Reshaping the South African farming sector. The role of finance and farmland brokers.

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Introduction

According to financial professionals, from institutional investors to "alternative" portfolio managers[3], agriculture is being presented more and more as an emerging asset class (Chen *et al.*, 2013). The increasing attraction of these assets is based on fundamental[4] and financial analyses by investors which all tend to underline the very same driving factors:

> "Strong long-term macroeconomic fundamentals; attractive historical returns on land investment; a mix of current income and capital appreciation; uncorrelated returns with the equities market and a strong hedge against inflation[5]".

Through the different options to take advantage of these different trends, such as commodity future contracts or public companies' equities related to agriculture (Goldberg *et al*., 2012), farms are more and more recognised as an alternative asset class (Visser, 2014). This recognition is largely fed by narratives produced by financial insiders, economically interested by the promotion of farmland as an asset class (DGC Asset management, 2012; GlobalAgInvesting, 2012).

This interest from financial industries in farmland and farming is not totally new. In the United States, for instance, it is estimated that institutional investors, especially long-term institutional investors, such as pension funds and university endowment funds, possessed 27 % of the country's farmland in 2007 (GlobalAgInvest, 2012). However, its spread towards new geographical regions, (Latin America, beyond Brazil and Argentina, as well as Asia and increasingly in Africa (Land Matrix, 2013)) and the involvement of an increasingly diversified types of investors, seems to announce a broader curve in the financial industry and its procedures for capital allocation. Indeed, "the multiple food-energy-climate-finance crisis" (Margulis, 2013) opened a window for the promotion of alternative assets such as farmland.

The promotion of such innovative assets must be understood as an uncertain process driven by specific entrepreneurs spatially and temporally situated, rather as a natural and ineluctable expansion of the financial realm. Indeed, farmland 'brokers' (Bierschenk, 2000) play an active role in structuring and mediating demand and supply; they select and frame the farmland offers on one hand; raise and channel the international and/or national demands on the other hand. In addition, they play a key role by converting and transforming capital and

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3 See, inter alia, "Farmland: Yield-starved investors go back to the land", Euromoney, January 13, 2014;
4 Based on macro-economic data (i.e. growing world population, rising incomes in the developing world, etc.)
5 HighQuest Partners, 2010

resources from these two different arenas. Through their actions, these intermediaries set up the instruments and cognitive frameworks for these "emergent" asset class (Bessy and Chauvin, 2013). Rather than promoting an existing product, they tend to produce a new asset, converting farmland, already framed and considered as a commodity (Li, 2012), into a financial asset.

We define an asset as anything carrying a value recognized as such by financial markets. To get such recognition, a particular good, service or activity must be framed to fit with financial market requirements and values. An asset is based on specific beliefs, that it can generate a positive cash flow in the future, preferably outperforming the average profits on financial markets, and is liquid enough (Orléan, 1999); and on specific devices, this it can be evaluated and compared with others according to standardized benchmarks. This financial valuation (Vatin, 2013) is not a natural given but is rather produced by particular actors or group of actors in a specific social environment. Indeed, the production of this asset is embedded in specific societies and social structures. Farmland brokers, for instance, are engaged in a translation process between global investors on one hand, and local agricultural sector on the other hand.

In this paper, we will try to understand how an emerging group of South African intermediaries are currently trying to shape, or reshape, farms as investment opportunities for institutional investors, i.e. as an asset class. Progressively, these financial entrepreneurs tend to empower themselves as a financial sub-industry with their own expertise, instruments and procedures; while in the same time, they compete each other in this market in structuration as they try to impose their own conception of farmland. By analysing their daily management, their interactions with investors, farmers, workers and government, we aim at understanding the concrete issues and challenges related to the 'assetisation' of farmland.

To do so we will focus on South African farmland through two specific financial vehicles set up in the late 2000's and specifically dedicated to this emergent asset class. Regarding South Africa, the country has lately seen a significant development of financial vehicles servicing agriculture and particularly farmland, according to particular narratives:

> "Land in South America is seven times more expensive than in South Africa and is utilized for the same underlying agricultural activity with the same soils, climates and yields. This provides the ideal opportunity to leverage this arbitrage opportunity and simultaneously generate above average cash flow return[6]".

As such, through our two South African case studies, we will highlight this uncertain process of farmland's assetisation, and particularly its groping and failures. Indeed, if the farmland brokers mobilize instruments and procedures from other sub-financial industries to unlock (or create) financial value[7], they face contains and resistances which transform it. Therefore, we attempt to illustrate the innovative strength of the financial industry and its adaptive capacity.

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[6] Fund A, Flyer of presentation

7 In its presentation, fund A specialized in South African agriculture states that "The objective remains to not only become the most successful food producer in SA, but almost more importantly, the most valued food producer".

The paper will start with a presentation of the two investment funds and their specificities. These financial products are structured from the interactions between the investor(s) and manager which we will detail. Then, we will focus on the production process of this emerging asset class distinguishing the leverage strategies implemented to create value from such particular assets, the coding process into a standardized financial idiom and the neutralization attempts of social "interferences". Finally, the conclusion will come back to the challenges and issues raised by this attempt of farmland's assetisation and the form of resistance it faces.

