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Commodities in Current Macroeconomic Outlook. A Possible Hedge against Inflation

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Abstract – The recent global economic recession pushed investment funds and other players in the investment world closer to tangible assets, luring them back to commodities and especially to metals and agricultural markets. As the present macro environment supports commodities investing – especially investments in agriculture, thanks to very low interest rates, weaker currencies, a commodity boom, and as a hedge against global inflation - the level of funds invested in commodities increased by over 220% in the 2006-2011 period when compared to the previous five years' time (2000-2005). Meanwhile, estimates of an increasing global population, rather extreme weather patterns observed in recent years, decreasing crop yields and the extraordinary growth in global ethanol and biodiesel markets, focused the attention on cereals, sugar cane, rapeseed and soy, as concerns of a possible very tight supply situation might happen any time.

Keywords: commodities, markets, economic crisis, macroeconomics, investments, biofuels

I. THE MACROECONOMIC ENVIRONMENT

The United States financial crisis started in 2008 spread to the real economy and led to the most serious recession since the Second World War, as it got over the U.S. borders and it bumped into the largest world economies, ending in a global economic crisis. In the U.S., signs of economic slowdown started to appear earlier (in 2006-2007) when the decline in the housing market spilled over into the labour market but it became noticeable in late 2008, when one of the largest investment banks in the world failed (Lehman Brothers), the stock markets plummeted and liquidity dried up.

If the peak unemployment rate in post-war recessions averaged 7.6%, the U.S. unemployment surged to 10.2% in October 2009 (the highest level seen since end of 1982 when it hit 10.8%, predicting the major recession from 1984) and it is still at high levels, reported in January 2013 at 7.8%. Excepting the second quarter of 2008, the U.S. economy was in recession from the beginning of 2008 up to the third quarter of 2009, lasting almost twice as long as the average post-World War II recession of 11 months.

As all economies are related at the global level and the financial markets work together, the U.S. crisis spread over, mainly to Europe, Asia and parts of Africa, creating a global anxiousness in the investment world. In Europe, countries like Spain, Greece, Ireland and Portugal were hit the most, recording in 2011 average unemployment rates of 21.6%, 17.7%, 14.4% and 12.7% respectively, while the Gross Domestic Product (GDP) growth dropped to 0.7% in Spain and Ireland, to -6.9% in Greece, and to -1.5% in Portugal . Among the young workers, the unemployment rate was even higher touching over 50% in Spain and Greece and over 22% in the euro zone. Asian countries were also hurt, especially those ones having their economy structure mainly based on exports, as their trade partners, mainly Europe and the U.S., witnessed sharply drops in imports as a consequence of lower sales in durable goods. This situation left the supplier nations (especially China) in a limbo being obliged to focus mainly on the domestic market and suffering drops in their GDP growth. In Africa, its largest economy - South Africa, sow unemployment rate going as high as 24.7%, the highest unemployment rate among the world's 50 biggest economies.

II. STEPS FOR IMPROVEMENT OR POSSIBLE DELUSIONS?

The substantial decline in the stock and housing markets together with the failure of some major financial institutions had definitely a serious impact over the world economies but above all, what made it a crisis was the freezing of credit markets in the fall of 2008, when no private lending was available at any price in several of the major credit markets. All businesses were impacted by this, as all need liquidity and financing to operate, therefore this recession branch out in every sector of economy causing losses and business failures due to significant decreases in real estate and durable goods sales.

Facing these problems, governments came in with bailout funds and stimulus packages especially in

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the financial industry as it affects all sectors, while the rest of industries (especially housing and automobile) were less "saved" as there were no money for everyone. These measures stopped the hemorrhages for a while but the patient was still on the table in the operating room.

As always, time remained the most important remedy to be applied as neither the capitalist nor the socialist system or any other economic system that was conceived doesn't offer a solution or at least a possible answer for everything that happens in the society. Therefore, we can't go only up and crises are part of the game. But faced with a slow and uneven economic recovery, many countries are looking to cut the value of their currency in order to gain a competitive edge without worrying about long term consequences.

