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Agriculture Investing

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As the Fed “expands its balance sheet”, investors are showing interest in hard assets. Even Bill Gross recently wrote that “real assets...should occupy an increasing percentage of portfolios.”¹ The investment industry has responded heroically, deploying G. Gordon Liddy to pound the mantra of “Gold!” into America’s collective consciousness. Larger investors, however, are quietly exploring another real asset, agricultural land. There are a host of serious investment opportunities being offered, but is “ag²” for real? What should investors look for? What are the pitfalls?

Greycourt has taken a hard look at the investment thesis for ag funds and has also reviewed a representative sampling of funds. This background piece will suggest an analytic framework for investors, describe some of the specific funds we reviewed and weigh some of the pros and cons of swapping dollars for dirt.

❖ Investment Thesis

Ag managers build their investment case primarily on several demand factors plus one or two on the supply side. These can be roughly divided into Malthusian and Reaganesque arguments.

In 1798 Thomas Malthus argued³ that, while population grows exponentially, food supply grows arithmetically. After 213 years the predicted Malthusian catastrophe has not yet over taken us, but his ideas remains strong in both academic and popular thinking, as evidenced by the work of (for example) Stanford professor Paul R. Ehrlich⁴. Advocates for ag investing do not suggest outcomes as extreme as Malthus and Ehrlich. They do suggest that a disparity in the growth rates of population and food supply will raise the prices of food and the land it grows on. Whether this actually happens remains to be seen, but it is a reasonable investment thesis.

The Reaganesque argument is far more cheerful, but points to the same investment result. In this view, the continuing growth of the emerging market economies expands per-capita demand for more and better food. Increasingly affluent consumers demand a more varied diet, one higher in protein. This view does not reject the Malthusian expectation of high population growth, but adds an additional growth driver, increasing per capita demand. We believe this is a critical factor in the ag investment thesis, as it addresses serious shortcomings in the Malthusian argument.

¹ “Tuesday Never Comes,” PIMCO Investment Outlook, May 2012.

² Investor slang for “agricultural land,” not the symbol for silver.

³ *An Essay on the Principle of Population*, 1798.

⁴ *The Population Bomb*, 1968. Ehrlich made a famous bet with Julian Simon in 1980 in which Ehrlich selected five commodity metals and bet that the prices of those metals would go up over the next ten years. Ehrlich lost, as the prices of all five trended downward for the following decade.

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On the demand side, ag advocates point to evidence that the productivity gains of the “Green Revolution” in agriculture are slowing. From the 1940s through the 1970s, the Green Revolution brought about an expansion in agricultural productivity that shattered the Malthusian thesis. Norman Borlaug⁵, the father of the Green Revolution, has probably saved more lives than anyone in history. Yet the possibility exists that the rate of productivity increase is unsustainable and must taper off. This concern is coupled with the argument that there is a **finite** amount of agricultural land available, and that we are reaching the limits of that availability.

Taken together, these arguments are a reasonable investment thesis for agricultural land, based on both supply and demand factors. Before an investor considers a specific ag investment, however, he or she should select the most compelling macro supply and demand factors as guides in evaluating each opportunity.

As we sort through the ag investment thesis and universe of funds attempting to exploit it, we conclude that the themes of the investment thesis are broadly valid, but that the timing and magnitude of the predicted effects are both critical and difficult to predict. Consider the following pros and cons:

Pro: The population will grow. There is little disagreement on the direction of the population trend in the foreseeable future. No one doubts that the growing population will need a growing food supply.

Con: Will population growth continue at its current rate? Certainly fertility rates in developed countries have declined, often below the replacement rate. We have also seen that increasing prosperity in developing countries is associated with declining fertility rates. It is enormously difficult, however, to figure out how this will play out against the ag investment thesis. It seems safe to say, however, that the process is a lot more complex than Malthus and Ehrlich imagined. Further, population growth alone may not produce the growth in food demand that ag investors would like to see. For example, what if the population scenario does in fact play out in the kind of catastrophe that Malthus (and even Borlaug) envisioned? What kind of purchasing power will these impoverished billions have? We know that in the past governments have been unable or unwilling to import food that would have prevented the deaths of millions. No one is likely to invest in farmland based on the opportunity to sell food to UN relief programs.

⁵ Norman Borlaug, recipient of the Nobel Prize (1970), the U.S. Presidential Medal of Freedom (1977) and the Congressional Gold Medal (2006).

