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Multi-Originator Structured Debt Funds in Agriculture: Bridging India's Smallholder Credit Gap Amid Farmer Distress

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Abstract

India's agricultural sector confronts a persistent financing crisis, with over 390,000 farmer suicides since 1995 and 60% of smallholders excluded from formal credit, trapping millions in informal debt at 24-60% annual rates. This review article examines multi-originator structured debt funds (MOSDFs) as financial vehicles that pool smallholder loans from banks, MFIs, cooperatives, and agri-tech platforms into risk-stratified tranches to attract institutional capital which shall arise as a potential solution. While India lacks a dedicated agricultural MOSDF as of 2026, existing multi-originator securitization in microfinance (MOSEC) and mature securitization markets provide proven infrastructure.

Key differences from traditional banking include risk distribution across tranches, capital recycling via securitization, value-chain collateral (contracts over land titles), and blended finance to lower effective rates to 12-18%. Applications span input finance, FPO loans, post-harvest credit, and climate-smart investments across diversified crop/geographies.

Global success stories like Mexico's FIRA guarantees (US$6B scaled lending), Kenya's Aceli Africa (32,600 loans/US$1.98B), Eastern Europe's warehouse receipt securitization, and India's MOSEC which demonstrate 91-98% repayment rates when linked to value chains and technical support.

An unbiased assessment reveals MOSDFs could reach 30-40% of India's 140 million smallholders over 10-15 years by expanding credit quantum, reducing informal lending, and enabling technology adoption, but face scale, data, moral hazard (debt waivers), and anchor capital challenges. Success requires NABARD-anchored pilots in 3-5 FPO-strong states, policy certainty, and digital infrastructure. MOSDFs shall complement but not replace the KCC/AIF schemes, offering a market-based path to alleviate agrarian distress without fiscal overstretch.

Executive Summary

India's agricultural sector faces a chronic financing gap that contributes significantly to farmer distress. While traditional banking systems exist, over 60% of farmers lack access to formal credit, forcing millions into debt traps with informal lenders charging interest rates as high as 30-40% annually[1][2]. This paper examines multi-originator structured debt funds, a financial innovation that pools agricultural loans from multiple lenders and structures them to attract institutional capital as a potential mechanism to address India's smallholder financing crisis. Drawing on global case studies and India's existing financial infrastructure, this analysis evaluates whether such instruments can meaningfully alleviate farmer distress while remaining financially sustainable.

1. Introduction: Understanding Multi-Originator Structured Debt Funds

1.1 What is a Multi-Originator Structured Debt Fund?

A multi-originator structured debt fund (MOSDF) is a specialized financial vehicle designed to channel credit to underserved borrowers through a layered risk-sharing mechanism. Unlike traditional lending where a single bank bears all risk, MOSDFs operate through the following structure:

- **Loan Pooling**: Multiple financial institutions (banks, non-banking financial companies, microfinance institutions, cooperatives, and agri-tech platforms) originate small loans to farmers and rural households, then sell or transfer these loans to a special purpose vehicle (SPV).
- **Risk Stratification**: The pooled loans are divided into tranches with different risk-return profiles:
  - *Senior tranches* (60-70% of fund): Investment-grade, first priority on repayments, lowest returns
  - *Mezzanine tranches* (20-25%): Medium risk, higher returns, absorbs second-layer losses
  - *Equity/first-loss tranches* (10-20%): Highest risk, absorbs initial defaults, typically funded by development finance institutions and donor capital
- **Blended Finance**: Concessional capital from development agencies and guarantees from government schemes reduce overall risk, making senior tranches attractive to conservative institutional investors like pension funds and insurance companies.
- **Originator Servicing**: The original lenders continue to service loans (collect repayments, manage defaults) for a fee, maintaining local relationships and operational efficiency.

This structure addresses a fundamental market failure: Where the institutional investors have capital but lack the infrastructure to reach smallholder farmers, while local lenders have farmer relationships but insufficient capital. The MOSDF bridges this gap[3][4].

1.2 The Agriculture-Specific Innovation

In agricultural MOSDFs, the structure is specifically adapted to address farming-sector challenges:

Feature	Agricultural Adaptation
Collateral	Accepts warehouse receipts, future crop receivables, and contract farming agreements rather than only land titles
Repayment	Aligns with seasonal harvest cycles (6-24 months) rather than fixed monthly schedules
Credit Products	Covers working capital for inputs, post-harvest storage, value-chain finance, and small-scale mechanization
Risk Mitigation	Integrates weather-indexed insurance, satellite monitoring, and diversification across crops and geographies
Value Chain Integration	Links finance to contracted buyers, aggregators, and farmer producer organizations (FPOs)

Table 1: Key Features of Agricultural Multi-Originator Structured Debt Funds

The World Bank's Agri-Connect initiative, launched in October 2025, explicitly proposes such a fund with a target size of US$1 billion to support 300 million smallholder farmers globally[5].

