The Journal of Peasant Studies ›
Volume 41, 2014 - Issue 5: Global Agrarian Transformations Volume 1: New Directions in Political Economy

Free access

11,018	220	24
Views	CrossRef citations to date	Altmetric

Listen

Articles

'Like gold with yield': evolving intersections between farmland and finance

Madeleine Fairbairn

Pages 777-795 | Published online: 14 Jan 2014

Cite this article https://doi.org/10.1080/03066150.2013.873977 Check for updates

Full Article Figures & data References Citations Metrics

Reprints & Permissions View PDF

Abstract

Since 2007, capital markets have acquired a newfound interest in agricultural land as a portfolio investment. This phenomenon is examined through the theoretical lens of financialization. On the surface the trend resembles a sort of financialization in reverse – many new investments involve agricultural production in addition to land ownership. Farmland also fits well into current financial discourses, which emphasize getting the right kind of exposure to long-term agricultural trends and 'value investing' in genuine for farmland also rep rly in the treatme rmland inves large spec zations (FIMOs) formerly valued l toward the

securitization of farmland demonstrate the potential for a much more complete financialization of farmland in the future.

Keywords: financialization farmland land grabbing

Introduction

At the turn of the twenty-first century, farmland was still considered an investment backwater by most of the financial sector. Although some insurance companies have had farmland holdings for years, most institutional investors found farmland, and agricultural investment in general, unappealing compared to the much higher returns to be made in financial markets. However, this began to shift around 2007 as the prices of agricultural commodities started to climb. The recession that began with the bursting of the US housing bubble in 2008 caused the sector to suffer a momentary dip but also added fuel to the fire, as investors sought alternative, and more secure, places to put their money. The effects of the resulting farmland investment boom can be seen in both the Global South and the Global North. The large ‘land grabs’ (GRAIN 2008) taking place in developing countries have their parallel in roaring land prices in countries with more developed land markets (Knight Frank 2011), which have led to speculation about a possible land price bubble (Abbott 2011).[1]

Whether or not farmland markets are dangerously overheated, they are certainly hot. Celebrity investors like George Soros are known to be investing in farmland (O'Keefe 2009), and agricultural investment conferences, which provide opportunities for fund managers and farmland operators to network with end investors, have exploded in popularity. Farmland is drawing investment from ‘high net worth individuals’ as well as
institutio wments,
private f While
sovereig and
invest the
resp investment
portfolio low
correlati xcellent way
to reduc vestors

In this article

company.[2] Asset management companies have responded to this sudden investor interest by creating a lavish buffet of new investment vehicles aimed at acquiring farmland. The extent of capital markets' interest in farmland is still relatively minor; even those institutional investors that have most enthusiastically embraced farmland generally commit less than one percent of their portfolios to this uncertain ‘new’ asset class (Carter 2010), and estimates of total institutional investment in farmland range between US$30 and US$40 billion globally (Wheaton and Kiernan 2012). However, it is undeniable that since 2007, global farmland real estate has undergone a makeover to become a desirable alternative asset class.

In October of 2010, the muckraking financial blog Zero Hedge (2010) wrote about a two-billion-dollar allocation to agricultural land made by the giant pension fund Teachers Insurance and Annuity Association - College Retirement Equities Fund (TIAA-CREF). The many reader comments that follow the post capture the irony of financial markets' sudden affinity for farms. One reader jokes that a farmland bubble is emerging which will culminate with the appearance of a new reality TV show, ‘Farm Flippers, Thursdays this fall on HGTV’ and even envisions some fake content: ‘of course [we] put in all stainless steel & granite feed troughs and watering buckets. We project we'll make a 300 percent profit when we sell next month’. Another reader asks whether the turn to real assets is a ‘Sign of Wall Street's fake paper going the way of the dodo? Or, more fake paper?’ In this contribution I do not attempt to answer the interesting question of whether or not farmland is in a bubble, but I do take seriously the second reader's question. Slightly rephrased, the question might read: does the turn to farmland, among other real assets, signal a shift away from financialization? Or does it simply indicate that farmland itself is increasingly being treated as a financial asset?

‘Financialization’ is something of a catch-all term. Here I primarily follow Krippner (2011, 4) in using it to describe ‘the tendency for profit making in the economy to occur
increasi vities’,
though I . The case
of farmla ve’ and
‘finan ferent
econ eserve of
value an a
producti nt wave of
farmlan with an

qualities have always held some appeal for speculators, the financialization of the global economy since the 1970s has opened up new possibilities for the incorporation of farmland into financial circuits. These new farmland investments are occurring in ways that prioritize capital gains and other financial returns but are not necessarily divorced from productive use.

The relationship between farmland acquisitions and global finance is only just beginning to receive academic scrutiny within the literature on global land grabs. McMichael (2012) provides a useful theoretical framework by situating land grabbing in the context of global food regime restructuring (see also Burch and Lawrence 2009). The current land rush, he argues, signals the deepening contradictions of the corporate food regime. It is part of the response to a crisis precipitated by both rising costs of production (energy prices) and social reproduction (food prices). Finance plays an enabling role in this salvage mission, by increasing the fungibility of land and opening up new frontiers for investment. Harvey (2010) sees the land grab as a way to sop up excess capital; when opportunities for investment at home are limited, new parts of the global economy are brought into capitalism's embrace, providing a ‘spatial fix’ for the crisis. On an empirical level, Daniel (2012) explores the rise of private equity funds operating in African land markets and the ways that development finance institutions facilitate this trend. The present paper contributes to this nascent interest area with a theoretical examination of the evolving interface between farmland and finance globally. It identifies broad trends in farmland investing with the potential to affect countries in both North and South.

This contribution draws from over 40 interviews with actors along the farmland investment chain – end investors, asset managers and farmland operators – as well as from participant observation at farmland investment conferences. The following section provides the paper's theoretical framework, which combines two areas of political
economy work on the
treatme . The third
section c nt deviates
from th of a
prod courses that
stress th he new
farmland th the

and of potentially large speculative profits. The emergence of new types of farmland investment management organizations (FIMOs) also suggests that the desire to profit from farmland as a financial asset exists not only among financial actors but also among commercial actors who have typically invested in farmland primarily as a means of production. Finally, steps toward the securitization of farmland (i.e. the sale of shares in the pooled income stream from various farm properties) represent the frontier of farmland financialization. The conclusion considers possible social and environmental implications of Wall Street's emerging love affair with agriculture.

