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Food Speculation: Between Virtual . . . and Reality

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I. INTRODUCTION

Food is at the base of human development. The International Covenant on Economic, Social and Cultural Rights in 1974 recognized the right to food, and in particular the right of adequate

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food.² The same year, the World Food Summit defined "Food Security" as the "availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices."3 This includes: availability of food, access to food, utilization of food (within a healthy diet), and the stability of the previous three criteria.4

Since time immemorial, every sovereign state has had the objective of achieving food security for citizens, notably the availability of food and the access to food, and this objective now has achieved in liberalized markets. The General Agreement on Tariffs and Trade ("GATT") of 1994 recognized the peculiar nature of agriculture products within liberalized trade and noted the negative impact of a sudden liberalization of trade of agricultural commodities for net-food importing countries.⁵ On this note, article 6 of the Charter of Economic Rights and Duties of States 1974, also associated with the Right to Development, passed since into

of Toulouse I. Her professional assignments led her to work on International Economic Law issues across Europe. She is a French Bar Candidate Class of 2016.

1. Jean Ziegler, Promotion and Protection of All Human Rights, CIVIL, POLITICAL, ECONOMIC, SOCIAL AND CULTURAL RIGHTS, INCLUDING THE RIGHT TO DEVELOPMENT: REPORT OF THE SPECIAL RAPPORTEUR ON THE RIGHT TO FOOD ¶ 17 (2008). The Right to Food is defined as:

the right to have regular, permanent and unrestricted access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensures a physical and mental, individual and collective, fulfilling and dignified life free of fear.

Id.

- 2. International Covenant on Economic, Social and Cultural Rights art. 11, Dec. 16, 1976, 993 U.N.T.S. 3. ("The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food.").
- 3. World Food Conference, Rome, It., Nov. 5-16, 1974, Report of the World Food Conference, 3, U.N. Doc. E/CONF.65/20, (Nov. 16, 1974).
- 4. Id. at 38-58; EUROPEAN COMMISSION, FAO FOOD SECURITY PROGRAMME, AN INTRODUCTION TO THE BASIC CONCEPTS OF FOOD SECURITY (2008), http://www.fao.org/docrep/013/al936e/al936e00.pdf.
- 5. Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries ¶¶ 1-3, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, 1867 U.N.T.S. 154, https://www.wto.org/english/docs_e/legal e/35-dag e.htm.

customary law,6 stated:

[i]t is the duty of States to contribute to the development of international trade of goods, particularly by means of arrangements and by the conclusion of long-term multilateral commodity agreements, where appropriate, and taking into account the interests of producers and consumers. All States share the responsibility to promote the regular flow and access of all commercial goods traded at stable, remunerative, and equitable prices; thus, contributing to the equitable development of the world economy, taking into account, in particular, the interests of developing countries.⁷

It is worth noting that State's duty to promote the regular flow and access of all commercial goods traded at stable, remunerative, and equitable prices is reflected in the "availability to food" and "access to food" criteria of food security.

The international food price index rose by 40% in 2007 and by 50% in the beginning of 2008, giving a higher rise percentage compared to a rise of 9% in 2006.8 This was an unprecedented price swing. Traditionally, the remunerative and equitable food price follows the real fundamentals of supply and determines the agricultural policy of the state. However, the growing importance of financial speculators have come into play in the price determination of agricultural commodities. Current literature abounds with studies and demonstrations of causal links, or lack thereof, between excessive speculation and the commodities prices. Certain economists, such as Kilian and Murphy, have established a causal link between these aberrant price increases of agricultural commodities and speculative activities in the financial markets.

^{6.} Statute of the International Court of Justice art. 38, para. 1(b) (defining customary law as a primary source of international law and as evidence of a general practice accepted as law).

^{7.} Charter of Economic Rights and Duties of States, G.A. Res. 29/3281, art. 6, U.N. Doc. A/RES/29/3281 (Dec. 12, 1974).

^{8.} Sudan Institutional Capacity Programme: Food Sec. Info. for Action/Food & Agric. Org., *Determinants of Current Food Price Hikes and their Implications in the Northern States of Sudan*, 3 (Oct. 2008), http://www.fao.org/sudanfoodsecurity/sifsia-publications/sifsia-parchive/en/?page=10&ipp=10.

^{9.} Lutz Kilian & Daniel P. Murphy, *The Role of Inventories and Speculative Trading in the Global Market for Crude Oil*, 29 J. APPLIED ECONOMETRICS 454, 454-78 (2014).

Other economists, such as Krugman¹⁰ and Wolf,¹¹ on the contrary, found evidence that speculator activities were not consistent with the food price spike of 2007 to 2008.¹²

The question at hand is whether financial speculators' virtual forestalling of prices can increase real agricultural prices. In the affirmative, if speculation can have an impact on prices and their volatility, what kind of reform is taken to prevent the establishment of this *new-normal* regime?