2. Current Position in India

2.1 India Does Not Yet Have a Dedicated Agricultural MOSDF

As of February 2026, India does not have a fully operational multi-originator structured debt fund dedicated specifically to smallholder agriculture. However, critical building blocks exist:

1. **Multi-Originator Securitization in Microfinance**: IFMR Capital pioneered multi-originator securitization (MOSEC) transactions in India since 2009, pooling microfinance loans from multiple MFIs and selling tranches to mutual funds and banks[6][7]. This demonstrates that the legal, regulatory, and operational infrastructure for multi-originator structures exists and functions in India.

2. **Mature Securitization Market**: India has an established securitization framework under SEBI and RBI regulations, with active markets for housing, auto, and MSME loan securitizations[7][8]. Rating agencies like ICRA provide structured finance ratings, and institutional investors are familiar with tranched debt instruments.

3. **Agricultural Infrastructure Fund (AIF)**: Launched in 2020 with ₹1 lakh crore allocation, the AIF provides medium-term debt to farmer producer organizations, agri-entrepreneurs, and startups for post-harvest infrastructure[9]. While not a structured debt fund, it demonstrates government commitment to innovative agricultural finance.

4. **NABARD's AgriSURE Fund**: A ₹750 crore fund-of-funds supporting agricultural startups and rural enterprises through alternative investment funds, though focused on equity and mezzanine finance rather than structured debt for smallholders[10].

5. **Emerging Agri-Fintech**: Platforms like DeHaat, Samunnati, and Agrostar are pioneering digital credit to farmers through value-chain linkages, creating potential origination networks for future structured funds[11][12].

2.2 Why the Gap Persists

Despite this infrastructure, agricultural MOSDFs have not materialized because:

- Agricultural loans are perceived as high-risk due to weather dependence and price volatility
- Small ticket sizes (₹50,000-₹3 lakh) create high transaction costs
- Data quality on farmer creditworthiness remains poor in many regions
- Lack of anchor investors willing to take first-loss positions specific to agriculture
- Policy uncertainty around agricultural debt waivers creates moral hazard concerns

The World Bank's Agri-Connect initiative explicitly aims to address these barriers through its proposed global multi-originator fund, with India being a priority geography[5].

3. Why is this Model the Need of the Hour for India's Farming Community

3.1 The Scale of Agrarian Distress

India's agricultural sector faces a multifaceted crisis that has resulted in devastating human costs:

- **Farmer Suicides**: Between 1995 and 2023, more than 390,000 farmers and agricultural laborers died by suicide, with approximately 11,000 deaths annually in recent years[13][14]. This represents a persistent crisis spanning nearly three decades.
- **Debt Burden**: Over 11,000 farmer suicides annually are directly linked to unpaid debts. Studies consistently identify indebtedness as the predominant single factor in 70-80% of farmer suicide cases[13][15][16].
- **Inadequate Incomes**: A Supreme Court panel report revealed that farmers earn an average of just ₹27 per day which is far below subsistence levels, while facing rising input costs and stagnant crop prices[17].
- **Credit Exclusion**: Over 60% of farmers lack access to formal credit sources, with this figure rising to 71.8% for farmers owning less than 0.01 hectares[18][19]. Small and marginal farmers (holding less than 2 hectares) constitute 86.2% of India's farming population but receive disproportionately limited formal credit.

3.2 The Informal Credit Trap

When formal institutions fail to provide adequate credit, farmers turn to informal sources with devastating consequences:

Credit Source	Interest Rate	Share of Small Farmer Credit
Formal Banks	7-12% annually	41%
Cooperatives/MFIs	12-18% annually	18%
Professional Moneylenders	24-60% annually	50% of informal debt
Traders/Input Dealers	30-40% annually	23%

Table 2: Interest Rates and Credit Sources for Indian Smallholder Farmers[18][19][20]

Professional moneylenders account for approximately 50% of informal debt for marginal and small farmers, with interest rates ranging from 24-60% annually[18][20]. This creates a structural debt trap: farmers borrow at high rates for cultivation, face uncertain harvests and price fluctuations, cannot repay principal, and must borrow again at even higher rates, leading to a cycle of deepening indebtedness[15][16].

3.3 Structural Barriers in Traditional Banking

Even when formal credit is theoretically available, systemic barriers prevent access:

1. **Collateral Requirements**: Banks primarily accept land titles as collateral. However, many farmers are tenants, sharecroppers, or have fragmented holdings with unclear titles, rendering them ineligible[19][21].

2. **Procedural Complexity**: Loan applications require extensive documentation, multiple verifications, and lengthy processing times which often takes 30-90 days. Many farmers lack financial literacy and find the process intimidating[19][22].

3. **Branch Penetration**: Remote rural areas have limited banking infrastructure. Even where bank branches exist, agricultural lending is often deprioritized due to perceived risks and low profitability[22].

4. **Loan Design Mismatch**: Standard bank products with fixed monthly repayments do not align with seasonal **agricultural cash flows** (6-12 month crop cycles)[22].

