹ Development Project (2008–2013) included three matching grants components, which financed (1) advisory services for farmers/pastoralists (called Fadama users); (2) input support (mainly seeds, fertilizers, and agrochemicals) with a matching grant of 50% of the input purchase price; and (3) capital assets to undertake a broad range of small-scale income-generating activities and facilitate access to markets

Linkage with financial institutions

This project introduced an innovative savings mechanism called Fadama Users' Equity Fund (FUEF). Indeed, the project required that 10% of the replacement value of the common assets used for income-generating activities of Fadama User Groups (FUGs) was saved annually (with effect from year 2). This feature served as a sustainability provision on the project and aimed at facilitating the observed desire of participants to continue investment after completion of the matching grant.

Fadama Farmers Community Associations (FFCAs): Under South-South Cooperation, the Fadama project undertook a study tour of India and Sri Lanka for learning experiences on intensification of federation of community groups, use of agricultural technological innovations and ICT, and promotion of a rural savings-credit revolving scheme.

Positive impact

The project promoted the formation of FUGs, which were federated into associations at state level as the FFCA. More than 490,000 farmers had access to agricultural inputs thanks to the matching grants program. Beneficiaries also acquired agricultural productive assets worth N11.6 billion, equivalent to about US\$72 million. Livestock assets (e.g., poultry production) and crop assets (e.g., water pumps, sprayers) constituted the largest number of productive assets. Across the 36 states, about 7.32% of the value of these assets was saved in FUEF accounts, slightly below the 10% target.

A total of 37 FFCAs were created, one for each state and the Federal Capital Territory, with the objective of transforming some of the vibrant FFCAs into self-sustaining institutions. The ICR indicates that a total of 15 FFCAs were still functional and providing services to their members. Of them, seven institutions have generated enough capital and expertise to apply for a license to operate as a microfinance bank. They are waiting for the Central Bank's approval before commencing operations as a microfinance bank. In the state of Plateau, the Central Bank of Nigeria awarded the FFCA its banking license in 2015, and the Plateau State

Fadama Farmers Microfinance Bank has been operational since January 2016. It is expected that the other seven FFCAs will also get banking licenses and will contribute to providing requisite financing.

Challenges

International experience suggests that rural financial institutions stemming from farmers' groups can face issues related to lack of financial expertise and governance. The fact that less than half of the state-level institutions created as part of the project were still in operation by the end of the project confirms these challenges.

India-Chhattisgarh District Rural Poverty Project: Requirement of 10% of Investments in Savings for the Second Matching Grants Tranche to be Disbursed

Description

This project included two matching grants components: (1) matching grants for community investment subprojects from Common Interest Groups (CIGs) to finance collective income-generating activities, including agriculture as well as traditional activities such as trading; and (2) matching grants for Panchayat (village groups) plans to finance investment subprojects in village infrastructure.

Linkage with financial institutions

Community members had to contribute 5% in cash upfront towards subproject costs and place 10% into a village fund (Apna Kosh) as a condition for the release of the second tranche of the subprojects. The fund was aimed at covering operation and maintenance costs and further village development beyond the lifetime of the project. Towards the end of the project, a decision was made to revise the guideline on the village fund and use the fund as working capital/revolving fund for the federations of the CIGs.

Outcome

The project fostered investments in collective income-generating activities as well as village infrastructure:

- **Income-generating activities:** A total of about US\$39.32 million in matching grants for collective income-generating activities was provided to 20,446 completed CIG subprojects identified by community members. Communities contributed about US\$2.06 million for these activities. These subprojects were mainly for agriculture, livestock, and traditional local activities.
- **Village infrastructure:** A total of about US\$13.57 million was provided as matching grants to finance 3,314 completed investments in village infrastructure; 60% of these investments were for paved cement roads.

Members also consistently raised the 10% of savings, although it led to some implementation delays for poorer individuals. At completion, around US\$3.56 million, or 10.1% of actual subproject costs, had been placed in fixed term deposits.