Nations engaged in currency devaluation are hoping to cheapen the price of their goods and thereby increase their exports creating a positive inflation. Among other measures to increase growth, central banks are keeping the interest rates very low facilitating lending and also sending the investors to commodities, to risk assets and to Treasury Inflation Protected Securities. In 2012 the global central banks cut interest rates some 75 times, while in the U.S., since the beginning of the crisis, there were three rounds of quantitative easing (QE) that managed to keep for the moment the U.S. economy afloat.3, But the U.S. was not the only one nation doing it, as a declining currency put an upward pressure on other currencies, therefore other central banks followed the same strategy: Bank of Japan, the European Central Bank (ECB), the Bank of England, Swiss National Bank and others.

These actions are very risky as an imminent currency war might soon occur. Therefore, if the current situation will still continue and stocks won't recover fast, then investments in safe commodities (such as gold or even agro-commodities) might skyrocket sending their prices up to the moon and creating general imbalance, as a large part of this new liquidity created will be absorbed by safer assets and food prices will be so high as many nations won't afford to pay the price sending them into poverty.

III. FOLLOWING THE WINNER: THE COMMODITY WORLD

As said before, this global economic recession pushed investment funds and other players in the investment world closer to the real values of society, closer to tangible assets, luring them back to commodities and especially to metals and agricultural markets. Indeed, today investment in commodities is back in fashion after many years when it played an obscure role, and was almost the black sheep of this community. Moreover, the present macro environment supports commodities investing – especially investments in agriculture thanks to very low interest rates, weaker currencies, a commodity boom, and as a hedge against global inflation. Meanwhile the extraordinary growth in global ethanol and biodiesel markets has also focused attention on the feedstock these bio-fuels are obtained from: corn, wheat, sugar cane, soy, rapeseed and palm.

Estimates of an increasing global population that may reach 7.6 billion people by 2020 and 9.2 billion by 2050 together with a lower global agricultural production growth expected for the 2010-2020 period (+1.70% compared to 2.60% recorded in 2001-2010, according to the OECD) make agricultural commodities very attractive for investments. Moreover, rather extreme weather patterns observed in recent years together with the issues that humanity is expected to face in the next 40 years, such as decreasing crop yields and water conflicts (mainly in South & West Africa, India, South Brazil and East Argentina), a rise in sea-levels (mainly in the Mediterranean area and Persian Gulf) are contributing to global ideas of a possible very tight supply situation across the commodities' sector.

Best price performers

In the same time when stocks were plummeting everywhere around the world, commodities saw one of the best period in their history with gold recording new daily all time highs skyrocketing up to $1,900.3 an ounce in 2011, silver reaching an amazing $48.7/once the same year and Brent crude oil jumping over the $140/bbl mark in July 2008 (a new all time high on market speculations and supply concerns due to higher Asian demand). Agro commodities performed very well too, with wheat surging to new record levels on drought and fires in Russia that caused important losses and a very tight supply. In 2010, LIFFE wheat prices increased by almost 85%, rapeseed prices by +71%, CBOT corn added over 50% and soybean oil increased by 41%. The same year, biofuels performed well too: CBOT ethanol added 21% in the U.S., RME biodiesel increased by 42% while FAME 0 biodiesel surged by 36% on FOB Rotterdam. Therefore, the year 2010 can be considered (at least up to 2013) the commodity year of this century: from a statistical point of view, the level of funds invested in commodities increased by 229% in the 2006-2011 period (to almost 263 billion USD) when compared to 2000-2005 period.

The years that followed up to present time were also good years for the investment in different commodities, as bonds and stocks returned low levels of profit for the period. After a 2011 correction seen in wheat prices due to a good crop year and a more relaxed situation in the world balance, the year 2012 brought again weather problems both in East Europe and the United States where excessive drought affected especially corn, wheat and soy crops driving prices once again up to the roof. At the end of 2012, LIFFE wheat prices were some 35% higher, soybeans gained over 18% while corn finished just below the $7/bu mark, after months spent close to $8/bu. (see Table 1).