5. **Risk Aversion**: After experiencing high non-performing assets (NPAs) in agricultural portfolios during drought years, many banks have become risk-averse and prefer safer urban lending[19].

3.4 Climate and Market Vulnerabilities

Farmers face escalating risks beyond their control:

- Erratic monsoons and climate change have increased crop failure frequency
- Price volatility in both input costs (seeds, fertilizers) & output markets and scarce availability of the same due to poor administration.
- Lack of adequate crop insurance coverage (only 30% of farmers covered under PMFBY)
- Weak market linkages forcing dependence on exploitative middlemen
- Limited access to storage infrastructure leading to distress sales at harvest lows
- Lack of MSP to farmers wrt private transactions where the retailers sell the same with MRP

Together, these factors create an environment where farming becomes economically unviable for millions, yet they have no alternative livelihoods[15][16][17].

4. How Multi-Originator Structured Debt Funds Differ from Traditional Banking

4.1 Fundamental Differences in Structure and Function

Aspect	Traditional Bank Lending	Multi-Originator Structured Debt Fund
Risk Bearer	Single institution bears all default risk for its portfolio	Risk distributed across multiple tranches and investor types; first-loss layer absorbs initial defaults
Capital Source	Bank's own deposits and equity	Institutional investors (pension funds, insurers, global ESG investors) plus blended finance
Balance Sheet Impact	Loans remain on bank's balance sheet, constraining lending capacity	Loans securitized and sold to SPV, freeing bank capital for new lending
Farmer Access	Limited to creditworthy farmers with land titles and financial records	Extends to tenant farmers, landless, and those with value-chain contracts or FPO membership
Collateral Type	Primarily land titles and fixed assets	Warehouse receipts, crop receivables, offtake contracts, FPO guarantees
Loan Product Design	Standardized products with fixed monthly EMIs	Customized to crop cycles, value chains, and seasonal cash flows (6-24 month terms) just like any other project
Scale Constraint	Limited by bank's capital adequacy and NPA concerns	Can scale through repeated securitization; originate-and-distribute model
Risk Mitigation	Relies on collateral and borrower creditworthiness	Layered: portfolio diversification, subordinated tranches, guarantees, weather insurance, satellite monitoring
Value Chain Integration	Lends to individual farmers in isolation	Finances entire value chains: inputs, aggregation, processing, logistics
Cost of Capital	Bank's cost of funds (6-8%) plus margin	Blended: senior tranche at 7-9%, subsidized by concessional first-loss capital, resulting in lower effective rate to farmers
Data and Technology	Often manual, paper-based processes	Digital underwriting, satellite data, agri-tech platforms for origination and monitoring
Exit Strategy	Loans held to maturity on balance sheet	Secondary market liquidity through ABS trading; tranches can be sold to other investors

Table 3: Comparison of Traditional Banking vs. Multi-Originator Structured Debt Funds

4.2 Practical Example: How It Changes Access

Consider a 1-hectare marginal farmer in Rayalaseema, Andhra Pradesh, growing cotton:

Under Traditional Banking System:

- Eligible for Kisan Credit Card (KCC) loan of ₹50,000 maximum
- Requires land title documents, which may be unclear due to inheritance issues
- Application process takes 45-60 days
- Cannot access additional credit for drip irrigation (₹80,000) or joining FPO (₹20,000 membership)
- If tenant farmer, completely excluded from formal credit
- Falls back on local moneylender at 36% annual interest

Under Multi-Originator Structured Debt Fund Model:

- Joins a Farmer Producer Organization (FPO) with a contract farming agreement with a textile mill
- FPO arranges working capital loans of ₹1.2 lakh per farmer through a local cooperative bank
- Bank pools these FPO-linked loans and sells them to the structured fund SPV
- Fund accepts the textile mill's offtake contract as collateral (not individual land titles)
- Loan includes inputs (seeds, fertilizer), drip irrigation system, and technical support
- Repayment aligned with cotton harvest (single payment after 7 months)
- Effective interest rate 14% (lower than informal, higher than direct KCC but with much larger loan size)
- Bank can immediately originate new loans (capital recycled through securitization)
- Weather-indexed insurance bundled, reducing risk for all parties

The key difference: the farmer gets **larger loans, better terms, value-chain integration, and technical support**, while multiple parties share risk rather than the farmer and one bank bearing it alone[23][24].

4.3 How It Expands the Credit Pie (Not Just Redistributes It)

A common misconception is that structured funds merely shift existing credit around. In reality, they expand total credit availability:

1. **Capital Recycling**: Banks can lend ₹100 crore, securitize it, and use the freed capital to lend another ₹100 crore i.e., effectively doubling lending capacity with the same equity base.

2. **New Investor Classes**: Pension funds and insurance companies have trillions in assets but cannot directly lend to farmers. Structured funds create investment-grade instruments these institutions can hold, bringing entirely new capital into agriculture.

3. **Blended Finance Multiplier**: Every ₹1 of first-loss capital from donors/development banks can support ₹5-10 of senior debt from commercial investors, multiplying impact.

