THEMATIC NOTE 6

Risk Capital for Agriculture in Developing and Middle-Income Countries

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SYNOPSIS

Risk capital is money explicitly available for investment into a high-risk business or a security of some type—typically those which are not publicly traded on any national stock exchange. In this note, "risk capital" refers to investment in a company or project at an early or high-risk stage. Because interest in agricultural risk capital investment is relatively new (although investment at other stages is already in place), many of the investment vehicles cited in this note are still relatively unproven. This note draws on lessons from using risk capital in other sectors, especially in innovative technology. It describes current and possible future investment models, their benefits, and potential applications in agricultural investment. Global lessons from developing investment vehicles and investments in both agriculture and other asset classes are presented with recommendations for policy makers and practitioners. Because capital for investment does not exist in isolation, an enabling environment must be in place or under development. Traditional venture capital is not appropriate for countries lacking essential features for venture funding, such as a strong flow of investable opportunities (which can be stimulated by the public and private sectors), access to domestic or foreign stock markets, a large business sector for trade sales of companies, and an entrepreneurial culture where risk and failure are acceptable. It is always critical to ask the question: What problems are to be solved or needs to be met? Only then can it be known whether the provision and use of investment capital could help accomplish the expected outcomes.

BACKGROUND AND CONTEXT

Investment in agriculture is growing because of improved profitability projections and the interest of development agencies and governments to increase investment in the sector to achieve food security and economic growth. Investment is essential for the agricultural sector to grow; it is estimated that net investments of US$83 billion per year must be made in the agricultural sector in developing countries if there is to be enough food to feed the world population of 9.1 billion in 2050. Private investors need to be the major sources of this capital. Public investment cannot meet the needs, but it can be effective in stimulating and leveraging private investment in the sector. "...[A]gricultural investment growth has not only been spurred by increased agricultural prices and food security concerns, but also importantly because of innovation and experience in *risk mitigation* of investment. One manifestation of this phenomenon is the proliferation of funds set up to target the agricultural sector—*agricultural investment funds*" (FAO 2010, xv).[1]

Investing in agricultural innovation is an important part of overall agricultural investments. Increasingly agricultural innovation is seen as a sector that offers profitable investment opportunities for private investment funds as well as alleviating poverty and increasing food security (World Bank 2007). Investments are being made in SMEs that are developing innovative agricultural technologies to improve the quality of crops, reduce risk and losses, and improve efficiency to increase competitiveness. It is expected that the level of innovative technology used in agriculture in developing countries will significantly increase through new applications of biological and information technologies. The availability of "risk capital," money explicitly intended for investment into a high-risk business or a security of some type (typically those which are not publicly traded on any national stock exchange), is warranted. Gaps in the provision of finance for agriculture and agricultural innovation for SMEs and early-stage firms are evident, however, as illustrated by data on Africa, which show that the "meso-finance stage financing is the most difficult to obtain"

(table 5.9) (the finance gap for small enterprises is also noted in TN 3). The choice of a risk capital investment model depends on the growth stage of the project or company that will receive the funds.

Innovation funds, including competitive grants or matching grants as described in TN 2, may be used to make a small enterprise in the early stages of development "investment-ready" for the types of investment shown in figure 5.3.[2] Innovation funds may, for example, support moving an idea through the feasibility and proof of concept phased to a stage that is much more attractive to angel and seed capital. Incubators (TN 3) may provide similar support.

Typical equity investment levels, which do not have clearly defined boundaries, are:

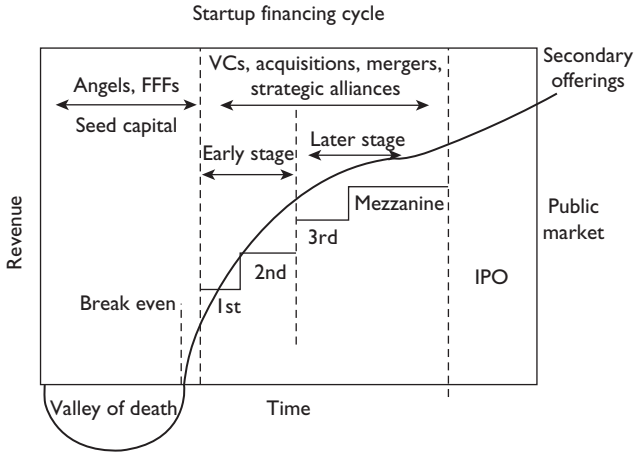
1. ***Angel investment.*** An angel investor provides backing to very early-stage businesses or business concepts. For example, a business may have little more than a business concept and perhaps a plan for growing the business.[3] Angel investors may group together to form angel investment pools or come from the category referred to as FFFs (friends, family, and fools—see figure 5.3).
2. ***Seed fund investment.*** A pool of money used to back companies that are too small to attract venture firms but require too much money for angel investors. For example, a business may have a prototype product or service but few sales.
3. ***Venture capital fund investment.*** Venture capital funds pool and manage money from institutional investors, such as pension funds and insurance companies, as well as from other venture funds and wealthy individuals. They take equity stakes in SMEs with strong growth potential.