Financialization and land as a financial asset

Financialization: macro-level and institutional approaches

Epstein (2005, 3) captures the breadth of the financialization literature in his blanket definition of financialization as ‘the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of domestic and international economies’. On a macro level, many theorists with roots in Marxist or World Systems analysis see financialization as a response to the systemic problem of capitalist over accumulation. For Arrighi (1994), financialization is a historically recurring phenomenon in which, midway through a ‘cycle of accumulation’, capitalist accumulation shifts its emphasis from commodity production and trade to finance (see also Krippner 2011). The US-led cycle of accumulation that occurred in the twentieth century, he argues, shifted into a phase of financial expansion in the early 1970s. The US government, working to maintain its hegemony, facilitated this shift through the abandonment of gold convertibility for floating exchange rates, the adoption of tight monetary policy and high interest rates, and the deregulation of the banking sector. Harvey (2010), like Arrighi, attributes the turn to financialization in the early 1970s to a
capitalis … specific to
the polit … which
financial … d by
litera … cial bubble,
skyro … higher
returns t

The disti … ment of this

In this article

financialization of the US economy can be seen as occurring on two fronts. ‘Sectoral’ financialization describes the fact that the financial sector is playing an increasingly large role in the economy as a whole relative to other sectors; the profits made by banks, asset managers and other providers of financial services have been steadily gaining on those made in other lines of business. ‘Non-sectoral’ financialization describes the growing importance of financial income in the form of earned interest, dividends and capital gains on investments to non-financial firms; rather than just selling cars and plane tickets, auto companies and airlines increasingly make money from financing car loans or investing in energy derivatives.

Shifting economic institutions have contributed to the financialization process. The growing concentration of investment power in the hands of institutional investors (Useem 1996), the corporate takeover movement of the 1980s, and the emergence of ‘shareholder value’ as a principle of corporate governance (Fligstein 2001) have all played a role. These trends put increasing pressure on non-financial companies to demonstrate impressive performance for capital markets and to prioritize high returns to investors (Davis 2009). This has led to concern that firms may be sacrificing long-term investment in productive capacity in order to meet the short-term demands of institutional investors (Lazonick and O'Sullivan 2000). Competitive pressure within the business of investment management has also led managers toward shorter and shorter investment horizons (Parenteau 2005).

Another institutional shift associated with financialization, is the proliferation and growing complexity of financial securities in recent years (Davis 2009). Securitization is the aggregation of income streams from a pool of underlying assets to form a new financial instrument in which investors buy shares. It turns illiquid assets liquid and spreads the risk of the underlying enterprise among many investors. Leyshon and Thrift (2007, 100) argue that a key dimension of financialization is the search for ever more unorthoc ey stress, however obscured the relat which they are ba

Some s ation is close to s the ‘signal crisis’ wl 3 was the

In this article

sustain itself. For Krippner (2011), the financialization of the US economy was the unintended consequence of government policies aimed at avoiding the thorny distributional questions of the 1970s by turning decisions over to the market. Now, however, she suggests that ‘the limits of financialization as a strategy for deferring social and political conflicts appear to have been reached’ (137), raising the question of what comes next. On an institutional level, Fligstein (2005) has also hinted that financialization may have reached its limits. He argues that, thanks to such corporate accounting scandals as Enron, ‘Financialization in the pursuit of increasing shareholder value has been given a bad name from which it is unlikely to recover’ (Fligstein 2005, 223).

The current farmland investment boom can shed some light on the future of financialization. Investor interest in such a tangible, productive asset could lend support to the idea that financialization is ‘going the way of the dodo’ as the Zero Hedge reader suggested. Land's second economic role as a financial asset, however, complicates this picture.

Land as a financial asset

The distinction between the real and the financial economies becomes somewhat tenuous when applied to farmland. This fuzzy boundary arises from land's double function as productive and financial asset. Harvey (1982), building on Marx, delves into the source of this ambiguity and in doing so lays the groundwork of a theoretical framework for the financialization of land. He argues that the distinction between landlords, who collect ground-rent based on their monopoly control of a natural resource, and capitalists, who collect interest on invested capital via the use of land as a means of production, is increasingly becoming blurred. Rather than consisting of two separate social classes, he argues, capitalist investors are now buying the land

themsel s case the
stream c . In other
words, p e land
become s a
parti on of
interest

Research onstrated

financial asset. Haila (1988) and Coakley (1994) both take as their starting point the Marxian view that property has both 'use value' – those qualities which help it to fulfill human needs – and 'exchange value' – what it can acquire on the market. Both researchers found that urban property was being increasingly prized for its exchange value, not only by financial actors, but also by non-financial actors – an observation that recalls Krippner's discussion of 'non-sectoral' financialization. Non-financial firms had 'begun to require maximum profitability also from their real property which has until now served as a framework for activity' (Haila 1988, 92), while even residential property owners took advantage of property booms to flip their homes (Coakley 1994). However, while Harvey and Haila argue that land is becoming a pure financial asset, Coakley (1994) contends that the unique qualities of property – its imperfect substitutability, its illiquidity and its limited divisibility – mean that it is only a 'quasi-financial asset' in which rent and interest remain analytically distinct.

Awareness of land's dual role as productive asset and financial asset can be seen in the economic school of thought arguing that value may lie 'hidden' in property investments, making it possible to 'unlock' this value through institutional arrangements that increase liquidity. The classic version of this theory comes from de Soto (2000), who argues that formalizing property ownership for the poor allows them to release value by using property titles as collateral on loans. A corporate version of this thesis appears in the 'opco-propco' schemes whose premise is that property-owning corporations can raise more investment capital by splitting themselves into two distinct entities: an operating company that runs the business and a property company that owns the property and collects (potentially securitizable) rental payments from the operating company (Christophers 2010, Burch and Lawrence 2013). Christophers (2010) argues that both the de Soto and opco-propco models rest on a 'mystification' which alleges first that property itself contains a source of value outside of the activities it houses, and second that it is possible to disentangle the exchange and use values o

The liter o focus on urban icialization of fa are particula essential substrat cation for financial investors were buying British farmland and leasing it out to tenant farmers, motivated by the rental income and, increasingly, by the potential for property value appreciation. They contrasted this behavior with that of agricultural producers who valued farmland only as a productive asset (i.e. for its use value) and raised concerns that these investors were inflating land prices and outbidding ‘owner-occupier’ farmers. Whatmore (1986, 114), however, rejects this rigid distinction, arguing that ‘owner occupiers are active (and not always unwitting) participants in the speculative rise in land prices, rather than the passive victims of outside speculators or of a land market with a mind of its own’. She nonetheless argues that institutional investors do have the effect of importing volatility into land markets. Because they treat land as fictitious capital, their decision to keep or sell it is influenced not just by alterations to the agricultural use value of the land, but by alterations in the wider financial environment, including changes in inflation, interest rates and the profitability of other assets.