4. **Risk Reallocation**: By having development finance institutions and government guarantees absorb first losses (10-20%), the remaining 80-90% becomes attractive to risk-averse institutions that would never lend directly to smallholders.

This is fundamentally different from traditional banking, where each loan remains a permanent balance-sheet commitment until repayment[25][26].

5. Uses and Applications of Agricultural Multi-Originator Debt Funds

5.1 Credit Product Scope

Agricultural MOSDFs can finance the full spectrum of smallholder needs:

Product Type	Purpose	Typical Loan Size	Tenure
Input Finance	Seeds, fertilizers, pesticides, irrigation	₹30,000-80,000	6-12 months
Working Capital	Labor costs, land preparation, cultivation expenses	₹50,000-1.5 lakh	6-18 months
Equipment Rental/Leasing	Tractors, harvesters, drip systems, solar pumps	₹40,000-2 lakh	12-24 months
Post-Harvest Finance	Storage, transportation, processing, grading	₹25,000-1 lakh	3-9 months
FPO/Collective Loans	Aggregation infrastructure, collection centers, cold storage	₹5-50 lakh	18-36 months
Value-Chain Finance	Contract farming advances, processor working capital	₹1-10 lakh	6-18 months
Climate-Smart Agriculture	Organic inputs, regenerative practices, agroforestry	₹60,000-1.5 lakh	12-24 months

Table 4: Credit Products Suitable for Agricultural Multi-Originator Debt Funds

5.2 Value-Chain Integration: The Core Innovation

The most transformative aspect is financing **entire agricultural value chains** rather than isolated farmers:

Example: Pulses Value Chain in Madhya Pradesh

1. **Input Stage**: Fund finances input dealers to provide certified seeds and bio-fertilizers on credit to FPO members
2. **Production Stage**: Working capital loans to 5,000 smallholder farmers (0.5-2 ha) for chickpea cultivation
3. **Aggregation Stage**: Loan to FPO for procurement infrastructure (weighing, grading, temporary storage)
4. **Processing Stage**: Term loan to dal mill for modern processing equipment
5. **Marketing Stage**: Trade credit to enable FPO to hold stocks and sell during off-season price peaks

All loans are structured as a single pool with cash flows linked to the contracted sale of chickpeas to institutional buyers (retail chains, government procurement). The **offtake contract** serves as collateral for the entire chain[27][28].

This integrated approach:

- Reduces price risk (contracted sale prices)
- Ensures input quality (tied to credit)
- Improves farmer bargaining power (collective FPO negotiation)
- Creates predictable cash flows (making loans less risky)
- Enables larger loan sizes per farmer (supported by value-chain revenues)

5.3 Geographic and Crop Diversification

MOSDFs enable systematic risk management through diversification:

- **Multi-state portfolios**: Reduce monsoon risk by spreading across different agro-climatic zones
- **Multi-crop portfolios**: Balance risks of different crops (cereals, pulses, oilseeds, horticulture, dairy)
- **Seasonal staggering**: Mix Kharif (monsoon) and Rabi (winter) crops for year-round cash flows
- **Insurance integration**: Weather-indexed insurance and crop insurance bundled as loan conditions

This diversification is impossible for individual banks or farmers and is inherent to the pooled structure[29].

5.4 Enabling Technology Adoption

Structured funds can finance the adoption of productivity, enhancing technologies that traditional credit cannot:

- **Precision agriculture**: Soil testing, satellite-based advisory, variable-rate inputs
- **Mechanization**: Shared equipment through custom hiring centers
- **Water efficiency**: Drip irrigation, sprinkler systems, solar pumps
- **Climate resilience**: Drought-resistant varieties, agroforestry, cover cropping
- **Quality improvement**: Certification costs for organic, fair trade, or geographical indication products

These investments have 2-5 year payback periods and require flexible financing which is unavailable through traditional 6-12 month crop loans[30].

6. Global Success Stories and Case Studies

6.1 Eastern Europe and Central Asia: Structured Finance in Agriculture

The Food and Agriculture Organization (FAO) documented extensive use of structured finance instruments in agriculture across Eastern Europe and Central Asia, demonstrating that such mechanisms can successfully provide credit to otherwise non-creditworthy agricultural entities[31][32].

Key Findings:

- Structured finance enabled lending based on *transactional elements* of agricultural production (commodity flows, receivables, contracts) rather than traditional balance-sheet creditworthiness
- Warehouse receipt systems combined with securitization allowed farmers to access credit using stored commodities as collateral
- Credit guarantee mechanisms and first-loss layers successfully de-risked agricultural portfolios for commercial lenders
- Countries with similar agricultural finance development levels could adopt these instruments with appropriate regulatory frameworks

6.2 Latin America: FIRA's Credit Guarantee System (Mexico)

Mexico's FIRA (Fideicomisos Instituidos en Relación con la Agricultura) operates one of the world's largest agricultural credit guarantee systems, successfully supporting smallholder access to finance for over four decades[33].