1. The structuration of new financial products: weight of investors and managers' margin of manoeuver

In this article we will focus on two different investment funds specifically set-up in order to buy farms in South Africa. Both raise capital on financial markets and channel it toward investment opportunities which they have identified, thus progressively building an "asset portfolio". To better understand these financial vehicles, their similarities as well as their differences, it is important to detail both the investor's and the asset management's construction and trajectory, and the relationships and interactions between these two actors.

The profile of these investors is important to understand these funds' capital allocation and governance. Indeed, the source of the capital, mainly related to their liability structures (Aglietta and Rigot, 2009), weighs significantly on their investment policy, and thus on their choice and expectations regarding agriculture.

Our first case study, fund A, has been set up in 2008 and is quiet atypical in the industry as it counts only one investor. It is structured by a major American endowment fund investing in this fund as part of its 'natural resources' portfolio along other investments all over the world in agriculture, but also logging and renewable energy. In 2013, this natural resource asset class accounts for 13% of a large and diversified portfolio dominated by equities. The second vehicle, fund B, started in 2010; its two main investors are the South African insurance company Old Mutual and the Public Investment Corporation, which is the manager of the South African Government Employee Pension Fund. Other minor institutional investors joined the fund, especially smaller pension funds. Pension funds, endowment funds and insurance companies are all long-term investors (Aglietta and Rigot, 2009) looking for stable return investments to reward their subscribers. As such, they implement diversification strategies through investments in asset classes which are not correlated with one another (Campbell, 2011). South African farms become an attractive investment for these investors with such diversification strategy.

These investors entrust their capital to a managing company, which is the implementer of the projects. The fund A is managed by 'manager A', a South African company initially dedicated to commodity trading but progressively the firm got involved in farm management and other agro industrial assets on behalf of foreign investors. Therefore, they manage in parallel a similar vehicle for a European industrial investor in order to invest in soya crashing

plants in South Africa. Fund B is managed by 'manager B', an Old Mutual's subsidiary specialized in 'fixed interest investments'. This company is assisted by a fund advisor, 'advisor B', specialized in agriculture and farm investment in charge of the daily management of the fund. This firm, prior to its engagement with fund B, participated to several Black Economic Empowerment transactions in the sector. Advisor B is partly a manager B subsidiary and partly owned by its founders who are two Dutch entrepreneurs with background in development finance institutions (e.g. FMO). Finally, manager B also manage a Swazi Agri Fund with a mandate on farms and agricultural production only in Swaziland and they are currently trying to develop an African fund with a similar mandate.

These companies claim a field experience and a deep network in South Africa and its agricultural sector. Through the valorization of such "indigenous capital", they affirm their essential role as gateway to the country and its agricultural value chains. On the other hand, they both came from other financial sub-industries closely related to agriculture or agribusiness (i.e. agricultural commodity trading and BEE finance). Therefore, they are at the margin between this indigenous capital on one hand, and financial capital on the other hand (Dixon, 2012), occupying a strategic position between "the bush" and the "financial industry". As they handle non-formalized and non-benchmarked assets, these diverse managing entities compete with each other, and with others in and outside South Africa, in this structuration process to sell their specific product and capture the investor flows. According to the firms' path and their staffs' career, managing companies implement different practices and strategies mobilizing different instruments and repertoires. Indeed, these backgrounds determine largely their paths to farmland investment, i.e. the integration and perception of this specific product in their activities. They also position themselves on various financial sub-fields and asset classes, mobilizing different networks of investors and different persuasive registers to convince investors; indeed, one would place emphasis on the consumption boom in Africa, while another would place stress on land as a scarce resource and the returns generated from similar investments in United States.

An investment fund or company is basically the alliance of these two types of collective actors, the manager and the investor(s), each with their own interests and beliefs. Usually, the manager initiates the fund's project, defines its mandate and then raises capital from potential investors. The concrete aspects of the investment vehicle, the structure of the fund on one hand, its strategy and practices on the other hand, are then specified through negotiations between the parties and formalized into an investment policy and a shareholders' agreement.

Such an agreement reflects the balance of power between these actors. Indeed, the balance of power and the room for manoeuver of the actors change according to the number, the profile and the size of investors sitting on the board, and also according to the track record of the manager. The alignment of interests and the respect given to the investment policy by the manager are major concerns for the investors. Indeed, a trust, which is the legal structure of most of the funds, gives investors few means of control after the fact (Montagne, 2006). That is why investors protect often themselves through a set of legal and technical mechanisms:

manager's financial participation, side letter[8], external audit, remuneration system by profit sharing[9], etc. However, investors cannot practicably formalize everything in the fund's legal instrument and managers often empower themselves through their daily practices.

