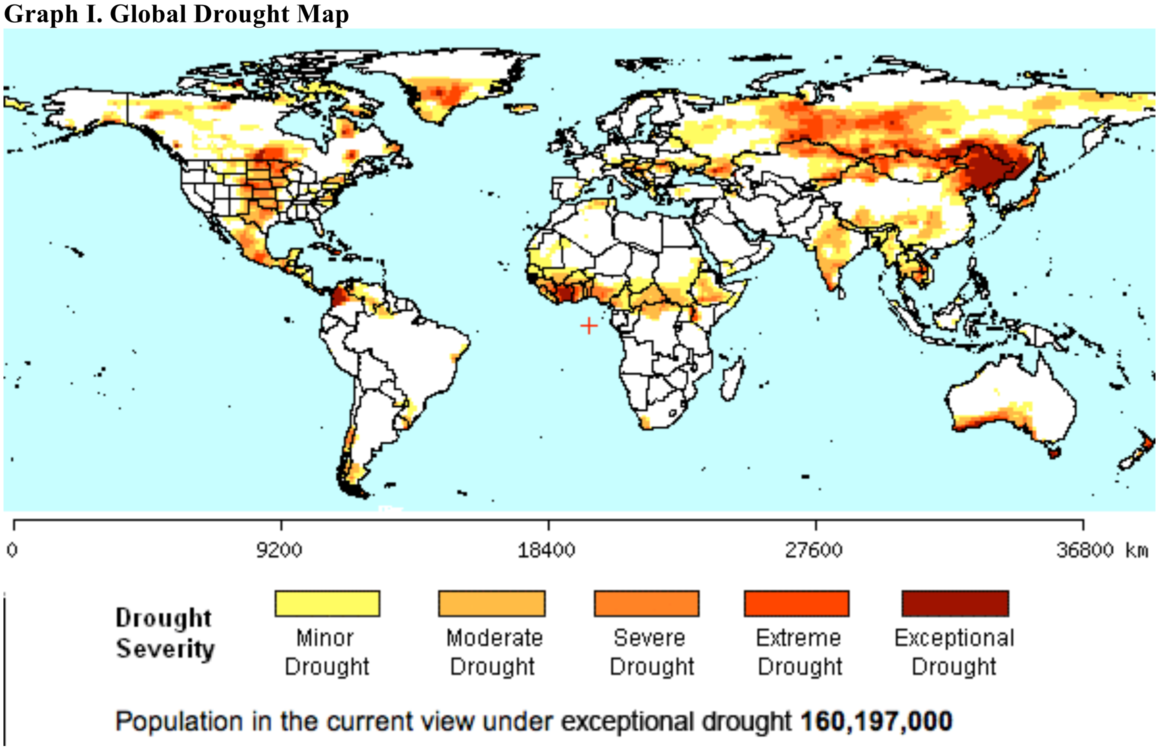
PCM Consulting

Food for Thought

In the second of this series of overarching themes and risks facing investors we look at the problems and opportunities in the food sector. Not only has there been an escalation of farm food prices, we have seen a significant price rise in farmland as well. The price increases have been broadly based from grains such as wheat and corn to the beef, poultry and hog producers. The reasons for the increases are not isolated incidents but a perfect storm of a growing population and a growing global middle class in the developing countries with higher food consumption, poor energy policy and drought conditions. The map in Graph I. shows the potential impact on food production globally as large areas in the Great Plains in the U.S. and Russia are under drought conditions. There are also drought problems in various parts of Africa and the Middle East which are already political powder kegs.

Graph I. Global Drought Map



Source: Bloomberg

Also noted in Chart I. is the fact that there are over 160 million people living in the areas deemed under <u>exceptional drought</u>. This is expected to increase. In the U.S. Central and

Northern Plains, the most recent 90 day rainfall has been 50 percent below normal and the Midwest is showing little rainfall to offer any drought relief to that region. In southern California, precipitation is less than 25% of normal. Below normal rainfall is expected to continue in the Mid-Atlantic and eastern Gulf Coast and from the central Rockies into the Southwest. For those with a non-meteorological background this means that the drought conditions are likely to worsen and food supplies will diminish and prices will rise as farmland will become scarce.

Farmland

The values of farmland continue to move higher raising the specter among pessismists that the next bubble (after gold of course) will be farmland. The average value of an acre of U.S. farmland reached a record $2,350 in 2011. Farmland values in Iowa, the biggest producer of soybeans and corn surged to a record average of $6,708, up 32%. Many areas in the Corn Belt and Northern Plains posted price gains of 20-40 percent. There are several factors that may ultimately deflate the "bubble" talk. First according to the Federal Reserve Bank of Kansas City, a growing share of buyers for farmland is farmers, not speculators. The share has grown from 60% in 2005 to around 73% in 2011. Unlike the last farm crisis in the 1980s when farmers were overleveraged and supported in large part by government subsidies, excess debt is not a factor today. From 1988 to 2007 the value of farmland in the FRB of Kansas City District has only seen one down year. During the period 1998-2002 government subsidies accounted for 38% of net farm income and in recent years subsidies have fallen to about 14% of net farm income.