Positive impact

Project beneficiaries had more confidence in dealings with banks, had access to bigger loans, and displayed stronger savings discipline. The IE shows that beneficiaries, especially women, considerably increased their confidence in dealing with banks. While the IE did not show a significant difference in the share of CIG beneficiaries with bank accounts compared to control areas, it did find that more CIG members with bank accounts succeeded in taking loans compared to the situation in control villages (48% v. 37%), and that in control areas more still used money lenders. The CIG members' loans were for productive purposes, primarily agricultural investments, and were double the amount of productive loans taken out in control areas. Overall, CIG households saved more than non-CIG households, in particular most excluded beneficiaries. This saving discipline contributed to CIG households becoming more creditworthy. According to the IE, the total amount of loans taken by CIG households was 30% higher than the amount borrowed by non-CIG households. Project households borrowed 30% more from banks and 40% less from money lenders, compared to control households.

Challenges

The impact evaluation indicates that 70% of the groups are expected to sustain their improved farm operations during the project period, while 30% of the CIGs failed to function effectively and are considered unsustainable. This raises the question of whether sufficient screening was undertaken and whether the level of required contribution (5% cash) was sufficient to ensure the sustainability of CIG projects.



Annex 2. Financial Institutions as Funders

India Assam Agricultural Competitiveness Project

Linkage with financial institutions

In its initial design, the project promoted strong participation of financial institutions, as opposed to an earlier World Bank project in the region.⁶⁰ Started in 2004, the Assam Agricultural Competitiveness Project in India included a matching grants component for irrigation investments for farmers. This program initially required that farmers contribute 20% of the investment and that commercial banks cover 50% of the investment. This design aimed at promoting private sector financing, compared to the previous project providing grants covering 70% of the investment costs.

Challenges

The project had to be restructured due to slow disbursements. After 18 months the project was able to provide only 470 irrigation pumps against the target of 6,170. The project was therefore restructured to raise the grant to 50%, with the balance of 50% contributed by the beneficiary as cash, while also dispensing with the mandatory commercial bank linkage.

This experience highlights the trade-off between promoting a design which promotes sustainability and ensuring quick disbursements. It also illustrates the difficulty of changing matching grants patterns after an earlier project with a low level of beneficiary contribution.

Honduras COMRURAL Project

Linkage with financial institutions

The Honduras COMRURAL project required that a subproject secure a loan from a financial partner, covering at least 30% of total subproject investment costs, in addition to the 10% in cash or in kind required by the Produce Organization. From the beginning of the project, a broad range of financial partners were identified as eligible to participate in co-financing the subproject: (1) commercial banks, finance associations, and private finance development

institutions regulated by the Banking and National Insurance Commission; (2) credit and savings cooperatives affiliated with the Honduran Federation of Credit and Savings Cooperatives; and (3) other microfinance institutions, and other buyers such as input providers.

The matching grant instrument was combined with a Partial Credit Guarantee fund to increase the supply of agriculture finance services.

Positive impact

During implementation, the producer organizations' contribution was often higher than required, in some cases almost 50% of subproject costs. As a result of their participation in the project, various producer organizations have received further loans.



Annex 3. Financial Institutions as Managers

Kyrgyz Republic Agribusiness and Marketing Project

Financial institutions as primary providers of funds (70% required) and managers of grants, with grants conditional on loan repayment

Description

The program allowed eligible cooperatives that had participated in the specialized training, and required investments in productive assets for agricultural production and small-scale processing, to obtain a portion of necessary financing to procure the asset on a conditional grant basis.

Linkage with financial institutions

In this project, financial institutions played a key role, both in the appraisal of grant requests and in the funding of the investments. The participating financial institutions appraised requests for grant financing to ensure the cooperatives were financially viable, and filled in any financing gap (between the total amount of the subproject and the grant financing) from their own credit line resources.

The grant could be obtained in an amount of up to 30% of the loan amount. For example, if a cooperative wanted to purchase a tractor, it had to invest 10% of own funds (as borrower's contribution). Of the remaining 90%, up to 30% could be obtained as matching grant, and the remaining 70% was provided by the participating financial institution as a loan from own resources or from the credit line.

The grant represents the last 30% of the provided financing—the loan portion (70%) had to be repaid in full and on time in order for the 30% to become a grant. In case of non-repayment of the loan portion, the entire matching grant amount became a loan, repayable with interest.

The matching grant instrument was combined with three other instruments aimed at increasing the supply of agriculture finance services: (1) a credit line to participating financial institutions for agribusiness lending, (2) technical assistance to loan officers to broaden the base of eligible borrowers, and (3) training of agricultural cooperatives to strengthen their management skills and allow them to apply for financing.