Looking at our two case studies, a set of relevant aspects can be identified, illustrating the structuration of such vehicles and there diversity:

The status of the financial vehicle: Both vehicles are registered in Mauritius. With regards fund A, the Mauritian entity is a subsidiary of the American investor with a 10 years life span. As such, capital allocation and the validation of the investments are directly controlled by its investment committee and framed according to its internal procedures. Conversely, fund B set up a private cell company in Mauritius held by the fund's investors in proportion to their financial involvement. This entity has its own investment committee composed by main investors' delegates and independent directors. It has been structured on the private equity model as a closed-end fund with a 12 years life span. Fund B's managers can take advantage from the diversity of investors by arbitrating between their expectations; conversely, fund A is much more under the investor's scrutiny.

The fund raising process: Because of its specific structuration related to its investor's exclusivity position, the manager A does not have to raise funds from additional investors. The fund manager submits a proposal to the investment committee which grant, or not, this project. The fund B has gathered R500 million (about 35 million of euro); they just started their second fund with a similar mandate focussing on agriculture in South Africa.

Financial return benchmarks: As these asset classes are not (yet) standardized, the target return of these funds is not standardized. Therefore, they adopt different objectives for the fund to reach, based on different metrics. Fund B's target is the South African Consumer Price Index (CPI) + 10%; while for fund A, the target has been defined regarding the historical performances of farmland investments in the United States and targets 8% of annual return.

The mandate of the fund and its frontiers: Both financial entities are specialized investment vehicles only dedicated to South African farms and agricultural activities. Their investment mandates focus only on South Africa and regional funds, targeting farms in Africa or Southern Africa, do not have the same successes as illustrated by their mitigated experiences beyond South African borders[10]. The investors frame the type of asset and portfolio they want through investment bearings and ratios; as such, fund B cannot invest less than 50 million of

8 This is an agreement between the fund manager and an investor that outlines different terms that will apply to the investor's investment in the fund, giving the investor some flexibility to go outside the terms of the fund's legal document.

9 Both funds adopted the manager's remuneration standards from the private equity industry known as 2/8/20: 2 % of the asset value under control as management fee; a hurdle internal rate of return fixed at 8 %; and 20 % of benefits as profit sharing.

10 While fund B's management team is currently trying to develop a similar fund with an African dimension, manager A had managed such African entity on behalf of another endowment funds until they split the two entities

Rand per farm (3.5 million of Euro) and its final portfolio should include at least 4 farms. Fund A targets farms above 1000 hectares. Such framing activities tend to privilege 'mature' farms and business as rather than 'green projects'; indeed both funds only acquired consolidated farms resulting from a previous grouping of family farms. This bias towards more commercial integrated farms is reinforced by the valuation methodology focusing on its financial track record, the experience of its management team and its global exposure[11]. Then, these funds just focus on farms and not on the entire agro-food value chains as other recent African financial vehicles (Daniel, 2012). They both set up expansion or improvement programs on their farms in order to get a higher margin at their exit.

Type of crops and productions: Certain funds have an investment charter emphasizing specific focuses and sectors, or preventing managers from investing in specific sectors, such as tobacco or timber. Our funds do not have such restrictions in their investment thesis but include a focus on specific crops. Fund B focusses exclusively on 'permanent crops', i.e. fruits and vegetables; as such its 4 farms produce mostly lemons and table grapes, but also pears, peaches and apple, all under irrigation[12]. Conversely, fund A focuses on cash crops, i.e. grains, such as maize, wheat and soybeans, both on dry and irrigated land[13]. Since their inception, the latter fund tried several other crops to maximize their productive potential (e.g. butternuts, potatoes, olives, garlic); but recently, they decided to change radically their focus and are now also looking for permanent crops. Finally, even if it was not part of their initial mandate from the investor, they acquired farms with cattle and decided to keep this activity running.

Land ownership and operational activities: While other studies mentioned investors leasing farmlands especially in other African countries (Deininger and Byerlee, 2011), in our case studies, both directly purchase the farms and integrate land price increase expectations in their cash flow model. Fund A so far only acquired farms at a 100% equity, while fund B set up two joint ventures with the former owners, but ensuring a large majority control. Regarding the agricultural production, they both tend now to externalize it to third party operators, but through different models. Fund B, from the beginning, implemented contracts with operators, selecting only developed farming companies. Such contracts are signed on a 10 year basis with a remuneration corresponding to 8% of the annual farm value including of inflation. Fund A started to directly engage in the management of the agricultural operations on its farms, through farm managers hired by the company. However, they more and more contract external operators, often their former managers who they sponsored to set up their own companies, but are still coordinating the entire process. Therefore, fund B cash flow relies on its rents and its farms' value appreciation, while fund A bets on both property appreciation and agricultural operation incomes.

11 Such "financial bias" in the selection process benefits to the most "financialized" farms and agricultural firms in Africa and South Africa: the African Agriculture Fund purchased the Zambian company Golden Lay in 2012 from the Abraaj Group, another private equity firm; Zeder bought its farms in Zambia through the acquisition of Chayton capital, a private equity fund.

12 Fund B has currently 1490 hectares of fruits and vegetables under irrigation

13 In 2013, fund A counted 22 336 hectares whose 3050 hectares of irrigated land and 3859 hectares of dry land, the remaining being pasture or grazing.