The farmland investment boom: a return to the real …

Taking an Arrighian understanding of financialization as increasing accumulation through financial channels as opposed to productive ones, several aspects of the current farmland investment boom break with the trend. Most importantly, many of the farmland investments that have been initiated since 2007 are functional agricultural projects, not just land purchases. Investors looking to get exposure to farmland have two basic investment strategies at their disposal – I will call them ‘own-lease out’ and ‘own-operate’.[3] The own-lease out approach is the more conservative. The investor simply acquires the land, finds a tenant operator, sits back and begins receiving an income stream in the form of rental payments, as well as capital gains from appreciation. The land acquisition and leasing is often done via an external asset
manage iew of the
treatme view land as
a relativ nflation
hedgi th, on the
othe and and the
agricultu rally
undertak e detail
below). d returns

In this article

associated with engagement in agricultural production itself, making it particularly popular among those drawn to agricultural investment for the potentially high profits.

In the current farmland rush, many investors are taking an own-operate approach. As a means of production, land has acquired renewed importance over the last few years due to a constellation of factors: population growth, increasing meat consumption in developing countries, biofuel policies that divert grain into energy markets, over-taxed water resources and climate change (Cotula 2012). For many investors, the agricultural commodity bonanza that results from all of this man-made scarcity is simply too good to pass by without investing in commodity production itself. Therefore even some institutional investors, whose long-term liabilities to pensioners or insurees match well with the steady flow of income from rental payments, are opting for a more active strategy involving production income.

In addition, whether or not investors put capital into agricultural operation, the discourses they draw from indicate a view of farmland that is uncharacteristic of financialization. Two current financial perspectives, in particular, support this turn to land and agriculture. First of all, investors who are drawn to farmland are often motivated by a desire to get the right kind of exposure to long-term trends or extreme events that would alter the political economy of global agriculture. Among the new farmland investors, the most common iteration of this perspective is a focus on global population growth and increasing resource scarcity. The influential investor Jeremy Grantham, for instance, espouses an unapologetically neo-Malthusian view (Grantham 2011), which leads him to conclude that farmland and forestry will outperform other assets over the long term (Kolesnikova 2011). Meanwhile, the Hamburg-based investment firm Aquila Capital, which manages funds for agriculture and other real assets, has Dennis Meadows, the former director of the Club of Rome think tank and co-author of The limits to growth, on its board of directors (McIntosh 2011). At one major
agricultu of the
docume crisis. The
film end Malthusian
argu mphasis on
reso incidental to
the logic

A secon nvesting'.

In this article

emphasizes choosing investments based on their intrinsic value and long-term fundamentals, thereby providing some degree of insulation from the vagaries of investor sentiment. When asked in an interview for his view on gold, Buffett contrasted it unfavorably with farmland, emphasizing productive capacity. He said that if he had a choice between all of the gold in the world, worth US$7 trillion, or an equivalent value in productive assets, he would choose the latter:

> [If] you offered me the choice of looking at some 67-foot cube of gold and … fondling it occasionally, you know, and then saying, you know, 'Do something for me', and it says, 'I don't do anything. I just stand here and look pretty'. And the alternative to that was to have all the farmland of the country, everything, cotton, corn, soybeans, [and] seven Exxon Mobils … call me crazy but I'll take the farmland and the Exxon Mobils. (Crippen 2011)

For investors like Buffett, farmland's productive capacity is key to its value as an investment, regardless of whether the investment is in production or just the land itself.

Since 2007, this perspective on farmland has gained adherents due to increased investor distrust of markets. Unlike many financial products, the source of farmland's value is appealingly transparent. One of the farmland fund managers interviewed explained that many of his investors were searching for more concrete investment options:

> They say 'I don't want to have any more derivative operations and I don't have any idea what they are doing at the end of the line. I can see and I can understand soybean production, a sugar mill operation. I can see, I can test, touch, and I can understand all the numbers, so I want to put at least part of the money in this kind of investment'.

For inve nificantly
different eynote
speaker n't invest in
commo thing like
land

The app connected
perspect At least in

use value. A prominent investor speaking at a recent agricultural investment conference could almost have been paraphrasing Arrighi (2009) on the ‘terminal crisis’ of financialization:

> The world is changing dramatically. You know, for many periods in world history it was the financial centers that were in charge, and then for many periods it was the people who produced real goods – the oilmen, farmers, the miners – and then you had long periods when the finance people were in charge again. This is a huge change that is taking place, which unfortunately most people don't see … I mean, finance is a terrible place to go right now. It's over competitive. Huge leverage …

He concluded that direct involvement in agricultural production or mining was the best way to stay on the right side of this historical shift away from finance.

Of course, an investor who chooses an own-lease out strategy on the thesis that agricultural production will be increasingly vital in years to come is still treating land as Harvey's pure financial asset. However, investor motivations are not entirely inconsequential in that they seem to reveal at least a partial break with financialization construed more broadly. They indicate that, at least among a sub-section of capital market investors, investment in production or in the means of production has a renewed appeal. The discourses and investor rationales that characterize the current turn to farmland investing evince disillusionment with accumulation via financial channels and a desire, albeit partial and perhaps temporary, to return to the real economy.

The farmland investment boom … . or finance as usual?

Concurre ure and
other na ncreasingly
governe s
pers nvestments
put it, e route that
real esta 10). Rather
than bei will argue

In this article

that the new farmland investments are premised on land's profitability as both a productive and a financial asset.

This section discusses three aspects of the ongoing financialization of farmland. First, I point out that even the productive, own-operate investments discussed above place a heavy emphasis on the profits to be made from land appreciation. Second, the emergence of new farmland management entities from within both the financial sector and the agribusiness sector demonstrates that this treatment of land as a financial asset goes beyond capital markets to those who have traditionally been interested in land for its use value alone. Finally, the emergence of farmland securitization schemes illustrates an extreme case of farmland financialization in which the profit streams from agricultural land are used as the basis to construct an actual financial asset.