Positive impact

While the project was small in scale, it had positive impact on the economic activities of beneficiaries, who were all able to reimburse their loans. Fifty-eight matching grants for a total of US\$800,060 were provided to cooperatives to co-finance investments in agricultural machinery and other productive assets. The repayment rate on the subloans financed through the credit line (amounting to about US\$16.6 million) was 100%. According to the impact survey at the end of the project, 32% of the respondents saw an increase in their production output, 41% saw an increase in profit, 37% saw an increase in total sales, and 47% saw an increase in market share compared to before the investments.

Challenges

While such a challenge is not indicated in the ICR, a model whereby financial institutions channel both grants and loans could potentially create confusion among beneficiaries. In such an arrangement, it is important to raise awareness among beneficiaries about the difference between grants and loans.

Burundi Project

Keeping Good Firms Alive & Well: Matching Grants to Tackle Debt Overhang and Recreate Credit Histories

Description

The overall objective of this SME Launchpad project is to reintegrate in the financial sector SMEs that have lost access to finance due largely to exogenous price fluctuations and a general economic crisis.

Linkage with financial institutions

Commercial banks are involved at two important stages of the selection process: (1) identification of eligible SMEs based on their credit history; and (2) selection of SMEs, as the selection committee includes a representative of the National Association of Banks and Financial Institutions of Burundi.

Preliminary results after four months of implementation:

- Five commercial banks were involved in the pilot project.
- One-third of beneficiary SMEs were involved in the production, storage, and/or distribution of agricultural products.
- Of commercial banks participating in the pilot, 80% acknowledged that the project would lead to partial and/or full SME debt write-offs.
- Of participating SMEs, 50% reported being satisfied or very satisfied by the loan restructuring proposed by their bank on the basis of the investment plan.



Annex 4. Financial Institutions as Advisors

Mexico Sustainable Production Systems and Biodiversity Project

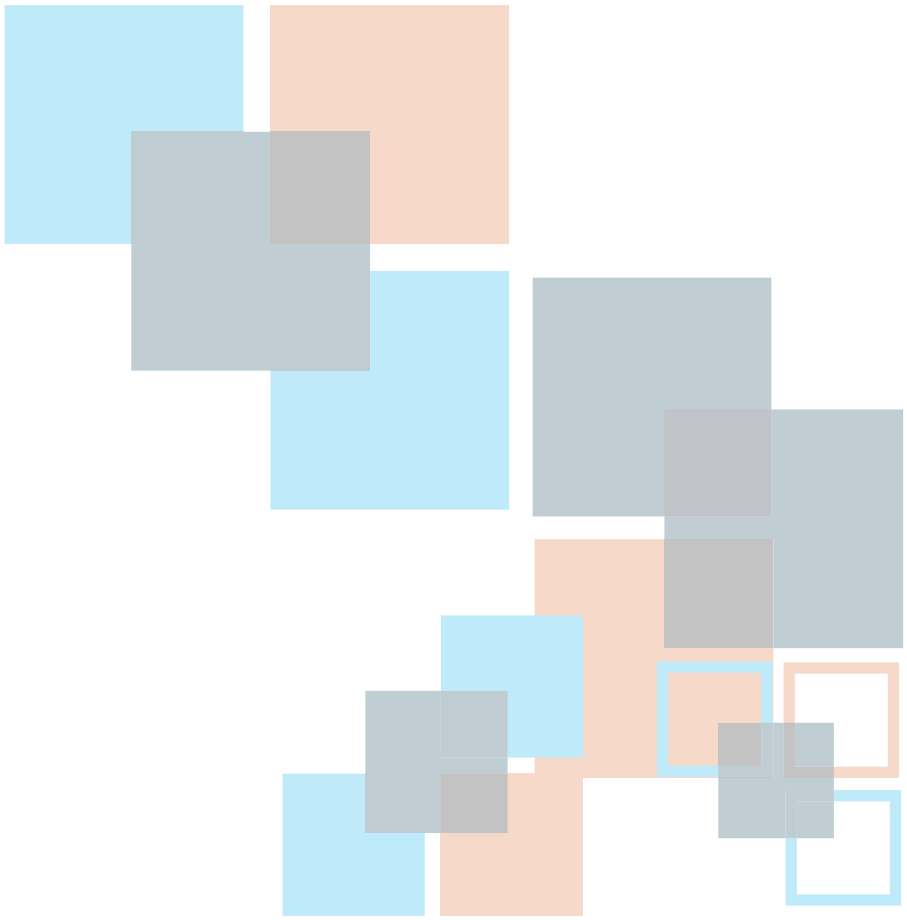
Description

The project makes matching grant financing available to existing producer associations and to producer groups that have developed a business plan for the production, processing, and marketing of biodiversity-friendly products.