Table 5.9 The Gap in Access to Enterprise Finance in Africa

Funding level	Funding category	Availability
US$10 million	Project financing	Yes
US$1–10 million	Venture capital/private equity	Some
US$50,000–1 million	Startup/seed capital/growth capital/meso-finance	No
US$100–50,000	Microfinance	Yes

Source: Adapted from Ashley, Warner, and Romano 2005.

Figure 5.3 Typical Financing Stages for Company Growth



Source: Wikipedia (http://en.wikipedia.org/wiki/Startup_company), accessed September 2011.
Note: FFFs = family, friends, fools; VC = venture capital; IPO = initial public offering.

This note focuses on the venture capital model of risk capital and pre-venture capital. Because much of the interest in risk capital investment for agricultural innovation is relatively new, although investment at other stages is already in place, *many of the investment vehicles discussed here have a limited track record for investment in agricultural innovation and are consequently unproven.* For this reason, the discussion that follows draws on lessons learned in the use of risk capital in other more traditional investment sectors, especially in innovative technology.

RISK CAPITAL INVESTMENT MODELS

The elements needed to provide risk capital for innovation are: (1) an adequate number of opportunities for investment (referred to as "deal-flow"); (2) a structured vehicle that provides a source of funds; (3) defined criteria for investments made by the investment vehicle; (4) a methodology for evaluating and selecting projects to be supported according these criteria; and (5) a fund management entity and governance to monitor and manage funded projects.

Venture capital in agriculture: The venture capital fund model

A suitable investment model is required.[4] Although traditional venture capital may not always be appropriate for many developing countries, it is a helpful model to which alternative financing models such as angel, seed, or meso-level investment can be compared. Venture capital[5] is a form of private equity provided for early-stage and more mature companies with substantial market potential. Returns on venture capital investment are from a trade sale (sale to, or merger with, another company) or an initial

public offering (IPO) in which the company becomes authorized to sell its stock to the general public on a stock exchange. Venture capital funds will not only provide money but will mentor their investee firms. Venture capital funds are very selective in making investments and may review many hundreds of business plans before investing in one opportunity. By their nature, venture capital investments are high risk and investments may fail. On average, about one in 10 venture capital investments will provide a substantial return on investment. Others may fail or provide insufficient returns to justify the investment. Venture capital funds usually invest at several stages of a business's development: *startup* (funding for businesses at the early stage of product or service development), *first-round* (funding for businesses that have initial sales), *second-round* (working capital for early-stage companies that are selling product, but not yet turning a profit), *third-round* (expansion funds for a profitable company; also called mezzanine financing), and *fourth-round* (financing for exit preparation such as a trade sale or an IPO).

The venture capital fund management structure

Venture capital firms are typically structured as limited partnerships ("limited" because they limit the liability of investors in the fund, who are referred to as the "limited partners"). Limited partnerships have "general partners," which serve as the managers of the venture capital fund and investment advisors for the venture capital funds raised. The limited partners have no decision-making authority for the investments being made. These limited partnerships are legal entities, which hold the funds from the limited partners and have a limited lifetime, typically around ten years. This means that the fund must cash in (exit) their investments in, say, five to seven years, and this need will be a factor in selecting opportunities in which to invest.

Venture capital fund management team

Venture capital fund management teams receive a combination of management fees and a share of the profits. Compensation in the form of a percentage of the fund's capital means that there is a lower limit on the amount of capital necessary to support qualified management teams. Thus this venture fund model cannot function if only small amounts of capital are available (for example, seed funds have to consider other compensation systems).

The *fund manager* is responsible for the overall financial and administrative management of investments, including: assessments on potential investments (known as "due diligence"); representation of the fund to the potential investment's board of directors or equivalent; defining exit strategies; monitoring investments and taking corrective action when needed; and communication with all investment parties. An *advisory board* composed of independent members and investor representatives should: provide guidance on the implementation of the fund's investment strategy; ensure adherence of the fund to its investment charter; and resolve conflicts of interest. An *investment committee* composed of fund representatives and/or other investors should: approve all investment decisions of the fund, on the basis of reports of evaluations and due diligence performed by the fund manager; conduct postinvestment monitoring; and review progress of the fund's portfolio and fund manager performance.