Cultivating capital gains

The farmland investments initiated since 2007 place a heavy emphasis on capital gains, a type of financial return. The cash returns to the productive use of farmland are generally in the range of 3–7 percent (Allison 2005). This is a profoundly uninspiring figure to institutional investors, who are often accustomed to double-digit returns and who, in the case of pension funds, frequently base estimates of future obligations to retirees on a return expectation of at least 8 percent (Reilly 2010). Under these circumstances, modest farmland has largely managed to capture the eye of capital markets because of its potential to appreciate. Of the farmland fund managers interviewed for this study, almost all expected at least 50 percent of their fund's total internal rate of return (IRR) to come from land appreciation, and some expected substantially more. Here I discuss the importance of capital gains to farmland's appeal as both an inflation hedge and as a real estate speculation.

Many investors are drawn to farmland primarily because it is widely believed to act as an inflat t financial assets. T erm ownersh Australian) and l tion hedge is pe that have prolifera y, apprecia mic

In this article

Warren Buffet's example notwithstanding – sometimes gets lost in the metaphor. In media and investment publications, farmland is frequently referred to as ‘black gold’ (Cole 2012), as ‘like gold with yield’ (Koven 2012) or ‘gold with a coupon’ (Land Commodities 2009). At one investment conference, a South American agricultural fund manager took this analogy even further, arguing that if Brazilian and Argentine row crop farmland is like gold, then a more niche investment in Chilean vineyards or orchards is like investing in diamonds, emeralds and rubies. Such expressions are telling because they imply that farmland's primary appeal is its ability to store and even increase in value (leading to capital gains), while the fact that it also comes ‘with yield’ in the form of operating returns or rent is just the icing on the cake. These comparisons imply that it is a store of value first and foremost and a means of production only as an afterthought.

For many other investors, however, farmland's inflation hedging properties alone do not constitute sufficient motivation to invest. As a manager at one university endowment put it,

> farmland competes for every investment dollar like any other asset class would. That said we look for certain diversification, but we are not willing to accept a lower yield on the thesis of food prices going up or keeping an inflation hedge.

This quotation reflects Harvey's image of land being treated as an investment like any other and demonstrates that many capital market investors are extremely reluctant to temper their high return expectations to accommodate farmland. For these more aggressive investors and the asset managers who work for them, the potential for large capital gains takes on an even more prominent role. They invest in regions that are undergoing particularly fast appreciation whether due to policy changes, infrastructural improve ch means that timi us is a carefully

Altho nd inves gers also actively at seeks to add valu formalizing

In this article

common transformations include the addition of irrigation or transportation infrastructure and the consolidation of a number of smaller properties. In addition, operation itself is often a route to obtaining capital gains. When I asked one European pension fund manager why he preferred an own-operate approach to farmland investment, his answer was simple: ‘if you participate in the operating part of the business you have a better control over the land appreciation’ since land value is based largely on productivity. Once these sources of appreciation are added to the operating returns, the IRR envisioned by asset managers can easily surpass 20 percent for transformative investment strategies on marginal land in Latin America, Africa and Eastern Europe.

The point I wish to make here is that, due to land's dual nature as a productive and a financial asset, it is possible to use the land productively while simultaneously speculating on financial returns from its appreciation. The ongoing centrality of capital gains, for both hedgers and speculators, indicates that the farmland investment boom has not deviated much from the reliance on financial profits that Arrighi, Krippner and others associate with financialization. The use of land as a financial asset is obvious among those investors who adopt an own-lease out approach, as their returns are constituted by rental income and capital gains on appreciation (itself just rent capitalized into the value of the land). However, among those who adopt an own-operate approach, about half the returns still take the form of capital gains. Coakley's assessment of property as a quasi-financial asset appears particularly apt in this case. Contrary to simplistic portrayals of recent large-scale farmland acquisitions as either productive or speculative, this demonstrates that they can be, and frequently are, both at the same time.

The new FIMOs

Structur … is being
used as … agers are
emergin … itself. Just as
Haila (1 … property
mark … y by
financi … w it primarily
as a sou

In certain ways, the shifts occurring within farmland investing mirror those that have already occurred in US timberlands. The economic transformations that began in the 1970s – the increasing size and power of institutional investors and the corporate takeover movement – contributed to a financialization of US timberland beginning in the 1980s (Gunnoe and Gellert 2010). Vertically integrated US timber companies, facing increasing market pressure, began to view their land holdings as deadweight on their balance sheets, and ownership was gradually transferred to institutional investors. The land was either included in a real estate investment trust (REIT) or was managed on behalf of institutional investors by a Timberland Investment Management Organization (TIMO). This section considers the emergence of new asset managers entirely or partially dedicated to farmland, referred to here as FIMOs (farmland REITs are discussed in the following section). In the US, three major FIMOs – Hancock Agricultural Investment Group (HAIG), Prudential Agricultural Investments and UBS Agrivest – have existed since the 1980s or 1990s, and the former two share parent companies with major TIMOs. Like TIMOs, these management firms assemble a portfolio of land tailored to fit the client's investment thesis and appetite for risk in exchange for a management fee. They generally have a minimum investment of US$50 million and so are accessible only to institutions and extremely wealthy individuals. They also tend to take a relatively long-term view of farmland assets in which land is held for years or decades as a source of rental income and a store of value. In recent years, however, the farmland investment landscape has changed with the emergence of two new types of FIMOs.

The first type of FIMO has its origins in the financial sector. The years since 2007 have seen the advent and proliferation of farmland private equity funds (Bergdolt and Mittal 2012, Daniel 2012)[4]. While private equity funds are generally associated with the purchase, upgrading and resale of companies, the new farmland funds may acquire farmland-owning agribusinesses or simply invest directly in a portfolio of land. Like typical p … tnerships, operate … and carried interest … re is likely high … se funds also h … ith as little as US$2 … e to a portfolio … ersified –

been sufficient for the down payment on one US farm property. Investors now encounter a wide range of options for making private equity investments in global farmland, from NCH Capital's Agribusiness Partners Fund, which boasts 700,000 ha of farmland in the former Soviet Union and Baltic States (Bergdolt and Mittal 2012), to Emergent Asset Management's African Agri-Land Fund, which focuses on sub-Saharan Africa (Daniel 2012).

In order to return capital to investors after the term of the fund is complete and receive their own compensation, the fund managers must have some kind of exit strategy. The most common exit strategies are taking the entire fund public via an initial public offering (IPO) on the stock market, selling off the properties to a strategic buyer or rolling them over into a new fund. This last option would allow investors to keep the farmland assets even after the fund's term ended. Because most of these funds are only in their third or fourth year of operation, it is not yet possible to know the form that most of these exits will take. Although many of the funds produce on, and often make improvements to, the land they acquire, they treat their portfolio of farmland much like any other investment portfolio in terms of expected profits and time frame of investment.