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Pro: Emerging world prosperity will expand premium food demand. This makes sense to us, far more than the pure Malthusian construct. Even the timing seems less risky on this issue. More and better food should be at the top of the wish list of the world's new middle classes.

Con: How big will this effect be? Note that the prosperity effect on food consumption is in tension with the effect prosperity has on fertility rates. Demand will increase or decrease based on the net effect of the two opposing forces.

Pro: There are limits on supply growth. Even Borlaug saw that ag productivity could not grow forever at the same rate he saw in his career.

“But Africa, the former Soviet republics, and the *cerrado*⁶ are the last frontiers. After they are in use, the world will have no additional sizable blocks of arable land left to put into production, unless you are willing to level whole forests, which you should not do. So future food-production increases will have to come from higher yields. And though I have no doubt yields will keep going up, whether they can go up enough to feed the population monster is another matter.”⁷

Con: When will those limits be reached? The critical issue for an investor, particularly an individual, is “When?” Public policy analysts can look at ag productivity trends out over many decades, but most investors have a horizon of a decade on their illiquid investments. A very wealthy family might add another decade to that. It seems very difficult to us to predict a meaningful supply constriction in the shorter time horizons, for two reasons. First, reports of the “end of progress” are generally exaggerated. As good as we humans are at inventing and improving things, we have a poor track record at predicting what we will invent next. We are reluctant to make an investment bet *contra* human ingenuity. Second, check your map. There is a lot of land suitable for conversion to modern agriculture, from the *cerrado* to parts of Africa. Indeed, even if growth of yield-per-acre slows, new technology may expand the scope of land which can economically be converted to agriculture. There is tremendous uncertainty around this issue, and it matters to an investor. A 20-year timing error may not mean much to a UN administrator, but it could mean a great deal to a private investor.

Pro: Farmland should be a decent inflation hedge. This is fair enough, as far as it goes.

Con: If inflation takes off, won't the price of farming inputs take off as well? We fear this. High productivity farming is dependent on fertilizers and pesticides. A run-up in oil and other chemical

⁶ The savanna of Brazil, one focus of most ag funds

⁷ Quoted in Easterbrook, G. 1997. *Forgotten Benefactor of Humanity*. The Atlantic Monthly

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prices would raise the prices of these inputs, as well as the cost of fuel used on the farm and in shipping. In fact, a significant increase in ag production itself could put upward pressure on the price of some of these inputs. If the residual value of the farmland is the net present value of the future profits that could be expected from it, increases in farming costs will have a negative effect on that value.

Pro: There is only so much farmland – they aren't making any more. They aren't making any more *land*, but more *farmland* may be another story.

Con: Actually, they *are* making more farmland. A major strategy of some ag funds is to do just that, to convert savanna from grazing to tilled crops. There are investment funds poised to exploit vast but difficult opportunities in Africa. Beyond conversion and repurposing, technical advances will make currently unusable land useable. Increases in crop prices also have the effect of making marginal land economically farmable. This is not a zero-sum game.

❖ Sources of Return

When you set aside theory and look at actual ag investments offered today, the variety of business models is impressive. Much like the term “hedge fund,” “ag fund” turns out to be a very broad description covering funds that touch agriculture, but seek to make money in very different ways. It is important to understand the various sources of return and to determine that the sources of return anticipated by a fund match up with the components of the ag investment in which you have high confidence. Here are the most important sources we see.

Farmland Leasing for Current Return. This is ag investing at its most basic, in a form most similar to conventional real estate investing. The ag fund buys farmland and leases it to active farmers who raise crops. There are funds doing this for straight rent, while some add a participation in the upside as well. These participations can take several forms:

- Extra rent based on agricultural prices. This is one step away from buying bonds and agricultural commodities futures, which is what the majority of the liquid commodity indexes and related funds on the market accomplish. True, you would give away potential upside on the residual value of the land, but you would gain liquidity.
- Extra rent based on production increases. This would be less attractive if you believe that improvements in agricultural productivity are leveling off.

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- Participation in profits. This combines the security of land ownership with upside opportunity based on commodity prices, farmer skill, and overall productivity improvement. The corresponding risks are present as well.

Farmland Leasing for Residual Land Value. One manager plans to lease at lower rates, looking to lock up and hold farmland for a long-term increase in value. This approach concentrates risk in the long-term-value thesis, which can only be proven in the future.