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Table 1. 2012 Best commodities performers

Rank	***Commodity***	***Price evolution in 2012***	***Price evolution in 2011***	***Price evolution in 2010***
1	LIFFE Wheat NYSE (£/ton)	+34.81% (205.25/152.25)	-23.49% (152.25/199)	+84.6%
2	Soyabeans CBT (¢/60 lb bushel)	+18.38% (1418.75/1198.5)	-12.53% (1198.5/1370.25)	+32.8%
3	T1 ethanol FOB Rotterdam ($/m3)	+16.88% (823.102/704.25)	+3.19% (695.5/674)	+0.75%
4	T2 ethanol FOB Rotterdam (€/m3)	+13.33% (634.553/559.91)	-3.71% (559.913/581.464)	+7.08%
5	LIFFE Coffe NYSE ($/ton)	+11.16% (1963/1766)	-15.18% (1766/2082)	+57.6%
6	Platinum NYMEX ($/oz)	+10.02% (1545.7/1404.9)	-21.36% (1404.9/1786.4)	+16.69%
7	Silver COMEX (¢/oz)	+8.26% (3019.8/2789.3)	-10.34% (2789.3/3111.1)	+77.21%
8	CBT Corn (¢/56 lb bushel)	+8% (698.25/646.5)	+4.19% (646.5/620.5)	+50.3%
9	Gold COMEX ($/oz)	+6.96% (1675.8/1566.8)	+10.11% (1566.8/1422.9)	+27.1%
10	NY RBOB gasoline NYMEX ($/US gal)	+5.82% (2.812/2.6574)	+9.48% (2.6574/2.4273)	+16.57%
11	Heating Oil NYMEX (¢/US gal)	+4.49% (3.0451/2.9142)	+14.97% (2.935/2.5528)	+16.12%
12	LIFFE Cocoa NYSE (£/ton)	+3.99% (1435/1380)	-31.58% (1380/2017)	-9.23%
13	IPE Brent Crude Oil ($/bbl)	+3.46% (111.11/107.38)	+13.22% (107.38/94.84)	+18.26%
14	LIFFE Rapeseed NYSE (€/kg)	+3.17% (456.25/442.25)	-13.05% (438.25/504)	+71.17%
15	IPE Gas Oil ($/ton)	+0.32% (927/924)	+16.56% (924/792.75)	+16.63%

Sources: CME Group, Financial Times, Bloomberg

Table 2. 2012 Worst commodities performers

Rank	***Commodity***	***Price evolution in 2012***	***Price evolution in 2011***	***Price evolution in 2010***
1	Coconut Oil (Philip)	-48.25% (815/1575)	-18.42% (1550/1900)	+229.27%
2	Orange juice NYCE (¢/lbs)	-31.33% (116.05/169)	-6.27% (169/180.3)	+34.07%
3	Crude Palm Oil – Malaysia	-22.12% (810/1040)	-20.76% (1040/1312.5)	+56.23%
4	Cotton NYBOT (¢/lbs)	-18.15% (75.14/91.8)	-35.44% (91.8/142.2)	+90.54%
5	Sugar 11 NYBOT (¢/lbs)	-16.27% (19.51/23.30)	-27.46% (23.30/32.12)	+16.29%
6	FAME 0 FOB Rdam NYMEX ($/ton)	-12.98% (1072.84/1232.9)	-3.61% (1232.9/1279.05)	+36.17%
7	RME FOB Rdam NYMEX ($/ton)	-11.71% (1234.53/1398.33)	-7.78% (1379.55/1496)	+41.76%
8	Rubber (KL RSS No 1)	-10.99% (919/1032.5)	-31.85% (1032.5/1515)	+54.78%
9	WTI Crude Oil NYMEX ($/bbl)	-7.09% (91.82/98.83)	+7.95% (98.83/91.55)	+12.1%
10	Soyabean oil CBT (¢/lb)	-5.62% (49.16/52.09)	-8.76% (52.09/57.09)	+41.17%

Sources: CME Group, Financial Times, F.O. Licht, Bloomberg

Among other commodities, different types and qualities of ethanol performed very well last year in terms of price evolution and possible business revenues for investors. Among them, ethanol is the happiest case this year with T1 ethanol increasing by +16.9% 9, and T2 European domestic ethanol gaining around 13.3% (both on a FOB/CIF Rotterdam basis) due to higher feedstock prices and to an increasing European demand for blending ethanol volumes used by oil refiners to fulfil their national blending obligations on biofuels. On the biodiesel side, prices were not performing as well mainly due to a large biodiesel idled capacity in Europe and good level of volumes in the market, lower vegetable oil prices and to large import volumes at lower prices coming from abroad (mainly Argentina and Indonesia) - see tables 9,12 (see the synthesis in Table 2).