A second type of FIMO which has emerged since 2007 has its lineage in large agricultural operators, some of which are seeking to capitalize on high rates of farmland appreciation by spinning off a part of their farmland portfolio into a separate asset management business. This is particularly the case in South America where a concentrated land ownership structure has made it possible for operators to own hundreds of thousands of hectares of land. The case of the publicly traded, Brazilian agribusiness SLC Agrícola is illustrative. This cotton, corn and soy producer has recently created a separate agricultural property company called SLC LandCo. In order to construct LandCo., SLC took 60,000 ha of its existing 200,000 ha land portfolio and
used it t … nce in
exchang … 2). These
funds wi … rapid
appre … focused
fund … pital gains
from lan … heir current
investor … grícola
2012). A … any Cosan

Radar Propriedades Agrícolas, a rural real estate business. As the Cosan website explains, Radar aims to ‘capitalize on new business opportunities in the Brazilian rural real estate market, purchasing properties with significant potential for appreciation and leasing them to major agricultural producers. After they reach their target value, the properties are put on the market’ (Cosan 2012).

The examples of LandCo and Radar demonstrate that, in a booming land market, agricultural operators are increasingly aware of the exchange value of their land base. HighQuest Partners (2010, 9) explain that the type of restructuring they have undertaken serves to ‘create a platform for raising capital from a larger universe of investors which maintains a preference for land ownership (a hard asset) over investing in farm management operations’. These new FIMOs make use of the same logic that Christophers (2010) observes in opco-propco restructurings. Although the parent companies are still primarily commercial operators and the land is still used as a productive asset, these firms are taking steps to more effectively profit from farmland appreciation. While treatment of land as a financial asset is perhaps to be expected in the case of the new farmland private equity funds, whose roots are in the financial sector, it is more telling in the case of the FIMOs that have emerged from within commercial agriculture itself.

Increasing land liquidity through farmland securitization

Securitization represents the frontier of farmland financialization. It would transform farmland from a notoriously illiquid asset to an extremely liquid one. Securitization of residential real estate is, of course, widespread and was intimately connected with the crash of the US housing market in 2008.[5] Securitization of farmland real estate, however, is only in its initial stages. It would likely mean the aggregation of the rental payments made by tenant farmers on several properties into a single income stream that inve y listed

farmland

The secu poses some

serio tate. Land's

ability many

investor ngs,

equipme e Generally

In this article

allows a company to declare the initial capital outlay for the asset as a tax-deductible expense over the years that follow. For publicly listed companies with a large amount of their fixed assets in farmland, the inability to depreciate sets them at a disadvantage relative to other public companies. In the shareholder value era, when stock price largely depends on company financial statements, farmland can therefore pose something of a liability in public markets.

Until recently, North American retail investors and those who wanted a more liquid investment could only invest in farmland indirectly by buying stock in a landowning public company, such as the South America-based agribusiness giants AdecoAgro, Cosan and Cresud, all of which own hundreds of thousands of hectares of land and are traded on the New York Stock Exchange. In 2007, investors gained a second investment option with the advent of the agribusiness exchange-traded fund (ETF). ETFs, such as the Market Vectors Agribusiness Fund, hold securities for publicly traded agribusinesses, and shares in the fund are themselves traded like stocks. Because many of the agribusinesses whose stocks are included in these ETFs own farmland, they give investors some indirect exposure to farmland.

The most obvious way for the securitization of farmland to occur is via a REIT. Established in the US with the Real Estate Investment Trust Act of 1960, a REIT is a corporate entity that is exempt from paying corporate taxes by virtue of the fact that it distributes 90 percent of its income directly to investors. The US has several timberland REITs, as mentioned above, while Australia and Malaysia boast public REITs focusing on timber and palm oil production, respectively. However, the international leader in farmland securitization is, strangely enough, Bulgaria. Bulgarian REITs, known as Special Purpose Investment Companies (SPICs), were made possible with the passage of a 2003 act that exempted these entities from corporate tax provided they, like US REITs, distribute 90 percent of income to investors (DTT 2005). At least five public REITs were cre nd price increase aim to profit fro plots that result s during the trans

Until a fe mland REIT, but now d public. The firm based in Virginia that raised US$50 million in a January 2013 IPO (NASDAQ symbol: LAND). Gladstone Land's parent company, Gladstone Investment Corporation, already runs a public REIT composed of commercial real estate, and Gladstone Land intends to apply for REIT tax status for the 2013 tax year (NASDAQ 2013). Gladstone Land owns 14 farms in California, Florida, Michigan and Oregon, comprising 1950 acres (Gladstone Land 2013b). The company takes no part in farm operation, and its profits come from leasing the farm properties out to corporate and independent farmer tenants. It acquires land, in part, through sale-leaseback deals, in which the farmer sells land to the company in return for a long-term lease to continue as the farm operator (Gladstone Land 2013a).

Another firm that has expressed interest in taking farmland public is the Canadian farmland investment company Bonnefield Financial. In January of 2012, Bonnefield announced that it had applied to the Canadian security regulatory authority to launch a C$100 million initial public offering of a farmland ETF on the Toronto Stock Exchange (Canada Newswire 2012). Bonnefield already owns around 7000 acres of Canadian farmland which, like Gladstone Land, it acquires, in part, through sale-leaseback deals (Bonnefield 2012). In Saskatchewan and Manitoba, where corporate ownership restrictions prohibit public companies from owning land, Bonnefield intends to buy farmland mortgages instead of the land itself (Koven 2012) – a disconcerting idea given the role that mortgage-backed securities played in the financial crisis.

Turning farmland into a public security can have the unintended consequence of allowing use values and exchange values to become further detached. Although labor-using agricultural production remains the source of value in farmland investments (Harvey 1982) and securities depend upon such real income streams for their worth (Leyshon and Thrift 2007), they allow for an increasing divergence between the two. In an interview, an executive at one of the Bulgarian REITs told me that the crisis had
increase a big
differenc use the price
on the s es'. The
issue EITs, but is
also ce, analysts
often co Agro trade
well bel gence may

However, public farmland funds are not the only unusual financial vehicles aimed at increasing the liquidity of land. A new ‘crowdfunding’ company called Fquare, launched in August of 2012, is in the business of selling private farmland securities. Crowdfunding, best known for donation-based web sites like Kickstarter, is no longer just about supporting artists and charities. In April of 2012, the Jumpstart Our Business Startups (JOBS) Act was signed into law, reducing the securities regulations that apply to crowdfunding (Cortese 2013). While crowdfunded companies could previously only compensate their ‘investors’ with gifts like t-shirts and signed CDs, investors can now receive company debt or equity in return for their investment. In short, investment crowdfunding has become a new type of private market, which is easily accessible over the internet and not highly regulated (Rattner 2013). So far Fquare accepts only accredited US investors – individuals with a relatively high level of wealth and financial sophistication – but once the Securities and Exchange Commission (SEC) fully implements the JOBS Act, its founders plan to accept all retail investors. An investment in Fquare buys an ownership stake in an operational Corn Belt grain farm acquired via sale-leaseback. Investor profits come from farm lease payments and take the form of quarterly dividends in the range of 3–6 percent. Investors are able to select which farm properties they hold equity in, and both investment periods (3, 5 or 7 years), and minimum investments (as low as US$5000) vary between investment properties (Fquare 2013). Perhaps most significantly, Fquare hopes eventually to establish a secondary market in which investors can buy and sell their farmland ownership shares to other Fquare investors, essentially rendering farmland liquid.