Funding criteria

Key criteria may include the following:

- A strong and committed core management team with a demonstrated performance track record, commitment, enthusiasm, and energy, although in some cases a reason to invest may be to grow the potential of new businesses.
- Sales of products or services locally or in other markets.
- Potential for scaling up the business.
- Potential for sustainable high growth for the business.
- Expectation of sustainable long-term competitive advantage.
- A viable business model (overall business concept) followed by a viable business plan (a detailed plan for growing the business) delivering an attractive return on investment.
- A clear strategy for a cashing in their investment within a reasonable time period (known as the investment exit).

A selection of agricultural investment funds and the type of instrument and investment preferences is shown in table 5.10. A few of these funds, mostly the new ones, support agricultural innovation, but overall they focus on agribusiness, value chain development, and food processing. Box 5.29 describes one representative fund in more detail.

POTENTIAL BENEFITS

The impact of providing risk capital for investment in innovative agricultural ventures will depend on the reasons for

Table 5.10 Representative Agricultural Investment Funds

Fund (founding date) Purpose and capital base	Countries/target investments	Financial instruments
Actis Africa Agribusiness Fund (2006) www.act.is US$92.7 million private equity. This is a specialized fund from Actis, a leading private equity investor with sixty years of experience in emerging markets.	*Côte d'Ivoire, Kenya, South Sudan, Tanzania, Zambia* Agribusiness across the supply chain.	*Equity and quasi-equity investments* Deal size: US$5–15 million.
African Agricultural Capital (2005) www.aac.co.ke/web/ Venture Capital Fund (US$8 million), which is fully invested in 16 ventures. In response to the absence of an investment facility that focuses on the development of private initiatives in agriculture in East Africa, the Rockefeller Foundation, the Gatsby Charitable Foundation, and Volksvermogen NV set up the fund to invest in agriculture-related SMEs in East Africa.	*Kenya, Tanzania, Uganda* – Small and medium-sized agricultural enterprises. – Provision of risk capital to seed companies operating in agricultural value chains.	*Equity, quasi-equity, and debt investments* – Most likely there are no investments below US$100,000. – Objective is to earn a minimum gross return of 12%/yr on funds invested.
African Agribusiness Investment Fund (2008) www.agrivie.com/index.html US$100 million private equity.	*Botswana, Ghana, Kenya, Nigeria, South Africa, Tanzania, Uganda* Agribusiness sector across sub-Saharan Africa along the value chain.	*Equity and quasi-equity investment.*
Agribusiness Partners L.P. (United States of America/Russian Federation)/Agribusiness Partners International Fund partnership (1995) www.burlingtoncg.com/api.shtml US$100 million. The fund had an initial guaranty from the Overseas Private Investment Corporation.	*Georgia, Kazakhstan, Moldova, Russian Federation, Ukraine* Agribusiness and food-processing companies.	*Private equity, venture capital*
Omnivore Capital (2010) The Godrej Group US$50 million (target). Investment in scientists and entrepreneurs who are innovating to improve agricultural productivity. Investment in small and medium-sized companies focused on agricultural innovation.	*Canada, India, USA*	*Seed and venture capital*

Source: FAO (2010, 164 ff).

Box 5.29 African Agriculture Fund

The African Agriculture Fund was established in 2009 by AfDB, AGRA, BOAD, IFAD, and AFD. The fund has an initial target size of US$150 million and expects to raise additional commitments up to an aggregate capital amount of US$500 million. Investment objectives of the fund, chosen because they are assessed as future high-growth sectors, include:

- Food production industries (or provide financial services to small agribusiness operators).
- Invest in the value chain to reduce transaction costs of producers/processors and in storage/marketing.
- Grow their markets within the region or develop export opportunities.
- Main investment sectors: cereal production, roots and tubers, livestock and dairy products, fruit products, seed production and fertilizers, fats and oils, investment financing, equity, and quasi-equity products, Technical Assistance Facility (TAF).