Operating loans are down 40% compared to 2010 and the effective interest rates charged by banks are hovering around 5%. Capital expenditures and construction of farm buildings are also increasing which is allowing farmers to be more efficient and help offset some rising input costs such as higher energy costs. They have taken advantage of 2011 federal tax rules on bonus depreciation allowances. In the areas where drought is a concern farmers are being kept afloat by crop insurance and oil lease money. Forecasts used to stress test agricultural loans by the Food and Agriculture Policy Research Institute (FAPRI) are projecting crude oil prices to hover around $100 per barrel until 2017. Low interest rates and declining debt balances will be used to offset the higher input costs preserving the net farm income levels and ultimately farmland value. Table I. below shows the historic returns of farmland over what has been described the" lost decade" for investors. The 10 year compounded return was over 15%.

Table I. Historical Farmland Returns 2002-2011

2002	**6.86%**	**2007**	**15.90%**
2003	**9.68%**	**2008**	**15.84%**
2004	**20.49%**	**2009**	**6.33%**
2005	**33.90%**	**2010**	**8.79%**
2006	**21.16%**	**2011**	**15.29%**
10 Yr.	**Cpd Avg Return**	**15.20%**	

Globally, the demand for farmland has been robust as well. Developing nations have begun to reconsider their future "food security." By 2050 according to the IMF, the world will have to feed 3 billion more humans and need to increase food production by 70% with significantly less farmland. To solve this dilemma, countries such as China, Saudi Arabia, South Korea, and United Arab Emirates have purchased farmland across the globe to ensure a consistent availability of grains. The countries have sent expatriate farmers who will harvest the crops and directly export the grain back to their home country. Sub-Saharan Africa holds 60% of the world's remaining uncultivated land suitable for farming and has seen a particular surge of interest from both Chinese state owned companies as well as Persian Gulf Sovereign wealth funds, reflecting these nations' concerns for their food security.

Saudi Arabia has spent $100 million to lease land in Ethiopia to raise wheat, barley, and rice. In Sudan, South Korea has signed deals for 690,000 hectares, the United Arab Emirates for 400,000 hectares, and Egypt has secured a similar deal to grow wheat. Private companies are also acquiring land. Sweden's Alpcot Agro bought 128,000 hectares of Russian farmland, South Korea's Hyundai Heavy Industries acquired 10,000 hectares of eastern Siberia, and Morgan Stanley, a U.S. bank, bought 40,000 hectares of farmland in Ukraine. Farmland is a natural resource and to paraphrase Will Rogers," they aren't making any more." Acquiring farmland in countries such as Russia and Brazil are not without risk. Foreign ownership is difficult and may be subject to political risks. People vote and politicians wishing to stay in office listen. At some point an elected official in countries where the rule of law is fungible, will nationalize farmland.

Central-Eastern Europe remains a good combination of risk and return. They are within the EU and will benefit from improving sector fundamentals. Land values are still well below those in Western Europe. South America offers farming on a massive scale with a productive climate. Prices have risen to $5,000-10,000/hectares and seem fully priced. The political environment in Venezuela and Brazil may give some investors pause as the ownership rights by foreigners are tenuous.

As food demand grows it is highly likely that sales of farmland will draw more scrutiny from governments and "national security" may become the battle cry. Regardless, the upward pressure on the food demand curve will continue to support higher land prices which in turn will put pressure to increase food prices.

<u>Crops</u>

Global inventories of wheat and soybeans are declining faster than original forecasts while corn reserves are near 16 year lows. Farmers are unable to keep pace with rising current demand for food, feed, livestock and biofuel.

Soybean reserves on August 31 are forecasted to drop to a three-year low of 57.3 million tons. The corn inventories in the U.S., the world's top producer and exporter will slip to its lowest levels since 1996. Meanwhile U.S. wheat exports are expected to increase by

2.6% which will reduce domestic stockpiles to a three-year low. The rise in exports for U.S. grains is being driven by surging demand for grain and meat in Asia. Approximately 35-40% of the global grain supply is used as animal feed. It takes 7 kilograms of grain to produce 1 kilogram of beef. Higher imports in Iran and North Africa are needed to fulfill high domestic demands which will provide the impetus for higher exports from Australia, Brazil, Kazakhstan and the U.S.

About 95.864 million acres of corn will be planted in 2012, up 4.3 percent from 91.921 million last year and more than the 94.658 million expected by analysts of the U.S. Department of Agriculture. U.S. corn acreage this year will be the largest since 1937. World corn ending stocks of 124.5 mmt (million metric tones) are down 3.5% and 13.6% from a year and two years ago, respectively. Argentina corn production (22 mmt) and exports (14 mmt) in MY 2011/12 are both unchanged. Brazilian corn production was projected to be 62 mmt with 10 mmt of exports – both up 1 mmt from February. Ill-advised energy policies (ethanol) are forcing the price of corn higher. The higher corn prices are moving farmers to plant corn instead of lower value crops.

The early season warm weather has pushed forecasts for corn higher. The current forecasts estimate this warm trend will continue and that normal levels of precipitation will occur.

The world over the next 25 years will face a growing global population demanding more food from shrinking land resources complicated by many regions suffering from drought conditions. In addition to placing upward pressure on inflation, the higher food costs will reduce disposable income to spend on other consumer goods. As sovereign countries deal with the added strain of food and water shortages and inflation political unrest will increase as well. The focus on the food supply will sharpen as national requirements for food security increase. The impact will not be limited to food substances as other commodities; primarily energy will feel the pressure as well.

Investors need to be mindful of not only the opportunities but to the risks as well. Much of the risk is unquantifiable and due in large part to political expedience and nationalism.

Edward J Stavetski
April 2, 2012