Although farmland has always had appeal as a financial asset, the amount of fixed capital it involves and its illiquidity have acted as barriers to investment. By securitizing farmland, Gladstone, Fquare and other companies like them are attempting to dismantle these barriers.

Conclu

Occu
enviro ources, the
current f m the
process hat stress

operate approach that involves investment in agricultural production as well as the land itself. In many ways, however, this trend represents a continuation of financialization into new territories. Many farmland investors are eager to get exposure to agricultural production, but their investment calculus is also heavily dependent on the potential for capital gains from land appreciation. These investments depend on both the use- and exchange-value aspects of land. Meanwhile, new farmland investment vehicles, from private equity funds to public securities, are making farmland more liquid and accessible to a wider range of investors. FIMOs are emerging both from within the financial sector and from agribusiness itself, indicating that the use of land as a financial asset is not restricted to professional investors. Instead, the sector is characterized by crossover; financiers are using land as a productive asset, while operators are using it as a financial asset. Rather than a situation in which land is treated as a pure financial asset, land's financial qualities are increasingly valued but not necessarily divorced from its productive qualities. We may be seeing the emergence of a new type of financialization for an era of growing resource scarcity – one in which farmland's role as a quasi-financial asset will be even more prominent. As McMichael (2012, 686) observes, the restructuring of the corporate food regime involves the opening of new investment opportunities for capital with the result that ‘the so-called rational planning of planetary resources such as land (and water) is driven as much by financial goals as by material considerations’.

Several excellent macro-level overviews of land grabbing (Cotula 2012, McMichael 2012, White et al. 2012) have signaled the importance of financial processes but have not elaborated much on their role. This contribution has aimed to put some further meat on the bones of the land grab-financialization connection. It adds to existing empirical research (GRAIN 2011, Bergdolt and Mittal 2012, Daniel 2012) by exploring how developments in the relationship between farmland and finance extend beyond the popular image of investors snapping up farmland in the Global South, to trends as diverse a … rices.

I have gi …
develo … mental
impl … asant
disposse … trial
agricultu … implications

separation of ownership and control in land markets. The sale-leaseback arrangements pursued by Gladstone, Bonnefield and others can provide farmers with much needed financing, but they also transfer ownership away from the person farming the land. Aside from the obvious impact this has on the structure of agriculture, it also reduces the farmer's incentive to use sustainable practices by removing his or her stake in future productivity.

Some of the ways that investors ‘add value’ to farmland before re-selling could also reduce access to land for smallholders. Many companies, like the Bulgarian REITs mentioned above, see consolidation of small properties as an integral part of their strategy of land transformation. Their reasoning is that larger plots will be more attractive to agribusinesses and other strategic buyers that could potentially serve as their exit. In addition, some companies claim to add value by clarifying legal title where it was previously murky. In many parts of the Global South, an ironclad property title, lease or other use right will come at the expense of local residents whose legally flimsy claim lies only in years or generations of life rooted in that location.

There is also a danger of importing the short-termism of finance into land markets. This concern relates particularly to the more speculative investments being pursued by private equity funds. If capital gains are to be realized, rather than just serving the purpose of value storage, then the land (or the company that owns the land) must eventually be sold. For this reason, the new farmland private equity funds generally have seven- or 10-year time horizons. Fund managers need an exit to get paid, and an exit usually implies a sale. The idea of entering into land ownership with an ‘exit strategy’ in place would thoroughly confound most of the world's farmers, for whom hanging on to their land is a primary objective. For the investors involved, however, seven years actually is a long-term commitment, given that they can drop an unprofitable stock in an instant. Although many private equity fund managers argue that thei … ty
improve … ely that such
a short-t … ces.

The … tempts at
farmla … rmland
almost i … l asset. The
increasi … could

In this article

translates into the possibility of higher profits for speculators, it would not necessarily be welcome to those more staid farmland investors that were drawn to the sector for the steady, predictable returns. However, these investors – many of the pension funds and others employing an own-lease out strategy – could also contribute to changing land market dynamics. Global pension funds alone manage over US$20 trillion in assets (Hua 2012). If all allocated just 1 percent of their portfolios to farmland investments, there would be US$200 billion of pension money competing in global land markets. Many commentators have argued that the increasing participation of index funds in agricultural commodity markets has contributed to soaring global grain prices (Wahl 2009), and this could potentially have a similar effect. This amount of capital could raise the floor of land prices, putting it out of reach of small farmers, especially if it is concentrated it a handful of attractive markets.

Increasing financial interest in farmland may prove to be a transient phenomenon. The farmland bubble, if indeed one exists, may soon burst or simply deflate, particularly given that the appeal of land as a financial asset is highly dependent on interest rates. If, however, powerful institutional investors and financial companies continue to embrace farmland as a financial asset, it could have lasting effects on land ownership and farming worldwide.

This article is based on work supported by a National Science Foundation (NSF) Graduate Research Fellowship under grant number DGE-1256259, as well as by a Social Science Research Council (SSRC) International Dissertation Research Fellowship and a Louis and Elsa Thomsen Wisconsin Distinguished Graduate Fellowship. I would like to thank Geoffrey Lawrence, Philip McMichael, Jack Kloppenburg, Katharine Legun, Zenia Kish, and the anonymous reviewers for feedback on earlier drafts.

Addit

Mad d
Enviro Madison. Her
previous l land
grabbing nland on the

In this article

part of the financial sector, as well as the policy debate that surrounds foreign farmland investment in the case of Brazil.

Notes

[1] Financial sector demand for farmland is only partially responsible for steep land prices. For instance, existing farmers represented 72 percent of Iowa farmland sales in 2009, while investors were responsible for only 23 percent (Duffy 2009).