Linkage with financial institutions

This project establishes commercial financial institutions as key technical service providers which are hired to support the management of financial services for each producer association. The project includes three types of technical service providers for producer groups, including financial institutions: (1) local technical groups provide training and technical assistance to producer groups and producer associations; (2) Technology Transfer Units provide services for research, technology development, and innovation; and (3) financial agents support the management of financial services.

Additionally, this project paves the way for better access to finance through the requirement that every producer group needs to be formalized in order to receive financing.





Endnotes

1. IFAD (2012).
2. World Bank (2016).
3. These numbers capture only closed projects.
4. In some cases matching grants might distort financial markets and violate Article 6.2 of the WTO Agreement on Agriculture. In at least one case, the World Bank discontinued a matching grant fund on the belief that the fund violated WTO rules, which had come into existence since the project was approved. To satisfy the requirements of the framework agreement of the WTO, grants are defined as nonactionable subsidies because they are not specific. Specificity under WTO rules typically involves “targeting of geographic regions or economic sectors.”
5. World Bank (2016).
6. Campos et al. (2012).
7. In this paper, “access to finance” for farmers and agricultural small and medium enterprises is defined as access to suitable formal financial services such as savings, credit, insurance, and payments.
8. WBG (2016).
9. Inter-American Development Bank (2011).
10. See World Bank (2016).
11. *ibid.*
12. IFAD (2012).
13. Vander Meer and Noordam (2004).
14. World Bank (2016).
15. *Ibid.*
16. Bruhn, Karlan, and Schoar (2014).

17. Ibid. Owners also had improvements in “entrepreneurial spirit” when compared with the control group. The analysis finds a large increase in the number of employees and the total wage bill several years after the program. The paper documents that there is no singular mechanism for all firms.
18. McKenzie, Assaf, and Cusolito (2015).
19. Piza et al. (2016).
20. The reasons include ethical concerns about government “randomizing out” eligible applicants; program application rates too low to enable the planned selection of a random sample of eligible applicants; and continued implementation delays that prevented the start of the impact evaluation.
21. The literature points to several ways that matching grants can help increase access to finance:
 - In addition to the matching grants providing needed funds, the approval of a business proposal by the government might serve to signal the quality of the proposed investment and increase access to credit to finance the remainder of the investment. See Campos et al. (2012).
 - Risk sharing may induce higher technology adoption. Risks are widespread in rural productive activities, and small farmers have limited access to credit and insurance, in particular to smooth common shocks. The high variability of the climate and the associated risk of poor harvests heighten this risk, thus lowering farmers’ propensity to invest in new technologies; see Dercon and Christiaensen (2011). This is even more the case where farmers produce similar crops, increasing covariant risk. A matching grant scheme can potentially provide the necessary risk-sharing arrangement by lowering the expected loss for the organization and inducing a producer group to engage in a profitable activity it would have not have engaged in otherwise.
22. WBG (2016).
23. See the upcoming WBG Agriculture Finance Diagnostic for Côte d’Ivoire and Senegal.
24. Each financial institution defines “bankability” differently depending on its business model. This section therefore uses the term “fully bankable projects” for projects that can be perceived as bankable by at least one financial institution.
25. “Potentially bankable projects” include investments which are perceived as particularly risky or innovative by financial institutions (e.g., investments in new drought-resistant crop varieties with high return potential, large projects with long return periods, etc.).
26. World Bank (2016).
27. Of the 15 closed projects, some did not have an ICR when the review was undertaken and therefore do not have ratings. These unrated projects have an “n/a” success rate in the analysis below.
28. Compared to 72% for all 106 projects.
29. Compared to only 22% for non-agriculture projects.
30. This feature was highlighted in the World Bank (2016) review of 106 projects as the design modality which is most often correlated to positive outcomes.
31. For instance, the IEG review of the Zambia Agricultural Development Program (P070063) indicated “inadequate evidence on the extent to which” the key objective of the matching grants—namely improvements in agricultural productivity—had been achieved.