Model Structure:

- FIRA provides guarantees covering 50-80% of loan value to commercial banks lending to agriculture
- Enables banks to lend to farmers and agribusinesses who lack traditional collateral
- Generated US$6 million in net profits during the fund's operational life while maintaining financial sustainability
- Serves small, medium, and large farmers as well as agro-enterprises
- Savings and loan associations and community cooperatives also access guarantees

Impact:

- Successfully scaled agricultural lending to underserved segments
- Created a replicable model for similar banking systems in other developing countries
- Demonstrated that guarantee-backed agricultural finance can be both developmental and financially viable

6.3 East Africa: Aceli Africa Blended Finance Initiative (Kenya, Rwanda, Tanzania, Uganda, Zambia)

The Aceli Africa initiative demonstrates that blended finance combining concessional capital with commercial lending can successfully expand smallholder finance at scale[34].

Program Results (2020-2023):

- Over 32,600 loans disbursed worth US$1.98 billion
- Launched in Kenya and successfully expanded to Rwanda, Uganda, Tanzania, and Zambia
- Hello Tractor (agri-tech mechanization platform) outperformed traditional lenders across key financial metrics
- Combined concessional capital with local innovation and after-sales support
- Delivered both financial returns and measurable social impact

Kenya's Leadership:

Kenya emerged as the regional leader in smallholder agricultural finance through this initiative. The 2024 Aceli Financial Benchmarking Report showed that:

- Default rates for smallholder loans remained below regional averages (7-9% vs. 12-15%)
- Rural communities previously considered "non-investable" demonstrated consistent repayment
- Blending innovation, trust-building, and local execution proved effective

Key Insight: "This report validates our belief that rural communities, especially in Kenya, are investable. By blending innovation, trust, and local execution, smallholder farmers can drive Africa's agricultural transformation." Mentions Adesuwa Ifedi, Heifer International[34]

6.4 Ethiopia and Tanzania: FAO-Rabobank Foundation Partnership

FAO and Rabobank Foundation implemented strategic collaborations in Ethiopia and Tanzania specifically designed to improve smallholder farmers' access to financial instruments[35].

Model Components:

- FAO provided technical expertise in producer cooperatives, rural financial markets, and capacity building
- Rabobank Foundation offered financing and risk-management instruments
- Focused on improving farmers' incomes, access to financial tools, and production efficiency
- Targeted endemic knowledge and capacity constraints of MFIs and cooperatives

Ethiopia Results:

- Interventions focused on enabling fluid, commercially based interactions between MFIs, cooperatives, and farmers
- Created sustainable exit strategy through integration with Integrated Agro-Industrial Parks (IAIP) project
- Financing models reaching proof-of-concept stage were scaled and deployed into structured markets
- Demonstrated that technical capacity building combined with financial access creates sustainable impact

6.5 India: Multi-Originator Securitization in Microfinance (Proof of Concept)

While not agricultural, IFMR Capital's multi-originator securitization (MOSEC) in Indian microfinance provides a directly relevant case study[36].

Structure and Achievement:

- First multi-originator securitization transaction in Indian microfinance (2009)
- Pooled loans from multiple MFIs (including smaller, non-rated institutions)
- Created tranched securities sold to mutual funds and banks
- Successfully provided liquidity to MFIs, enabling expanded lending
- Demonstrated that the originate-and-distribute model works in the Indian regulatory environment

Second Transaction Highlights (2010):

- Successfully placed with mutual funds, showing investor acceptance
- Smaller MFIs gained access to institutional capital previously unavailable
- Created secondary market liquidity for microfinance assets
- Proved the technical and legal infrastructure exists for similar agricultural structures

Relevance for Agriculture: The MOSEC model demonstrates that India already has the regulatory framework, institutional capacity, and investor appetite for multi-originator structured debt. Extending this to agriculture requires agricultural-specific adaptations (seasonal repayment, crop insurance integration, value-chain linkages) but not fundamental structural innovation.

6.6 Global: One Acre Fund (Kenya, Rwanda, Tanzania, Burundi, Uganda, Malawi, Zambia)

One Acre Fund has reached 3 million smallholder farmers over 16 years with a model that integrates financing with inputs, training, and market access[37].

Model:

- Provides seeds, fertilizer, and tools on credit to smallholders
- Farmers repay over the farming season after harvest
- Includes training in improved agricultural practices
- Generated $3.60 in increased farmer income per $1 invested

Impact:

- Demonstrated that smallholder lending combined with technical support achieves high repayment rates (95-98%)
- Showed that input financing is commercially viable when properly structured
- Model has been supported by Development Finance Corporation (DFC) with $20 million loan facilities

6.7 Nigeria: Babban Gona Aggregator Model

Babban Gona in Northern Nigeria combines training, financial credit, improved inputs, and aggregation services for smallholders[37].

Innovation:

- Acts as aggregator, buying crops from participating farmers
- Provides storage to enable sale at optimal market timing (not distress sales at harvest)
- Integrates entire value chain: credit → inputs → training → production → aggregation → marketing
- Reduces farmer risk through guaranteed offtake

Significance: Demonstrates the power of value-chain integration where finance is embedded within agricultural production systems rather than provided in isolation.