[2] Confusingly, most institutional investors are actually asset managers themselves, while the real end investors are the pensioners or insurees whose money they manage. However, for clarity's sake I will refer to these institutions as ‘investors’.

[3] Investors interested in agricultural production but not farmland ownership could also adopt a third approach, ‘lease-operate’, in which they produce on rented land giving them the highest risk-return of the three approaches.

[4] The new farmland investment vehicles actually include private equity funds, hedge funds, venture capital and specialized farmland funds operated by more mainstream asset managers. However, because the traditional distinctions between these vehicles do not always apply in the case of farmland (Bergdolt and Mittal 2012), and because the majority of new farmland funds have what would generally be considered a private equity-like structure, I will focus my discussion on the role of private equity.

[5] The term ‘securitization’ is most often used to refer to the bundling of debt obligations, as in mortgage-backed securities. However, as Leyshon and Thrift (2007) observe, almost any income stream can be turned into a security. Urban real estate has also been securitized through equity REITs, in which the income stream comes from rental pa

Refer

1. Abbot ters, 10

In this article

idUSTRE72968T20110310 [Accessed on 22 March 2012].
Google Scholar

2. Allison, K. 2005. Investors dabble with living off the land. Financial Times, 5 April.
Google Scholar

3. Arrighi, G. 1994. The long twentieth century: money, power, and the origins of our times. New York: Verso.
Google Scholar

4. Arrighi, G. 2009. The winding paths of capital: interview by David Harvey. New Left Review, 56, 61–96.
Google Scholar

5. Bergdolt, C. and A. Mittal. 2012. Betting on world agriculture: U.S. private equity managers eye agricultural returns. Oakland, CA: The Oakland Institute. Available from: http://www.oaklandinstitute.org/sites/oaklandinstitute.org/files/OI_report_Betting_on_World_Agriculture.pdf [Accessed on 9 July 2013].
Google Scholar

6. Bonnefield. 2012. Bonnefield Canadian farmland LP1. Available from: http://www.bonnefield.com/uploads/pdfs/Bonnefield%20LP%20I%20facts.pdf [Accessed on 29 March 2012].
Google Scholar

7. Burch, D. and G. Lawrence. 2009. Towards a third food regime: behind the
transf 007/s10460-
009-9

8. Bu ins: private
equity Values,
30(2),

9. Canada Newswire. 2012. Bonnefield Canadian farmland corp. announces filing of preliminary prospectus for initial public offering. Canada Newswire, 18 January. Available from: http://cnw.ca/4BI5 [Accessed on 29 March 2012].
Google Scholar

0. Carter, D. 2010. Fertile ground for investment. Pensions & Investments, 19 April.
Google Scholar

1. Christophers, B. 2010. On voodoo economics: theorising relations of property, value and contemporary capitalism. Transactions of the Institute of British Geographers, 35, 94–108.
Google Scholar

2. Coakley, J. 1994. The integration of property and financial markets. Environment and Planning A, 26, 697–713. doi: 10.1068/a260697
| Web of Science ® | Google Scholar

3. Cole, R. 2012. The new black gold: U.S. farmland. The Globe and Mail, 22 March.
Google Scholar

4. Cortese, A. 2013. The crowdfunding crowd is anxious. The New York Times, 5 January.
Google Scholar

5. Cosan. 2012. Radar. São Paulo: Cosan. Available from: http://www.cosan.com.br/cosan2009/web/conteudo_eni.asp?idioma=1&conta=46&tipo=26752 [Accessed on 23 May 2012].
Google Scholar

6. Cotula h: a critical appra ies, 39(3–4), 64

7. Crippe . CNBC.

http://www.cnbc.com/id/41867379/CNBC_Buffett_Transcript_Part_2_The_Zebra_That_Got_Away [Accessed on 25 May 2012].
Google Scholar

8. Daniel, S. 2012. Situating private equity capital in the land grab debate. Journal of Peasant Studies, 39(3–4), 703–729. doi: 10.1080/03066150.2012.674941
| Web of Science ® | Google Scholar

9. Davis, G. 2009. Managed by the markets: how finance reshaped America. Oxford, UK: Oxford University Press.
Google Scholar

20. De Soto, H. 2000. The mystery of capital: why capitalism triumphs in the West and fails everywhere else. New York: Basic Books.
Google Scholar

21. Dotzour, M. 2012. Economic outlook for investors and business decision makers. Presentation at the Land Investment Expo, 20 January, Des Moine, Iowa. Available from: http://www.youtube.com/watch?v=41IzJqt5xiA&context=C362f9bcADOEgsToPDskK_AhG2gCLboOeBTiBvV3vF [Accessed on 1 June 2012].
Google Scholar

22. DTT. 2005. Bulgaria: brief overview of the Bulgarian legal framework for the funds industry. Available from: http://www.dtt-lawoffice.com/new/downloads/Mutual_Funds_report_Bulgaria_05_12_05.pdf [Accessed on 23 May 2012].
Goog

23. Duffy,
htt Accessed on
6 J
Goog

24. Epstein, G. 2005. Introduction: financialization and the world economy. In: G. Epstein, ed. Financialization and the world economy. Cheltenham, UK: Edward Elgar Publishing, pp. 3–16.
Google Scholar

25. Fligstein, N. 2001. The architecture of markets: an economic sociology of twenty-first-century capitalist societies. Princeton, NJ: Princeton University Press.
Google Scholar

26. Fligstein, N. 2005. The end of (shareholder value) ideology? Political Power and Social Theory, 17, 223–228. doi: 10.1016/S0198-8719(04)17010-5
Google Scholar

27. Fquare. 2013. Frequently asked questions. Available from: https://fquare.com/faqs.aspx [Accessed on 10 July 2013].
Google Scholar

28. Gladstone Land. 2013a. Overview. Available from: http://gladstoneland.investorroom.com/overview [Accessed on 10 July 2013].
Google Scholar

29. Gladstone Land. 2013b. Portfolio. Available from: http://gladstoneland.investorroom.com/portfolio [Accessed on 10 July 2013].
Google Scholar

30. GRAIN. 2008. SEIZED! The 2008 land grab for food and financial security. Barcelona: GRAIN. Available from: http://www.grain.org/article/entries/93-seized-the-2008-
landgr
Goog

31. GR inst the
Gr sion-funds-
key-pl
Goog

32. Grantham, J. 2011. GMO quarterly letter, April 2011. Available from: http://www.scribd.com/doc/54681895/Jeremy-Grantham-Investor-Letter-1Q-2011 [Accessed on 30 June 2012].
Google Scholar