The biofuels example

A particular case to be described is the one of biofuels (ethanol and biodiesel) as their markets have rapidly developed especially in the past 8 to 10 years. Subsidies (especially in the U.S.), national compulsory blending mandates (especially in Europe but also in the Americas) and environmental policies, pushed up biofuels demand in their first years of development. They now represent an important market, covering globally about 4% of the total volume of fuel used in transport and they are a profitable business for many players. Moreover, due to the fact biofuels represent a worldwide spread business being blended directly into fossil fuels (such as gasoline and diesel), the business is profitable without needing governmental support (which is not the case for the other renewable energies).

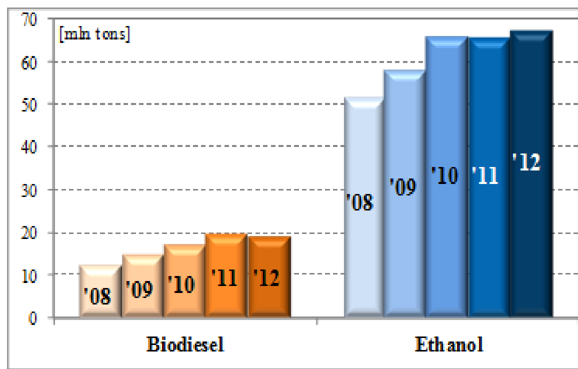

Fig. 1. World fuel ethanol and biodiesel demand
Source: (Covrig, 2011, 2012), F.O. Licht

In 2012, global fuel ethanol demand witnessed an 1.77-fold increase compared with 2007 figures and should reach record high levels by the end of 2013, expected to be around the mark of 70 million metric tons (mt). Biodiesel demand also exploded in the past five years, recording a 2.2-fold increase in the 2007-2012 period, and is supposed to reach around 19-20 million mt this year (almost 2.36 times more than in 2007) as up to 2011 biodiesel expanded at a higher pace than ethanol due to the fact that biodiesel market is younger than the ethanol one and demanded volumes might increase easier when the quantities are not at very high levels. (Covrig & Bosch-Gual, 2010)

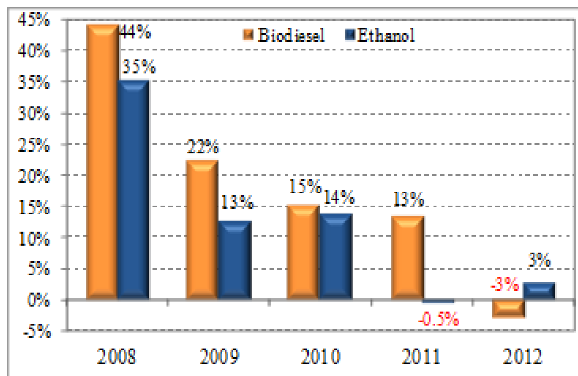

Fig. 2. Annual global increase in fuel ethanol & biodiesel demand
Source: (Covrig, 2010, 2011, 2012), F.O. Licht

Furthermore, according to the IEA, world biofuels production figures in 2016 are estimated to be 28% higher than in 2010, with fuel ethanol still maintaining the largest share in the biofuels market pie (about 3.8 times higher than for biodiesel) and is expected to displace about 5.3% of total gasoline demand. Biodiesel should follow with a 1.5% displacement of global diesel demand.

If in the paper market ethanol and biodiesel performed well during the economic crisis that started in the second half of 2008, producers margins were hurt in past two years and suffered as many other margins of durable produced goods. In the case of biofuels, the main reason for this drop in producers' profits was the increasing price of feedstock which brought the margins into negative.