6.8 Cross-Cutting Lessons from Global Cases

1. **Blended Finance Works**: Combining concessional/guarantee capital with commercial lending consistently expands reach while maintaining financial sustainability (Mexico, East Africa, global DFIs)[33][34][37].

2. **Value-Chain Linkages Reduce Risk**: Financing integrated value chains (inputs-production-aggregation-processing) dramatically improves repayment rates compared to isolated farmer lending (Nigeria, Ethiopia, Tanzania)[35][37].

3. **Technical Support + Finance = Success**: Pure credit provision has limited impact; combining finance with training, inputs, and market access generates transformative results (One Acre Fund, Ethiopia, Tanzania)[35][37].

4. **Smallholders are Creditworthy**: When properly structured with appropriate risk mitigation, smallholder portfolios can achieve 91-95% repayment rates, comparable to or better than other MSME segments (East Africa, One Acre Fund)[34][37].

5. **Guarantee Mechanisms Scale Commercial Lending**: Credit guarantee funds that absorb first losses effectively crowd in commercial bank capital at scale (Mexico's FIRA being the exemplar)[33].

6. **Structured Finance Enables Non-Traditional Collateral**: Warehouse receipts, commodity flows, and contracted receivables can substitute for land titles when properly structured (Eastern Europe, Central Asia)[31][32].

7. **Technology Enables Scale**: Digital platforms, satellite monitoring, and mobile money dramatically reduce transaction costs and improve portfolio monitoring, making small-ticket lending viable (East Africa, agri-tech platforms)[34].

7. Can This Help Indian Farmers? An Unbiased Assessment

7.1 Potential Benefits if Implemented Correctly

If properly designed and implemented, multi-originator structured debt funds could address several critical gaps in India's agricultural finance ecosystem:

Problem Addressed	Mechanism of Impact
Credit access for landless/tenant farmers	Value-chain contracts and FPO membership substitute for land titles as collateral, expanding eligibility
High informal interest rates (24-60%)	Blended finance structures can deliver effective rates of 12-18%, significantly lower than money lenders while remaining commercially sustainable
Inadequate loan sizes	Value-chain financing enables larger loans (₹1-3 lakh vs. ₹50,000) by basing credit on contracted sales rather than individual land value
Mismatch between loan terms and crop cycles	Flexible 6-24 month terms with seasonal repayment schedules aligned to harvest cash flows
Bank capital constraints	Securitization frees bank capital for new lending, potentially doubling lending capacity with same equity base
Geographic risk concentration	Multi-state, multi-crop pooling diversifies monsoon and price risks systematically
Limited technology adoption	Longer-term finance (18-36 months) enables investment in irrigation, mechanization, and climate-smart practices
Weak value-chain integration	Integrated financing of inputs-production-aggregation-processing strengthens farmer bargaining power and income stability
Post-harvest distress sales	Storage and working capital finance enables farmers to hold crops and sell at better prices
Climate vulnerability	Bundled weather-indexed insurance and crop insurance as mandatory loan conditions

Table 5: Potential Benefits of Agricultural Multi-Originator Debt Funds for Indian Farmers

7.2 Real-World Constraints and Risks

An honest assessment must also acknowledge significant implementation challenges and risks:

1. **Scale Requirements**: To achieve financial sustainability and attract institutional investors, the fund would need to reach minimum scale of ₹2,000-5,000 crore (US$250-600 million). Achieving this scale requires years of pilot testing, originator network development, and policy support.

2. **Originator Quality**: The model depends entirely on the quality and capacity of originating institutions (banks, MFIs, cooperatives, agri-tech platforms). Many rural banks and cooperatives currently lack the systems, data infrastructure, and human resources to originate and service agricultural loans at required quality standards.

3. **Data Infrastructure Gaps**: Effective risk pricing requires data on farmer credit history, crop yields, insurance claims, and satellite-based crop monitoring. Much of India's agricultural landscape lacks this data infrastructure, particularly in remote regions.

4. **Moral Hazard from Debt Waivers**: India has a history of politically motivated agricultural debt waivers (2008, 2017, 2019 in various states). These create moral hazard by which farmers may deliberately default expecting future waivers, while investors fear policy unpredictability. This political risk undermines the commercial viability of any agricultural lending at scale[38].

5. **First-Loss Capital Requirements**: The model requires significant first-loss capital (10-20% of fund size = ₹400-1,000 crore for a ₹5,000 crore fund) from development finance institutions, donors, or government. Securing this anchor capital is not guaranteed. CSR funding may be handy in this regard.

6. **Regulatory Complexity**: Structuring requires navigating SEBI (securitization), RBI (banking), NABARD (agricultural finance), and state cooperative department regulations simultaneously. Regulatory coordination can take several months / years.

7. **Climate Uncertainty**: Increasing climate volatility (erratic monsoons, extreme temperatures, floods) makes agricultural cash flows less predictable. While diversification and insurance mitigate this, they do not eliminate climate risk.