Beyond its farm rental income, fund B also capitalizes on the appreciation of its property. As such, they fund and supervise extension and improvement programs on their farms. On one of their table grape farm in the Northern Cape, they currently increase their production area from 12 to 73 hectares. Overall, 30% of this fund's capital (R136 million) is dedicated to the farms' improvement. Fund A also capitalize on farm improvement in order to maximize its returns but so far, its focus has been on the soil quality. Indeed, they hire an agronomist especially dedicated to set up and follow up a program aiming at improving the soil quality and foreseeing the adoption of a no-till farming model.

The environmental and social component: Fund B, because of requirements from its South African investors, implemented social and environmental programs, dedicating 0,5% of the value of their farms for initiatives such as literacy programs and health care for their workers. In addition, prior to the farm's acquisition, they conducted a social and environmental audit, according to private equity mainstream guidelines (i.e. IFC performances standards) and reassess the farms every year. Finally, they report every year on such initiatives through a dedicated report sent to the investors. Fund A, conversely, implement a different model through the implementation of a foundation collecting external funding, used for the development of 'community projects' (e.g. purchase of bicycles for their workers). But, as we will see later, they only buy henceforth farms far from rural communities, in order to avoid such activities and expenses.

Communication policies: Fund B uploads its annual reports and their environmental and social components, the 'impact report', for 2012 and 2013 and in general the management team brands the fund as an innovative financial product in the industry organizing farm visit with journalist and potential investors. Fund A kept a low profile in the industry as they never advertise the fund, not even on professional platforms such as Prequin, and kept their involvement in farming and the identity of their investor very secretive.

Rather than constituting a unique and standardized financial channel to South African farms, these funds are thus diverse, built around a plurality of the investor/manager relationships. However, they are all engaged in the same production process of a specific asset class. In such process, managers play a key role at the interface of two different arenas.

2. Toward the production of the asset: from South African farms to a financial asset

As defined in the introduction, an asset represents any value recognized as such by financial markets. Such financial value relies on the active work of shaping and promoting by intermediaries which aim to attract financial flows. This work can be described as a translation process from a particular good, service or activity inserted in a specific environment, to a reliable and sustainable investment for financial markets and actors. For this translation, intermediaries will mobilize a set of techniques and instruments (Lascoumes and Le Galès, 2005). Such production process is embedded in a broader social and political

environment. Indeed, the ability to mobilize these instruments relies on specific policies and social structures, historically and spatially situated.

South African farms, as well as others agricultural assets on the African continent, seem to be currently the object of such a translation attempt. Therefore, the production of an emerging asset class through the specific case study of South African farms will be analysed focusing on the intermediaries' role. Three different modalities of such translation can be identified for this research, but concomitant to the reality: firstly, intermediaries have to manage the characteristics and constraints surrounding agriculture production to "unlock the value"; secondly, they have to build an information flow toward investors, which relies on recognized standards and benchmarks; finally, this shaping work is faced with social, political and cultural resistances which managers have to deal with.

A. Leverage South African farms: Toward a profitable and predictable bundle of assets

To be recognized as an asset, that is, a financial value, a good or an activity must be considered by financial markets as liquid (Orléan, 1999) and as generating a predictable positive cash flow. South African farming faces several inherent risks, such as natural risks and international markets volatility which have historically discouraged private investments from outside the sector because of its random returns; in addition the South African sector has been characterized during Apartheid by the monopoly of white commercial farmers ensured by State policies and subsidies (Vink & Van Rooyen, 2009). As such, the farming cash flow looks particularly instable from one year to another, and the mitigation of these specific risks is a decisive step toward the assetisation of South African farms. To attract financial capital, managers have to build a stable and positive cash flow on one hand, and to increase the liquidity of their farms on the other hand.

The mitigation of agricultural risks and the making of profitability by farmland brokers rely on the mobilization of specific instruments, expertise and procedures. From our case studies, we identified several of such instruments that seem to play a crucial role in the asset production process in the South African farming sector for both risk mitigation and value creation.

The commodity future exchange: In 1996, with the enactment of the Marketing Act, the South African Futures Exchange (SAFEX) was created, being a futures market that substitutes the previous regime's agricultural commodity price regulatory and marketing boards (Vink and Van Rooyen, 2009). Such "market-based price risk management" (Newman, 2009) allows agricultural value chain actors to hedge the sales/purchases of their products, reducing the uncertainty around the price without State interventions. In addition, this futures market creates a centralized and standardized informational flow available to the public[14]. Fund A's

[14] A good example thereof is the system of silo receipts, which guarantee the amount and the grade of the grain delivered

management team firstly got involved in the sector through this agricultural commodity trading before to engage in the primary production. This future exchange gives them the opportunity to ensure their selling price and therefore to calculate and plan their rate of return. In addition, they also use it as a complementary source of income, at the margin of their operational incomes, as they manage a speculative account on behalf of their investor specifically dedicated to exploit the spread between white maize in South Africa and maize on the Chicago Board –the corn spread trade.