Moreover, the biofuels producer margin is feedstock related (as price of corn, wheat, barley, sugar cane, etc might vary independently and locally) and also differs by region, while different governmental subsidies for ethanol and biodiesel producers create a competitive advantage too.

In Europe, crushing margins (before profits from Distillers Dried Grains - DDGs and without considering other indirect costs involved) calculated for wheat-based ethanol producers were mainly in positive territory from 2008 to 2011, due to a downward trend in European feed wheat prices especially in 2011 (that had lost up to the end of 2011 about 23% since the beginning of the year) and good market values of ethanol – see figure 3.

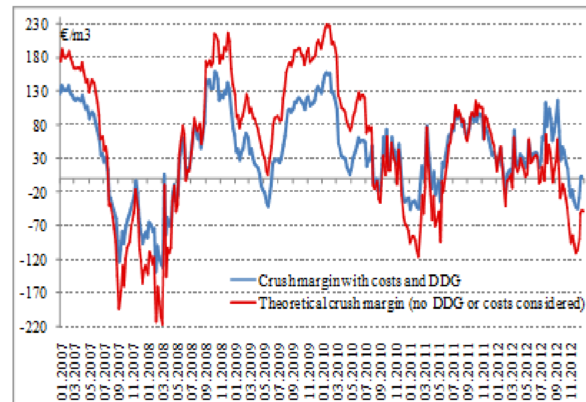

Fig. 3. Crush margin in Europe based on milling wheat (No.2) prices in France
Source: Prices from CME Group, margins calculated with own model

In 2012, as wheat prices started to increase due to weather concerns, the margin began to suffer and entered at the end of the year into negative territory. The positive margin varied therefore between a minimum of €0.28/mt recorded on February 21st to a maximum of €65.6/mt on July 24th encouraging ethanol production, while the negative margin in 2012 varied from a maximum of -€4.8/mt on July the 3rd to a minimum of -€110/mt on November 27th. Anyhow, the real situation of an ethanol producer might not be so pessimistic as described before due to revenues coming from by-products such as DDGs which are added to the profit margin (even if DDGs is still a niche market in Europe and not as liquid as the one in the U.S.). Thus, for the worst considered period of 2012, with the lowest point recorded on November 27th, the real margin of an European wheat-based ethanol producer was as bad as -€43.1/mt whereas the best positive margin recorded on July 24th was as much as €112.1/mt of wheat.

In the U.S., after relative positive values of the crush margins for corn-based ethanol producers recorded in 2011, the recent rally in corn prices kept the theoretical crush margin (without DDGs and indirect costs considered) somewhere around the negative edge of profitability in 2012 . If one adds the contribution of DDGs and other capital and production costs, the margin was at the edge of profitability in the first half of 2012, while starting with September it entered negative territory up to the

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end of the year. This situation made many ethanol plants to idle their production hoping for better margins in 2013.

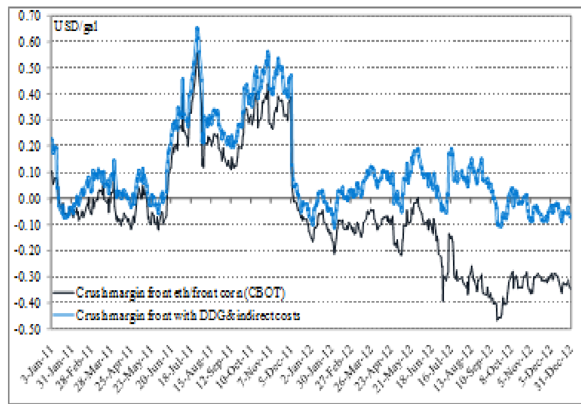

Fig. 4. Crush margins for US corn based ethanol producers (front corn future contract)
Source: Prices from CME Group, margins calculated with own model

V. CONCLUSION

Due to a dramatic rise in agricultural and energy price volatility based on different factors, such as rising demand (especially in emerging markets), expansive monetary policy, markets liberalisation, deregulation of financial service sector in some countries, easier access to electronic market place, multi-fold expansion of position limits for food and fuel, the profitable market player in the commodity business will be the one able to better manage this volatility.