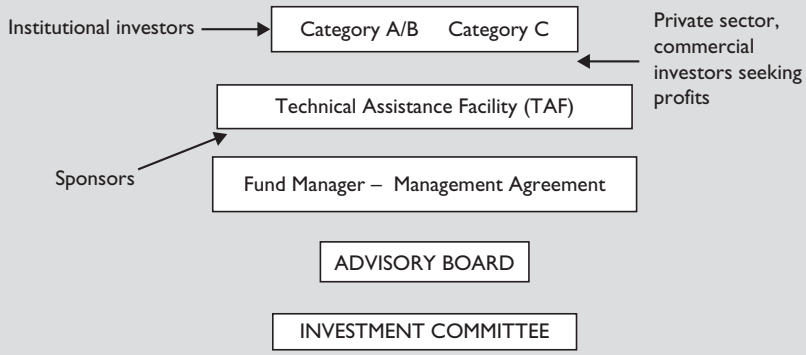
The fund has two windows of financing for enterprises. A small–medium company financing window offers investment between US$0.15 million and US$4 million to help bridge the typical early-stage financing gap. A large company financing window is designed for investment up to US$15 million for more mature firms.

Fund terms and exit strategy are: a five-year commitment period; seven- to ten-year investment maturity; the exit strategy shall be, as the case may be, to provide for the option for local agricultural producers to acquire interests in the targets; and average Internal Rate of Return per target shall be around the mid-teens.

(Box continues on the following page)

Box 5.29 African Agriculture Fund (continued)

African Agriculture Fund Structure



Source: www.phatisa.com.
Note: AFD = Groupe Agence Française de Développement; AfDB = African Development Bank; AGRA = Alliance for a Green Revolution in Africa; BOAD = Banque Ouest Africaine de Développement; IFAD = International Fund for Agricultural Development.

investing: Is the intention to earn a financial return on the investment, support innovation, create economic development, or promote social good? For typical venture capital investments, the Internal Rate of Return (IRR) is used as a measure of the cash return on an investment. The IRR can be thought of as the effective rate of interest earned by the investment.[6] A project may be a good investment if its IRR is greater than the rate of return that could be earned by alternative investments of equal risk. A venture capital fund in a developed country has traditionally expected an IRR of at least 20–25 percent (before the 2008/09 crisis).

The African Agriculture Fund cited in box 5.29 is an example of a mix of public and private funds. The presence of public support can be attractive to private investors. Although agriculture may have a lower IRR than other types of investment, the fund is designed to reduce risk where possible by adhering to strict investment criteria. Funds that provide training and technology transfer to farmers further reduce investment risk. Another benefit is the provision by some funds (such as African Agricultural Capital) of equity investment with possible debt financing in cases where taking an equity position in a business is not inappropriate (for example, when there may be too much dilution of value for the shares held by existing investors).

POLICY ISSUES

Sustained innovation and commercialization need consistent policies for the long term. Obtaining early-stage financing for SMEs with science- and technology-based products or services remains difficult even in developed markets. Investment capital is moving to later stages to avoid risk in developed markets and even in some developing markets such as India. SMEs do not have the tangible assets required by banks and other lenders as collateral; their assets may be intangible, in the form of patents or know-how. These firms may also have an unreliable revenue stream and inexperienced management. Before investment capital can be deployed effectively and efficiently, it may be necessary to make improvements in a country's IP regime and improve the support ecosystem. But it is also necessary to be realistic about what improvements can be made in the short term. Waiting until there is a fully functioning support system in place will mean delaying action indefinitely.

The frequent public policy response is (Hodgson 2009):

- ***The creation of some venture funding entity*** that provides, often with public sector participation, risk capital for new, knowledge-based businesses.

- ***Mentoring and training entrepreneurs*** in how to prepare their ideas to be investment-ready and thus attract funding by the right presentation of evidence on the opportunity and potential rewards to those looking to make investments.

This response may be necessary, but it is not sufficient as a capacity-building policy. For example, this note emphasizes the importance of creating the ecosystem for innovation, including the role of government policy in improving existing systems, such as reducing barriers to success, as well as making more radical changes. For agribusiness support this may include physical infrastructure such as transport systems as well as education.

Contributions of public and private sectors to both finance and knowledge generation should be coordinated to achieve maximum benefits. Public sector support in reducing barriers to business, for example, by easing the process of business registration and creating a more favorable tax regime and tax inspection systems, can help combine public and private sector investments. A related issue is to assure that foreign investors will be able to transfer their capital gains out of the country.

IMPLEMENTING RISK CAPITAL SYSTEMS: LESSONS LEARNED AND RECOMMENDATIONS FOR PRACTITIONERS

Although the provision of risk capital equity investment funds for agricultural innovation is a new trend, lessons have been learned from both agricultural investment and from investing in nonagricultural sectors.

Investment fund management

The fund management (general partners and support staff) must have the necessary skills to carry out the management functions described earlier, including in-country experience of working under the constraints of a frequently underdeveloped ecosystem to support the selection and growth of the fund's investments. Experience has shown that nonresident management teams and lack of experience in the country or in similar environments may lead to failure.