However, SAFEX only offers future contracts on certain grains[15]. Conversely, to ensure its revenue with fruits and veggies farms, fund B privileges the production's externalization to major production and export companies. As such, the fund management team guarantee their farms' outlets, through the company networks and contracts, and as such the fund's rent.

Geographical diversification: To mitigate the natural risks (flood and drought), both fund managers utilize geographical diversification rather than multi-peril/risk crop insurance. Geographical diversification relates to the acquisition of farmland in different areas in the country with different agro-ecological characteristics and different crops or varieties. As for the diversification of the "optimal investment portfolio" theory (MacKenzie, 2006), the objective is to dissolve the specific risk from one asset by a global mitigation in the portfolio based on the complementarity between assets and the returning force to the mean (Aglietta and Rigot, 2009). Therefore, fund A hold 5 farms in 4 different provinces, while fund B has 4 farms in 4 provinces.

Tax optimisation and off-shorisation: Compared to 'traditional' South African commercial farmers, these two funds mobilize tax exemption mechanisms, especially through their own off-shorisation, to increase farming profitability. Thereby, Mauritius is becoming a hub for investments both in Africa as it represents a regime for global business company -GBC1 regime- which offers a harmonized corporate and income tax of 15%, tax exemption on dividends and a set of bilateral double taxation agreements[16].

Farming corporisation: Fund A's strategy regarding primary production relies on the development of "network organizations" (Goldberg et al., 2012) as they gather several farms, enabling economies of scale, as well as facilitating management and risk control.

> "The investment premise is based on a similar model to the commercialized agricultural investment companies in South America with the adoption of No-till technology, GMO's and precision farming. Through the pooling of resources and expertise, the business generates substantial economies of scale and influence[17]".

Firstly, input costs (seeds, fertilizers, insurance, etc.) tend to reduce, since they are sourced centrally and then allocated between the units. Secondly, labour and management are more and more corporatized through the implementation of hierarchic organisation, report procedures or financial incitation's.

[15] White and yellow maize, wheat, soya beans and sorghum.
16 Mauritius and South Africa are bound by a bilateral double taxation agreement, signed the 20th July 1996.
[17] Fund A, Flyer of presentation

Then, Fund B's investment model relies on the existence of large agricultural production companies able to assume the profitability of the farm and to fulfil the fund B requirements in terms of reporting or sustainable practices. In South Africa, farming production was monopolized by white family farmers during Apartheid, thus such a model radically change the forms of agricultural production.

Distant Management: The challenge for the fund is to manage and control these immovable assets from a distance. To overcome this challenge and ensure the efficiency of this centralized management, such investment funds and companies rely on the utilization of advanced technologies such as satellite monitoring. As such, the software 'Google Earth Pro', thanks to its high resolution and the data it provides on farms' natural characteristics (e.g. slope, soils), is used in both cases for operations and/or expansions' monitoring. In addition, both funds rely on an agronomist for both the technical due diligence before the acquisition, and the supervision of the agricultural issues through regular farm visits. Finally, fund A formalizes reporting procedures through detailed excel table on a weekly basis summarizing the operational costs and the crop projections per plots.

Unbundling strategies: Through the separation of property and productive activities, fund B implements in the farming industry the 'propco-opco' model (Isakson, 2014). As such, this fund promotes and supports a specific conception of the farm as a "bundle of assets" (Capron, 2005) which characterizes the firm's design in the financial industry, especially in the private equity industry. The farm is considered here as the sum of independent assets: property title deeds, water rights, a "biological asset" – the soil, and a flow of commodities – grains. Each asset would be marketable, so managers "unlock" value from these farms through "bundling" and "de-bundling" strategies.

Balance sheet 'tricks': Both funds also mobilize cosmetic's strategies. For instance, to avoid that equipment depreciation weighs heavily on their balance sheet, fund A sponsored the development of external contractors through the sale of their tractors and equipment with advantageous loans.

Fund A looks more like a private equity fund, buying a company and trying to improve its cash flow in order to increase the firm's value. However, it is worth noting that it does not use financial leverage as a tool for value creation. Indeed, it bought its farms in cash with its own capital. Such a finding illustrates the hybrid character of this financial vehicle, its staff and its instruments; but also, the lack of available funds from commercial banks for such particular assets. Meanwhile Fund B seems closer to a real-estate investment trust (REIT).

B. Farms as a standardized and benchmarked asset

A financial asset is also seen in a set of standardized benchmarks with key indicators on its "historical" returns, on its variance and covariance (the beta) or on the market risk premium. Such benchmarks allow institutional investors to compare and evaluate their profitability and

their complementarity in their portfolio. This "commensuration", i.e. "the translation of different qualities into a common metric that can support, for instance, decision-making" (Styhre, 2013), is a central part of the managers' work to attract financial capital. In our case, managers apply the standards of financial analysis to South African agriculture from the specific "agencement" we described above.