32. Phillips (2001).
33. Indeed, the project involves two components: the first one consists of a revolving line of credit to finance land purchases, and the second one provides matching grants for infrastructure and productive investments on the purchased lands. The acquired land can serve as collateral for long-term credit.
34. “Niger: Note politique sur le credit agricole,” June 2018.
35. According to WBG (2016): *“Productive Alliance involves three core agents: a group of smallholder producers, one or more buyers, and the public sector. These three agents are connected through a business proposition, or ‘business plan,’ which describes the capital and services needs of the producers and proposes improvements that would allow them to upgrade their production capacities and skills to strengthen their linkage with the market, i.e. the buyer(s). The implementation of such a business plan through a subproject is typically supported through three core inputs and/or activities directed towards the producers’ needs: productive investments, technical assistance, and business development. These core inputs are financed through public grants provided by the project, which are matched by the beneficiary producers and in some cases also by the buyer(s).”*
36. This was true of 28% of 106 projects reviewed as part of World Bank (2016).
37. IFAD (2012). This source further notes: “The lower the contribution of the recipients, the lower their ownership, the higher the interest of local politicians and potential beneficiaries, and the faster the disbursement rate.”
38. 2011 Findex data.
39. World Bank (2016).
40. See Niger Agro-Pastoral Export Promotion (P095210).
41. Information included in the ICR of the Sudan Gum Arabic Export Marketing Project (P110588) seems to suggest that a similar approach was adopted for this project; however, the Project Appraisal Document for this project was not available.
42. Raiffeisen banks came from multipurpose cooperatives with a strong agricultural focus, which spun off their financial activities into dedicated financial institutions.
43. One last area for caution is compliance with WBG Operational Policy 10 related to revolving funds.
44. There was also an option for producer groups to have a collective savings account; however, all producer groups preferred setting up individual savings accounts.
45. The grant amount could be increased to a maximum of Col\$6 million per beneficiary producer household during the course of subproject implementation if the partnership could demonstrate that it had mobilized an additional Col\$2 million per household in commercial credit.
46. For instance, the Angola Agriculture Commercialization Project (P159052) under preparation considers capping working capital expenditures to 25% of the grant amount.
47. This refers to an ongoing project in Argentina, Integrated Risk Management in the Rural Agroindustrial System (P162316).
48. The grant could be obtained in the amount of up to 30% of the loan amount. For example, if a cooperative wanted to purchase a tractor, they would have to invest 10% of own funds (as borrower’s contribution). Of the remaining 90%, up to 30% could be obtained as matching grant,

- and the remaining 70% would be provided by the participating financial institution as a loan from own resources or from the credit line.
49. It provided 58 matching grants for a total of US\$800,060 to cooperatives.
 50. The Tamil Nadu Rural Transformation Project (P157702) under preparation considers a slightly softer approach, whereby matching grants beneficiaries are required to obtain commercial credit, but the credit is converted into a grant if the loan is repaid in full and on time.
 51. “Niger: note politique sur le crédit agricole.” Juillet 2018.
 52. This is an SME Launchpad project currently under implementation.
 53. Such a feature is also being considered for the Republic of Congo Commercial Agriculture Project (P159979).
 54. Some projects both have an access to finance component and a design feature promoting financial inclusion.
 55. The impact evaluation of the Chhattisgarh District Rural Poverty Project showed that beneficiaries with bank accounts succeeded better in taking loans compared to the situation in control villages (48% v. 37%), and that in control areas more still used money lenders. According to the IE, the total amount of loans taken by beneficiaries was 30% higher than the amount borrowed by non-beneficiaries. Project households borrowed 30% more from banks and 40% less from money lenders, compared to control households.
 56. One significant spillover effect is the 24.4% higher gross income found for “nearby producers” compared to “distant producers,” showing that the impact of the project on Colombia’s rural sector was amplified beyond direct project beneficiaries.
 57. There was also an option for producer groups to have a collective savings account; however, all producer groups preferred setting up individual savings accounts.
 58. By the end of the project, the average recovery rate across all producer organizations was 64%, below the 70% target.
 59. “Fadama” refers to rural lands and water resources within Nigeria.
 60. The earlier project was Rural Infrastructure and Agricultural Services Project (ARIASP) during the period 1995–2004.