Advisory boards, which are responsible for guiding the fund's investment strategy and making sure that the fund adheres to its investment objectives, all too frequently in developing countries do not in fact provide effective advice, owing to a lack of experience or understanding of investment processes. Advisory boards composed of government officials or representatives from large enterprises do not have the skills to carry out the duties of an advisory board.

Even more important, the investment committee, which must approve all investment decisions of the fund as recommended by the management, must be fully informed and experienced in such decision making, which is not always the case in developing countries. There is a need to provide training for advisory boards and investment committees working with agricultural innovation projects.

Challenges for a developing country or region

The challenges specific to developing countries or regions include:

- ***Setting the right balance*** between (1) investing in technology commercialization and (2) investing in technology absorption and adaption, together with investment in building the capacity to support technology translation and development.
- ***Understanding that capital for investment does not exist in isolation.*** It is critically important to have an ecosystem (enabling environment) that includes but is not limited to such features as: provision of advisory services, a supportive IP regime, access to markets, an effective governance structure, availability of investment exits as a way to realize a return on investment, and the existence of the rule of law to provide investor confidence.
- ***Recognizing that traditional venture capital is not appropriate for many countries*** lacking the features necessary for venture funding, such as a strong flow of investable opportunities, stock markets, a large business sector for public listing or trade sales of companies, and an entrepreneurial culture where risk and failure are acceptable.[7]
- ***Building the ability to provide small amounts of funding quickly*** for very early-stage technology development or technology translation funding, and knowing how to invest these funds in a "smart" fashion, to attract private sector participation and resources needed to scale up investments.
- ***Maintaining close contacts*** with the private sector and other investment funds in regions as well as globally.
- ***Finding partners*** to provide access to public and private financing outside the country when only limited financing is available within the country.
- ***Having a locally based investment fund manager*** (that is, one who resides within the country).

A cautionary lesson from developing countries is that investment decisions can be distorted by political influence. Government officials typically lack the experience to evaluate and manage investment opportunities. In India, for example, the selection of government-funded projects that were candidates for further investment was contracted to a private sector group.

Practical issues for risk capital use in early-stage development

Policies should focus on the practical rather than the ideological. A practical problem for many developing countries in negotiating financing agreements to either acquire a technology or license IP to others is that someone has to take the first step and agree to provide initial funding, which could be matched later by others. Sometimes this funding can be in the form of a grant for early-stage development, as noted. Should these grants take too long to be approved (as is often the case), the deal may be lost.

Note that usually angel and seed funding rely on the availability of later-stage capital to get a return on their investment by having their shares bought out. Of special interest to developing countries is that some investment models specifically attempt to address the "investment gap" (also referred to as the "Valley of Death") which occurs when private and public funding are either unavailable in the first place or run out, and where the company's net cash flow does not close the funding gap. Many businesses—frequently those based on research discoveries—continue to reside in the Valley of Death because they lack the financial support and skilled management teams to progress into the "proof of relevancy" phase.

Recommendations for practitioners

A few recommendations should be considered:

- ***Ask the question: What problems are to be solved or needs to be met?*** The answer will determine if the provision and use of investment capital will help accomplish the expected outcomes. Businesses and governments often believe that what they need most is investment capital when in fact it may not be the *immediate* critical need; a more pressing need might be finding business partners or gaining access to markets.
- ***Set the right balance*** between (1) investing in technology commercialization and (2) investing in technology absorption and adaption, together with investment in building the capacity to support technology translation and development.
- ***Determine the financing objective.*** Is it to earn a financial return on the investment, to foster economic development or social welfare, or achieve another purpose? The purpose of an investment or investment strategy should be decided and made clear to all involved at the start of the process.
- ***No investment can be made without a sufficient "deal flow"***—a continuous source of investment possibilities. The public and private sectors can stimulate deal flow.
- ***When developing an investment fund or other investment vehicle, decide how much money will be dedicated to the fund or other vehicle and under what conditions or constraints.*** This decision is critically connected to the question of what is the purpose and investment strategy of the fund. Some public investment funds have sizeable amounts of money but have not succeeded because of a poorly conceived or implemented investment strategy. Other funds, with limited capital, have not been able to support businesses to become self-sustaining.
- ***Structure public funding to attract private funds,*** either initially or later (for example, as matching funds or a guarantee for the private investment).
- ***A majority of nongovernment representatives*** should be appointed to management boards of investment programs using government funds. Government representatives should provide guidance but may want to create maximum good by funding too many projects.