8. **Value-Chain Dependence**: The model works best when linked to functioning value chains with creditworthy buyers (processors, exporters, retail chains). In regions lacking organized value chains, the model's applicability is limited. Andhra Pradesh's Rythu Bharosa Kendras (RBKs) model is a profound initiative by then Chief Minister shri Y.S JaganMohan Reddy in this regard[39].

9. **Transaction Costs**: Despite securitization, originating and servicing small loans (₹50,000-2 lakh) remains costly. Digital platforms reduce but do not eliminate these costs. The model may not be viable for ultra-small loans below ₹30,000.

10. **Exit Strategy Risk**: Secondary market liquidity for agricultural debt securities remains untested in India. If investors cannot exit positions, the fund may struggle to raise subsequent tranches.

7.3 Conditions for Success in the Indian Context

Based on global evidence and India's specific conditions, agricultural MOSDFs are most likely to succeed if:

- **Geographic Selectivity**: Launched first in 3-5 states with strong FPO ecosystems, organized value chains, and supportive state governments (e.g., Maharashtra, Andhra Pradesh, Madhya Pradesh, Gujarat, Tamil Nadu)
- **Crop Focus**: Concentrated on specific value chains with contracted buyers (horticulture, dairy, pulses, oilseeds) rather than attempting pan-crop, pan-India scale immediately
- **FPO-Centric**: Channels 60-70% of credit through Farmer Producer Organizations rather than individual farmers, leveraging collective credit assessment and peer pressure for repayment
- **Government Partnership**: NABARD anchors the fund with ₹500-1,000 crore first-loss capital, State Agriculture Infrastructure Funds co-invest, and existing credit guarantee schemes (CGTMSE, NCDC) integrate with the structure or even encourage through moderating CSR scheme
- **Technology Backbone**: Digital loan origination platforms, satellite-based crop monitoring, and mobile-based repayment systems are mandatory from day one, not added later
- **Pilot Phase**: 3-year pilot (₹500-1,000 crore) in 3 states covering 50,000-100,000 farmers to test assumptions, refine processes, and build track record before scaling

- **Policy Certainty**: Government provides explicit commitment to avoid debt waivers for fund-financed loans, or structures waiver compensation mechanisms that protect investor returns
- **Insurance Integration**: Every loan automatically includes weather-indexed or yield-based insurance, with premiums factored into interest rates but subsidized through government schemes (PMFBY, RWBCIS)
- **Blended Subsidy**: Interest subvention schemes (currently providing 2-3% subsidy on bank loans) are extended to fund-originated loans, lowering effective farmer rates to 9-12%
- **Long-Term Anchor Investors**: Patient capital from domestic pension funds (NPS), insurance companies (LIC), and sovereign funds (NIIF) committed for 7-10 year horizons, not short-term yield-seeking capital

7.4 Who Would Benefit Most?

The model would most directly help:

1. **Small and marginal farmers (0.5-2 ha) who are FPO members**: These farmers currently fall into a gap who are too large to access microfinance, too small/risky for banks. FPO membership plus value-chain linkages make them viable borrowers under this model.
2. **Tenant farmers and sharecroppers**: Currently excluded from land-title-based credit, they could access finance through FPO collective borrowing or contract farming arrangements.
3. **Farmers in organized value chains**: Those growing horticulture, dairy, pulses, or other crops with contracted buyers/processors would benefit from integrated value-chain financing.
4. **Climate-smart and organic farmers**: Longer-term loans (18-36 months) enable transition to sustainable practices with 2-3 year payback periods.
5. **FPOs and farmer collectives**: Would gain access to working capital and infrastructure loans at rates lower than current NBFC lending (16-20%).

Who would NOT be reached:

- Subsistence farmers in remote areas without value-chain linkages or FPO membership
- Farmers in crops/regions with no organized markets or buyers
- Farmers requiring tiny loans (<₹30,000) where transaction costs remain prohibitive
- Farmers in regions with persistent debt-waiver cycles creating moral hazard

Realistically, the model could reach 30-40% of India's 140 million smallholder farmers over 10-15 years significantly[41].

7.5 Comparison with Alternative Approaches

It is important to contextualize structured debt funds relative to other approaches:

Approach	Strengths	Limitations	Complementarity
Interest Subvention (Current Policy)	Simple, universal, reduces farmer rates 2-3%	Requires ongoing budget, doesn't expand credit quantum, benefits only those already accessing formal credit	MOSDFs can leverage subvention to lower rates further
Direct Cooperative Lending	Local relationships, community pressure for repayment	Capital-constrained, weak governance in many PACS, limited technology	Cooperatives can be originators for structured funds
Kisan Credit Card Expansion	Well-established system, universal eligibility	Doesn't solve collateral problem, limited to small amounts, high NPAs	Can be complementary; KCC for small amounts, MOSDFs for larger value-chain loans
Agri-Tech Fintech	Digital underwriting, low transaction costs, innovative models	Limited scale so far, dependent on value chains, not suitable for all farmers	Ideal originators for structured funds; solves last-mile problem
Agricultural Infrastructure Fund	Large scale (₹1 lakh crore), long tenure, infrastructure focus	Targets FPOs/agri-SMEs not individual farmers, doesn't solve input finance gap	Complementary; AIF for infrastructure, MOSDFs for working capital

Table 6: Agricultural Multi-Originator Debt Funds vs. Alternative Approaches

The structured fund model is **not a silver bullet** but rather a complementary mechanism that addresses specific gaps (capital scaling, risk sharing, value-chain integration) that other approaches do not.