Farmland Purchase and Operation. The ag fund would purchase land, make any necessary improvements and conduct farm operations. This could be accomplished directly by employees of the fund or indirectly by contract farmers. Even the latter approach requires fund staff very familiar with farm operations. A fund of this kind exposes an investor to all of the potential upside and risks of agriculture:

- Skillful purchase of farmland
- Earnings from farm operations
- Efficiency of operations
- Efficiency in acquiring “inputs” to the process such as seed, fertilizer, water and pesticides
- Changes in input prices and ag commodity prices
- Changes in the residual value of farmland prices

Trading in Agricultural Goods and Services. One fund proposes to invest in trading companies that import and supply inputs to ag production and perhaps in dealers in agricultural products. The source of return here would be the commercial skills of the traders and dealers, including their ability to take advantage of or protect against price swings.

Mezzanine Lending to Agricultural Businesses. One fund concluded that traditional ag players are undercapitalized, particularly with their bank lenders on the defensive. This fund believes that its team’s deep familiarity with the ag business and its risks will permit the fund to move quickly on loans banks may avoid, permitting the fund to charge very attractive rates with some upside participation. These fund managers have a strong negative view of appreciation in farmland prices. Their emphasis is on current pay and maturities of a year or less.

❖ Some Potential Pitfalls

These are some factors we think any ag investor should focus on, in addition to the usual issues inherent in any private equity investment.

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Clarify your personal investment thesis. Before you spend much time with managers, think about which components of the ag story ring true for you. The funds are very different in what they do and what has to happen for them to make money. Investing in private equity is complicated enough. You don't need to buy into a fund looking for current return when you are interested in very long-term appreciation in farmland values.

Understand your personal time horizon. For important components of the ag investment thesis, the "when" is as important as the "whether." Be sure that you have a long enough time horizon to realize on the thesis. Equally important, be sure that other family or investment committee decision makers share that time horizon.

Recognize that manager skill counts. Agriculture requires skill and experience, and investing in ag does as well. We listened to one former investment banker declare himself a qualified ag team member because he had participated in three ag deals in his young career. This may not be good enough. Even more than in conventional private equity, sector experience will be important if you are to realize on your investment thesis.

Consider political risk. Some portion of the food price upside you may expect may be taken from you if food prices rise rapidly in the host country. Food prices can become a red-hot political issue, and you can expect host country politicians to react strongly. This actually happened in Argentina when price controls caused a beef shortage. The government then limited beef exports. All the serious fund managers we interviewed recognized this as a reality. Ask your prospective manager about the issue. It will help you gage his or her candor and help you understand how this risk could play out in the target countries.

Understand your own motives. We see potential ag investors whose interest in the sector goes beyond the purely financial. That's fine, but we think it will help if you are clear about what you are looking for, and size the investment appropriately.

Understand your manager's motives. Are the managers' interests well aligned with yours? At least one fund we have looked at may have been launched in part as an effort by the manager to unload some of its farmland inventory onto investors.

Consider the environmental and sustainability issues. Almost every ag manager articulated a progressive position on environmental and sustainability issues, including social impacts in the host country. You should discuss these with a prospective manager. There are a number of ways to approach these issues, and you should know whether you are comfortable with how they will be handled.

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❖ Conclusion

We believe this is a sector best left to those with a special interest in it, or those who are willing to start small and learn along the way – making mistakes as they go along. There are just too many problems with the investment thesis:

- On the supply side, higher prices would likely bring marginal acreage into production, thus expanding supply.
- Proponents of ag investment assert that technology-based improvements in crop yields have reached the point of diminishing returns. Perhaps, but we've heard this argument too many times before.
- On the demand side, arguments based solely on population growth look shaky. Population growth translates into investment demand only over a long period of time, and by that time population growth tends to slow.
- The strongest demand-side argument is the growing desire for improved diet in rapidly-growing emerging economies. But this is partly circular, as it leads back to growing supply, as noted above.
- Finally, while the capital asset involved in farming, i.e., land, could be an inflation hedge, farming is also a *conversion* business. Farms convert nutrients, particularly fertilizers, water and sun, into crops. That process requires the use of a lot of fossil fuels. If inflation takes off, the costs of fertilizer, fuel and even water would likely rise with it. Investors seeking inflation protection will likely find better options in other asset classes.

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