As proven in the past years, agricultural commodities together with metals and energy performed well both on the future markets and on the physical ones but also as businesses in themselves, offering especially in the first years of financial and economic crisis good margins for both producers and investors. However, even if commodity futures performed relatively well, in past two years, many producers that transformed these commodities into different goods recorded weak margins due to higher feedstock and raw material prices, high price volatility, and to the global economic slowdown that came with a lower demand and limited access to credits.

Therefore, if present global quantitative easing measures won't succeed in their first stage of implementation to create jobs and to reach the awaited economic growth, at least they will keep interest rates low stimulating borrowing and eventually some business development, while the investors will firstly react in taking out the money from bonds and place them into equities which are expected to generate some good incomes. At least, something is going to move the markets... but the question is: For how long? And how much of this movement will help producers to regain their profits? As said before in the article, all measures implemented take time to be seen into the real economy. Anyhow, one thing is certain: if market participants recently ignored the role the commodities play in the investment world, for sure they have changed their thoughts, strategy and approach from now on.

REFERENCES

[1] Covrig, C. (2012). Assessment of ethanol and feedstock markets, Presentation to F.O. Lichts World Ethanol and Biofuels Conference, Munich, Germany, 5-8 November 2012, F.O. Licht

[2] Covrig, C. (2011). Eastern Europe on the way up in biodiesel and ethanol?, Biofuels, Bioproducts and Biorefining, Vol. 5, Issue 3, pp. 233-237, May/June 2011, Society of Chemical Industry and John Wiley & Sons, Ltd

[3] Covrig, C. & Bosch-Gual, L. (2010). Assessing European biodiesel markets and capacities, Biofuels, Bioproducts and Biorefining, Vol. 4, Issue 6, pp. 590-593, Nov/Dec 2010, Society of Chemical Industry and John Wiley & Sons, Ltd

[4] Covrig C. (2010). The Americas' role in world biodiesel markets, Biofuels International, Vol. 4, Issue 4, pp. 36-37, May 2010, Horseshoe Media Ltd, UK

[5] *** (1) http://www.bls.gov/news.release/empsit.nr0.htm - U.S. Department of Labor, Bureau of Labor Statistics, Accesed on: 2013-01-18

[6] *** (2) http://www.nber.org/cycles.html - The National Bureau of Economic Research (NBER), Working papers & Publications, Accesed on: 2013-01-25

[7] *** (3) http://www.bea.gov/ - Bureau of Economic Analysis (BEA), Accesed on: 2013-01-25

[8] *** (4) http://www.census.gov/# - U.S. Department of Commerce, United States Census Bureau, Accesed on: 2013-01-25

[9] *** (5) http://www.ilo.org - International Labour Organization (ILO),

[10] Accesed on: 2013-01-18

[11] *** (6) https://www.cia.gov/library/publications/the-world-factbook/ - Central Intelligence Agency (CIA), The World Factbook, Accesed on: 2013-01-18

[12] *** (7) http://www.imf.org/external/data.htm - International Monetary Fund, Data and Statistics, Accesed on: 2013-01-25

[13] *** (8) http://www.oecd.org/statistics/ - OECD, Accesed on: 2012-12-20

[14] *** (9) http://www.cmegroup.com - CME Group, Accesed on: 2013-01-15

[15] *** (10) http://markets.ft.com/research/Markets/Data-Archive?cat=CO - . FTSE International Ltd – FT Commodities and Agriculture, Accesed on: 2013-01-25

[16] *** (11) http://www.bloomberg.com – Bloomberg & Bloomberg anywhere,

[17] Accesed on: 2013-01-26

[18] *** (12) http://www.fo-licht.com –F.O.Licht's World Ethanol & Biofuels report,

[19] Accesed on: 2013-01-18

[20] *** (13) The Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC

[21] *** (14) http://www.epa.gov/otaq/fuels/renewablefuels/index.htm - U.S. Environmental Protection Agency, Renewable Fuel Standard Obligations, Accesed on: 2013-01-25

[22] *** (15) http://www.iea.org/publications/ - International Energy Agency (IEA),

[23] Accesed on: 2013-01-26.

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