These benchmarks and calculations are borrowed from corporate finance analysis and aim at modelling a specific investment on the medium-/long-term through a discounted cash flow. This accounting framework introduces the value of time in the valuation of transactions and assets (Chiapello, 2005). The production of this information flow is a central part of the fund managers' role and success as they endeavour to translate a specific environment/investment into "global financial language". Indeed, the managers' skills and dexterity in dealing with these models and implementing them in new activity areas are central issues in their competition to channel capital flow from institutional investors. Once validated by the investor(s), they guide the managers' action and constitute the benchmarks of their evaluation.

Discounted Cash Flow (DCF) model actualizes in present value an investment cash flow over a discounted period (Dufumier, 1996). This financial evaluation is realized before any investment is made, and re-actualized regularly during the project's lifespan. It is used as support both for the decision by the manager/investor as to whether the investment is profitable, and for the evaluation criteria by investors in the asset markets. It is a representation device of the productive world, as well as a control device (L'Italien *et al.*, 2011).

- **Discounted cash flow vs. comparable sales valuation methodology**

The hazards characterizing the agricultural production challenged such projections as the discount cash flow valuation is based on the stream of future incomes. Futures contracts and others risks mitigation mechanisms allowed investment funds to implement such calculation. Nevertheless, others challenges emerged for the farms valuation. Farms in the South African agricultural sector are valuated according to the comparable sale approach which gives a value to a specific farm according to 'similar' transaction in terms of localization and usage. Such valuation methodology is the norm in the agricultural sector used and recognised by both farmers and their financial partners, i.e. commercial banks or agricultural services companies, as a reliable estimate of farmers' collaterals.

Fund A undertook the agricultural production on its farms and, at the request of their investor, they realize a bi-annual DCF valuation of every single asset as a classic private equity fund. In contrast, the fund B isolates the real estate from the operations that raises issues and challenges for the valuation of their assets. Indeed, in 2013 the fund B's management team raises concerns at the investment committee about the comparable sale methodology. As a property fund, they adopt from the beginning such methodology to value the fund; but they considered that such methodology does not take properly in consideration the future stream of revenue and their potential improvements. They pointed out three challenges regarding the undervaluation of the new orchards by the comparable sale methodology:

> "Young orchards have 1/ a longer remaining productive life; 2/ have newer varieties that are more tailored to current market demand; 3/ are characterized by higher yields and/or lower production costs[18]".

In addition, as fund B has been particularly active on the South African farmland market, they realised that their valuator uses their previous transaction to benchmark the new ones. Finally, they raise questions about the comparability of two farms, even located in the same area and producing the same crop, as they often have a different risk and return profile.

The challenge for the fund B management team is mainly to highlight the impact of its expansion programs on the farm value in order to make visible its capacity to create value, while the comparable sale methodology mainly reflects the market fluctuation. In reaction, the fund sets up a valuation committee composed by the management team and the major investors, and in the same time, mandates a third party valuator to test a discount cash flow valuation of its farmland. Such issue around the farm valuation methodology illustrates the attempts to import a valuation framework that directly participate to the value creation (Boussard, 2013) and the legitimation of the financial industry.

In addition, the establishment of this framework, or its non-establishment, also constrains and frames the practices and strategies of actors. For instance, as we mentioned earlier, fund A acquired farms with cattle and decided after several discussions between management and investor to keep running such activity. However, they quickly faced unexpected difficulties starting with the impossibility for building a dynamic cash flow model for cattle. Indeed, so far, the valuation of cattle remains on productivity per capita or per hectare maintaining a parallel accounting system in the fund A balance sheet. Because of these difficulties to translate cattle production into financial language fund A is currently selling all its livestock.

- **Discount cash flow model as a vector of competition**

Since inception, fund A realizes DCF valuation on its farms twice a year. Such valuation report is sent to the American investor constituting a detailed and regular source of information for its assets' monitoring, together with weekly telephone meetings, annual report and visit on site. Such valuation is built on market conventions regarding the future. However, fund's managers and investors make arbitrages between several benchmarks. For instance, fund A choices the South African R157 bond as risk free of return for their calculation which is only one option among others South African bonds. Such framework is produced through intense negotiations between investors and manager (Boussard, 2013) in a competitive environment.

On one hand, managers try to attract institutional investors who are looking for specific financial products based on a risk/return profiles, a covariance, and other specific benchmarks. For instance, the fund A's investor impose a requirement to express these calculations in dollar. In other funds, they sometimes request other market references for the DCF calculation, e.g. the Chicago Board of Trade grain prices rather than the SAFEX prices.

[18] Fund B, Evaluation committee report, 2013

On the other hand, managers are directly interested by such internal ratios as their evaluation and their remuneration are based on them.

As noted, this standard modelling is primarily used by investors to arbitrate between different investment opportunities in agricultural value chains, and also between different asset classes. Managers specializing in South African agriculture participate actively in the double movement of deepening the financial market, by the inclusion of "hybrid goods" (Aglietta and Rigot, 2009) as new asset classes, and by connecting the different national markets through the production and diffusion of worldwide recognized benchmarks (Vallée, 2011).