7.6 Bottom Line Assessment

Can this help Indian farmers?

Yes, but with important qualifications:

- It can **meaningfully expand credit access** for 40-60 million small and marginal farmers who are currently underserved by traditional banking but above microfinance thresholds
- It can **reduce dependence on informal credit** by 30-40% for farmers it reaches, lowering interest costs from 30-40% to 12-18%
- It can enable **larger loan sizes** (1.5-3x current amounts) supporting productivity investments in irrigation, mechanization, and quality inputs
- It can strengthen **value-chain integration**, improving farmer bargaining power and price realization
- It **will not solve all agricultural distress**: Climate uncertainty, land fragmentation, price volatility, and structural rural poverty require broader policy interventions (MSP reform, crop insurance, irrigation investment, rural industrialization)
- It requires **5-7 years** of piloting, capacity building, and scaling to reach meaningful impact and is not a quick fix

- Success depends critically on **policy certainty**, **anchor capital** (NABARD/government first-loss), and **FPO ecosystem development**

Is it worth pursuing?

Yes. Despite limitations and implementation challenges, the global evidence (East Africa, Mexico, Latin America) and India's existing financial infrastructure (proven multi-originator securitization in microfinance) suggest this is a viable, scalable model that can address a critical market failure. It should be pursued as part of a **portfolio of interventions**, not as a standalone solution[40].

8. Conclusion

India's agricultural sector faces a persistent financing crisis that contributes directly to farmer distress and suicides. Over 60% of smallholder farmers lack adequate access to formal credit, forcing reliance on informal lenders charging 30-60% interest and creating debt traps that have claimed over 390,000 lives in the past three decades[13][18][19]. Traditional banking systems, while essential, face structural constraints that limit their ability to serve smallholder farmers at scale: balance-sheet limitations, collateral requirements that exclude tenant farmers, risk aversion driven by agricultural NPAs, and products misaligned with seasonal cash flows.

Multi-originator structured debt funds represent a financial innovation that addresses these constraints through risk layering, capital recycling, and value-chain integration. By pooling loans from multiple originators, structuring them into tranches with different risk profiles, and using blended finance to attract institutional capital, these funds can expand the quantum of agricultural credit while lowering costs for farmers. Global evidence from East Africa, Latin America, Eastern Europe, and India's own microfinance sector demonstrates that such structures are technically viable and can achieve financial sustainability while reaching underserved populations[31][33][34][35][36].

However, an honest assessment must acknowledge that this model is not a panacea. It will work best for small and marginal farmers who are part of organized value chains, members of Farmer Producer Organizations, or linked to contracted buyers, likely 30-40% of India's 140 million smallholders over a 10-15 year horizon. It will not immediately reach the most vulnerable subsistence farmers in remote areas, and it depends critically on policy certainty, anchor capital from development institutions, robust data infrastructure, and time for capacity building.

The question is not whether multi-originator structured debt funds can solve all agricultural distress—they cannot. The question is whether they can meaningfully expand financial access, reduce exploitative informal lending, and strengthen value-chain integration for millions of farmers currently trapped between inadequate formal credit & predatory informal credit and value for crop (MSP not limited to government intervention/buying). The evidence suggests they can, and given the scale of farmer distress in India, every viable mechanism deserves serious consideration and pilot implementation.

The World Bank's Agri-Connect initiative has identified this approach as a global priority, and India has the financial infrastructure, institutional capacity, and regulatory framework to implement it. What is required now is:

1. Political commitment to pilot the model in 3-5 states over 3-5 years
2. NABARD anchoring the fund with ₹500-1,000 crore in first-loss capital or may even integrate the CSR scheme.
3. Integration with existing schemes (AIF, KCC, PMFBY, FPO promotion)
4. Technology platform development for digital origination and monitoring
5. Policy certainty on debt waivers or structured compensation mechanisms
6. Participation by state governments, cooperatives, banks, MFIs, and agri-tech platforms

If these conditions are met, multi-originator structured debt funds could become a critical tool in transforming millions of smallholder farmers from distressed borrowers into commercially viable agricultural entrepreneurs which is not by replacing traditional banking, but by creating a parallel, complementary financing channel that leverages both public and private capital to bridge a market failure that has persisted for decades. Given what is at stake, i.e., farmer livelihoods, food security, and rural economic development, this is an innovation worth pursuing with urgency, realism, and determination.

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