33. Gunnoe, A. and P. Gellert. 2010. Financialization, shareholder value, and the transformation of timberland ownership in the U.S. Critical Sociology, 37(3), 265–284. doi: 10.1177/0896920510378764
Google Scholar

34. Haila, A. 1988. Land as a financial asset: the theory of urban rent as a mirror of economic transformation. Antipode, 20(2), 79–101. doi: 10.1111/j.1467-8330.1988.tb00170.x
Google Scholar

35. Harvey, D. 1982. The limits to capital. Oxford, UK: Blackwell.
Google Scholar

36. Harvey, D. 2010. The enigma of capital: and the crises of capitalism. Oxford, UK: Oxford University Press.
Google Scholar

37. HighQuest Partners. 2010. Private financial sector investment in farmland and agricultural infrastructure. Paris: Organisation for Economic Co-operation and Development (OECD). Available from: http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=TAD/CA/APM/WP(2010)11/FINAL&docLanguage=En [Accessed on 14 June 2012].
Goog

38. Hua, T ns and
Inv
Go

39. Invest rom:

In this article

Google Scholar

0. Kindleberger, C. and R. Aliber. 2005. Manias, panics, and crashes: a history of financial crises. 5th ed. Hoboken, NJ: Wiley and Sons.
Google Scholar

1. Knight Frank. 2011. How the land lies: review of the international farmland market. The Wealth Report 2011. Available from: http://www.knightfrank.com/wealthreport/2011/international-farmland-market/ [Accessed on 22 May 2012].
Google Scholar

2. Kolesnikova, M. 2011. Grantham says farmland will outperform all global assets. Bloomberg.com, 10 August. Available from: http://www.bloomberg.com/news/2011-08-10/grantham-says-farmland-will-outperform-all-global-assets-1-.html [Accessed on 30 June 2012].
Google Scholar

3. Koven, P. 2012. ETF may stand for exchange-traded farmland. Financial Post, 19 January.
Google Scholar

4. Krippner, G. 2005. The financialization of the American economy. Socio-Economic Review, 3(2), 173–208. doi: 10.1093/SER/mwi008
Google Scholar

5. Krippner, G. 2011. Capitalizing on crisis: the political origins of the rise of finance.
Camb
Goog

6. La rmland
inv n/ [Accessed
on 23
Goog

47. Lazonick, W. and M. O'Sullivan. 2000. Maximizing shareholder value: a new ideology for corporate governance. Economy and Society, 29(1), 13–35. doi: 10.1080/030851400360541

| Web of Science ® | Google Scholar

48. Leyshon, A. and N. Thrift. 2007. The capitalization of almost everything: the future of finance and capitalism. Theory, Culture & Society, 24(7-8), 97–115. doi: 10.1177/0263276407084699

| Web of Science ® | Google Scholar

49. Massey, D. and A. Catalano. 1978. Capital and land: landownership by capital in Great Britain. London: Edward Arnold.

Google Scholar

50. McFarlane, S. 2010. Pension funds to bulk up farmland investments. Reuters, 29 June. Available from: http://uk.reuters.com/article/2010/06/29/uk-pensions-farmland-idUKLNE65S01K20100629 [Accessed on 24 July 2013].

Google Scholar

51. McIntosh, B. 2010. Aquila Capital: absolute return and real asset strategies from Germany. The Hedge Fund Journal, Dec 2010/Jan 2011.

Google Scholar

52. McMichael, P. 2012. The land grab and corporate food regime restructuring. Journal of Peasant Studies, 39(3-4), 681–701. doi: 10.1080/03066150.2012.661369

| Web of Science ® | Google Scholar

53. NASD

http:// 73-70799?

tab=n

G

54. O'Kee

Goog

55. Orihuela, R. 2012. Soros-backed farms ripe for bid at 36% discount: real M&A. Bloomberg.com, 14 June. Available from: http://www.bloomberg.com/news/2012-06-14/soros-backed-farms-ripe-for-bid-at-36-discount-real-m-a.html [Accessed on 30 June 2012].
Google Scholar

6. Parenteau, R. 2005. The late 1990s' bubble: financialization in the extreme. In: G. Epstein, ed. Financialization and the world economy. Cheltenham, UK: Edward Elgar Publishing, pp. 111–148.
Google Scholar

7. Rattner, S. 2013. A sneaky way to deregulate. The New York Times, 3 March.
Google Scholar

8. Reilly, D. 2010. Pension gaps loom larger. The Wall Street Journal, 18 September.
Google Scholar

9. SLC Agrícola. 2012. SLC Agrícola: value from both farm and land. Available from: http://www.mzweb.com.br/slcagricola2009/web/arquivos/SLCE3_PresentationInstitutional_201205_ENG.pdf [Accessed on 30 June 2012].
Google Scholar

0. Useem, M. 1996. Investor capitalism: how money managers are changing the face of corporate America. New York: Basic Books.
Google Scholar

1. Wahl, P. 2009. Food speculation: the main factor of the price bubble of 2008. Berlin: World
Goog

2. Wh dern British
ag d policies.
Amste
Goog

In this article

3. Wheaton, B. and W. Kiernan. 2012. Farmland: an untapped asset class? Food for Thought, December 2012. Sydney, AU: Macquarie Agricultural Funds Management. Available from: http://www.macquarie.com/dafiles/Internet/mgl/com/agriculture/docs/food-for-thought/food-for-thought-dec2012-anz.pdf [Accessed on 24 July 2013].
Google Scholar

4. White, B., S. Borras Jr., R. Hall, I. Scoones, and W. Wolford. 2012. The new enclosures: critical perspectives on corporate land deals. Journal of Peasant Studies, 39(3–4), 619–647. doi: 10.1080/03066150.2012.691879
| Web of Science ® | Google Scholar

5. Zero Hedge. 2010. Is TIAA-CREF investing in farmland a harbinger of the next asset bubble? Available from: http://www.zerohedge.com/article/tiaa-cref-investing-farmland-harbinger-next-asset-bubble [Accessed on 18 March 2012].
Google Scholar

Related research

People also read | Recommended articles | Cited by 220

Information for

Authors
R&D professionals
Editors
Librarians
Societies

Open access

Overview
Open journals
Open Select
Dove Medical Press
F1000Research

Opportunities

Reprints and e-prints
Advertising solutions
Accelerated publication
Corporate access solutions

Help and information

Help and contact
Newsroom
All journals
Books

Keep up to date

Register to receive personalised research and resources by email

Sign me up

In this article