C. "De-politicization" of the asset

A financial asset is structured on a standard flow of modelling and calculation. But, to unlock the financial value, asset promoters have also "to conform" the social reality to these flows. Indeed, managers undertake a "neutralization", or a "de-politicization", of the farms in order to fit it into the "bundle of assets" conception. Such work is particularly visible when they have to deal with social or political issues surrounding their farms, as they often have to face actors or groups of actors who embody and defend other, often incompatible, conceptions of farmland value. This sometimes produces a distortion and a diversion of their approach and can interfere with the managers' relationships with the investors. Such confrontation sheds light on the political dimension of the production of an asset and how the "ferryman" (Pezet and Morales, 2010) manager turns into a political entrepreneur.

Among others, a concrete example from the field is the case of occupiers on the fund A's farms. During the apartheid era, farm workers, particularly in the Mpumalanga and KwaZulu-Natal provinces, were allowed to live on the farm on which they worked as "labour tenants". In 1997, the Extension of Security of Tenure Act[19] conferred formal residential rights to these (former) workers and their families. This Act includes a set of rights and duties for these "occupiers" and for the owners (e.g. security of tenure, access to services, no commercial use of the land, an income of the occupier under the prescribed amount of R5 000), while leaving a margin of manoeuvre for the two parties to negotiate and organize their daily cohabitation (Sibanda and Turner, 1999).

Fund A had acquired several farms with occupiers[20]. Gradually, such cohabitation generated tensions between the new farm owners and the occupiers[21]. The issue with the occupiers progressively interfered in the relationship between the American investor and the South African manager of the fund. Indeed, the investor became more and more anxious about this concern, seen as a potential source of mobilizations and contestations. This concern regarding investor' reputational risk was particularly strong after Vanderbilt University endowment,

19 RSA (Republic of South Africa). Extension of Security of Tenure Act 62 of 1997. Pretoria. Government Printers.

20 Most of the farmers in the eastern part of South Africa have to deal with these occupiers' issues.

21 These occupiers own cattle who graze on the farm and managers have accused them of putting the cattle on their grazing land, threatening their own cattle with disease contamination. Furthermore, the access to their family graves, situated outside of their area, has become a source of tension when a manager endeavours to control and regulate this access.

who invested through the fund Emvest in Southern African farms, was targeted by an activist campaign against land grabs and a student mobilization[22] for its divestment from this fund[23].

The fund manager tried to implement different strategies to "clean" what they considered to be the fund's "best asset". They started by implementing an identification/registration system for all the occupiers and their family members on the farms and introduced a code of conduct which all occupiers should sign. They also implemented a "livestock permit" to register the different owners and a three-step warning system in case of abuse of the code of conduct by the occupiers. Then, they proposed removing all the occupiers to another piece of land, outside the farm, with official property titles. But, occupiers refused the proposition, arguing that this land was far away from services and useless for grazing. Then, facing the increasing concerns from the investor, the manager proposed to group these farms and to list the grouping as a property fund on the Johannesburg Stock Exchange. They argued that in such a case, the international investor would become one shareholder, among others, in the listed fund. Such a strategy aims to dissolve the individual responsibility of the investor into the collective ownership of the market[24]. Regarding the manager's perspective, it allows them to keep the control over the operation on one hand, and to balance the investor's power on the other hand. Such proposition was rejected by the investor by virtue of its monopoly strategy, so the manager finally had to sell these farms, and the fund mandate has been reoriented toward smaller and more intensive farms such as permanent crops farms.

This example illustrates some of the difficulties faced in the translation process between an international investor and a local manager, and the misunderstandings that may arise. While the manager attempts to valorize its indigenous capital to minimize such issues, the investor seems more concerned by reputational risk, especially in its home country. Such a gap reflects the different positioning of these actors and gives a concrete example of intermediation difficulties.

Secondly, through the implementation of various initiatives and policies to regulate the presence of occupiers on farmland (e.g. through a code of conduct and livestock permits), a fund manager tends to become a political entrepreneur. In fact, to "unlock the value" of an agricultural asset, they have to mitigate the political and the social issues surrounding farmland and agriculture in South Africa. Indeed, they push for a "disembeddedness" (Polanyi, 1983) of their farms to materialize the "bundle of assets" conception. Paradoxically, even if they claim a purely financial approach through the "asset-fiction", they find themselves engaged in particular forms of "cross-regulation" (Bessy and Chauvin, 2013) alongside other public and private actors.

Conclusion

[22] The Vanderbilt Responsible Endowment Campaign

[23] Oakland Institute, Vanderbilt University Divests from "Land Grab" in Africa, 13th of February 2013. http://www.oaklandinstitute.org/vanderbilt-university-divests-land-grab-africa

24 Thereby, the financial markets' notion of "public" challenges the notion of "public good" as a use by those who live or work on it.

To conclude, four main points have to be highlighted.

Firstly, even though South African farms still represents a minor asset class, the investment funds and companies focusing on them are diverse as illustrated by our two case studies. This diversity can be explained by the specific interactions and balances of power between investors and manager portfolios. Fund managers structure and brand their financial products according to the investors' characteristics and a potential new asset class must fit into it. Beyond the divergence in the fund's status and investment policy, such financial vehicles are 'living' products. Indeed, the interactions and confrontations between both parties during its live span affect the fund's forms.

Regarding investors' balance sheet or their experiences and networks in this asset class and in the country they push for specific structures and mandates. For instance, they adopted very different forms of interaction with societies and legitimation's strategies with societies. Fund A and its American investor operate in the shadow, avoiding public visibility in order to keep a competitive advantage and to mitigate the reputational risks. Conversely, fund B is labelled by its investors as a development fund, and regularly highlights its contribution to South African rural economy through specific awards or its impact reports.

Secondly, South African farmlands are far from being standardized assets and there market, the rules of competition and cooperation (Fligstein, 2001), is not yet institutionalized. As such, fund managers compete to impose their own farmland, with different natural and social characteristics, as the most legitimate asset. While they are collectively engaged in an emancipation process and the structuration of a separate sub-field, they compete inside this arena to define the most legitimate forms of capital through distinction strategies (Bourdieu, 2001). Therefore, an asset is not primarily recognized as such because of its good financial returns outperforming the market performances, but rather because financial entrepreneurs frame and promote it as such in orders to legitimize their position in the financial field. Indeed, it is worth noting that except for United States there are not historical data on farmland returns, and if we just consider our two funds, so far there financial returns are quiet poor.

Such innovations are spatially and historically situated. Indeed, theses financial vehicles mobilized specific institutions and instruments at the national levels, and from financial industries in order to valorise their farmlands. Indeed, these funds borrow staff and tools from neighbours' sub-financial industry, as a repertoire of available resources, in order to produce a coherent framework which give South African farms a financial value, for instance in the mark of the optimal investment portfolio theory (Markowitz, 1952).

From this specific configuration, or "agencement" (Callon *et al.*, 2007), managers are able to implement financial analysis tools to produce a standardized informational flow. By producing these recognized benchmarks, managers allow institutional investors to evaluate these agricultural assets and potentially integrate them in their portfolios. As an asset is a

particular value, this valuation process is at the heart of the process of assetisation. As we have seen, such valuation must be understood as an evaluation and a valorization (Vatin, 2013) which rely on standardized benchmarks recognized by the financial markets. This commensuration (Styhre, 2013), i.e. the translation in a common metric, is a support for the decision-making but this is especially a comparison tool as an asset acquires a value only when compared with others.

Thirdly, these benchmarks are not enough to produce an asset and managers also try to "neutralize" the political and social issues related to agriculture and farmland in South Africa by "extracting" the farms from their social fabric. Even if they claim a purely financial and corporate approach, they find themselves engaged as political entrepreneurs, implementing "corporate policies" or collaborating and negotiating with different actors in order to protect, or increase, the asset value.

Therefore, this analysis illustrates the failures and groping of such attempts. As such, the disposal of several farms by the fund A highlight the potential of resistance from sparse mobilizations from local occupants on farms, global activist organisation and American students. Such disposal shows that financial industry, at least this endowment fund, takes in consideration critics. But rather than abandons this attempt to integrate South African farmland in its portfolio, it now looks for a different kind of farms where commodification process has been completed. The attempts to integrate South African farms into the financial markets as an asset class illustrate the cognitive and political work which asset categories undergo. However, in this specific case, such works are probably more visible because of the political and social conceptions and representations around farmland in South Africa. Polanyi (1983) had already shed light on the "land-commodity fiction" which was an attempt to subordinate land to industrial society needs. However, he underlined "society's self-protection" movement which curbed such dynamic. Today, is this "land-asset fiction" fully materializing through the subordination of farmland to the needs of the financial industry? And are the heteroclite coalition mention earlier embodied the society counter-movement?

Finally, the promotion of farmland as an innovative asset class and its integration in the allocation of capital industry could be explained by a broader transformation of the financial industry and not only as necessary steps to feed the financialisation process of accumulation. Indeed with the increasing computerization of market finance, financial staff, especially the less familiar with such technologies, tend more and more to commit themselves into corporate finance, which let them much more margin of manoeuvre, and as such they are always looking for new outlets. Therefore, (South) African farmlands are just one of the innovative and emerging asset class among others and could forward compete with other hybrid good (Aglietta & Rigot, 2009) such as football players for instance[25].

This current restructuration in the financial industry directly influences the organisation of the productive spheres, while the structures of these spheres force and frame such restructuration.

[25] L'équipe magazine, Falcao : itinéraire d'un joueur objet, 14th of september 2014

By channelling and allocating this capital flow toward specific projects, our funds push and legitimize a specific form and conception of agriculture and food production, and therefore specific actors, to the detriment of others (Ortiz, 2008). Indeed, we note new alliances between these investment companies and funds, with major farming companies who become their farm operators. Such alliances will probably tend to reinforce their domination (Greenberg, 2010) and further the marginalization of small-scale agriculture in the continent. In addition, as these funds consider South Africa as a stepping-stone toward the rest of the African continent, they could export such pair in countries where agriculture is the main source of income for the population. For instance, the fund B's manager is currently trying to develop an African fund with another pool of investor.

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