This article is therefore organized in three main axes. The first axis will focus on understanding the market environment and the evolution of agricultural commodities and how finance realized a *coup d'état* over such a particular good. The link between excessive speculation in financial markets and the price of food for consumers is of essence in this problem. The literature has been conflicted and is contradicting regarding speculation in agricultural commodities. The second axis shall focus on what is established: it is possible that excessive speculation has a serious detrimental effect on agricultural prices and thereby, on the ability of millions of persons to have access to food. Basis of the findings here, the third axis will analyze the legal developments in the European Union and the United States regarding speculation-induced high prices and how effective their implementation can be.

^{10.} See Paul Krugman, The Oil Nonbubble, N.Y. TIMES, May 12, 2008, http://www.nytimes.com/2008/05/12/opinion/12krugman.html?_r=0.

^{11.} See Martin Wolf, *The market sets high oil prices to tell us what to do*, FIN. TIMES, May 13, 2008, http://www.ft.com/cms/s/0/219fcbde-2108-11dd-a0e6-000077b07658.html#axzz4HQjqLHME.

^{12.} Jeffrey A. Frankel, *Effects of Speculation and Interest Rates in a "Carry Trade" Model of Commodity Prices* 2 (Nat'l Bureau of Econ. Research, Working Paper No. 19463, 2013), http://www.nber.org/papers/w19463.

II. SPECULATION IN THE AGRICULTURAL COMMODITIES MARKET

A. FINANCIALIZATION AND DEREGULATION OF THE MARKET

The GATT's adoption in 1947,¹³ the World Trade Organization's creation in 1995,¹⁴ or the wide adhesion to the Washington Consensus from the 1990s onwards¹⁵ gave liberalization to facilitate international trade, suggesting deregulation. In the financial sector, liberal policies have often been paired with domestic deregulation of financial activities.

In the United States, the Glass-Steagall Act of 1933 established the incompatibility of the inherent activities of depository banks with that of investment banks to restrict potential conflict of interests and risks. The Act provided:

[N]o member bank shall be affiliated... with any corporation, association, business trust, or other similar organization engaged principally in the issue, flotation, underwriting, public sale, or distribution at wholesale or retail or through syndicate participation of stocks, bonds, debentures, notes, or other securities. ¹⁶

However, from the 1980s onwards, the Federal Reserve reinterpreted the Glass-Steagall Act to gradually raise the percentages of gross revenues that could originate from investment banking activities and in 1999, the Gramm-Leach-Bliley Act (also known as the Financial Modernization Act) repealed all restrictions between activities of depository banks and investment banks.¹⁷ In

^{13.} See General Agreement on Tariffs and Trade, Arts. II, X, XI, Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT] (indicating progressive abolition of barriers to trade, *e.g.* tariffs and other non-quantitative barriers to trade).

^{14.} *See* Marrakesh Agreement Establishing the World Trade Organization, Preamble, Art. III, Apr. 15, 1994, 1867 U.N.T.S. 154 [hereinafter Marrakesh Agreement].

^{15.} See generally Stanley Fischer, The Washington Consensus, in GLOBAL ECONOMICS IN EXTRAORDINARY TIMES: ESSAYS IN HONOR OF JOHN WILLIAMSON 11, 12-15 (C. Fred Bergsten & C. Randall Henning eds., 2012)

^{16.} Banking Act of 1933, H.R. 5661, 73d Cong. § 20 (1933) [hereinafter Glass-Steagall Act] (defining the separation of financial institutions, or banks, from businesses).

^{17.} See Gramm-Leach-Bliley Act, Pub. L. No. 106-102, § 101(a), 113 Stat. 1338 (1999) (repealing Glass-Steagall Act); see also Glass-Steagall Act, supra

2004, the Security Exchange Commission ("SEC") loosened even more of the regulatory oversight of global investment banking by relaxing the net capital rule and introduced a self-monitoring system for their activities.¹⁸

On the other side of the Atlantic, the financial sector has also been quite self-regulated. In the aftermath of the financial crisis of 2007 to 2008, the European Commission recognized the inadequate (micro and macro-prudential) supervision and regulation of the financial sector, which led to the recurrent birth of asset bubbles and systemic risks created by the unregulated shadow-banking system.¹⁹

Generally, the growing use of new and complex financial instruments made it difficult for regulatory authorities to keep up. In particular, the exponential use of new and unregulated derivative instruments,²⁰ such as credit default swaps, has largely been put to blame for the financial crisis of 2007 to 2008.²¹ The picture gets even

note 16, at § 20. The Act provides:

after one year from the date of enactment of the Act no member bank shall be affiliated with a securities corporation in the manner described in Section 2(b) of the present Act (where the word "affiliate" is defined so as not to include holding company affiliates). A violation of this provision subjects the member bank to a penalty of \$1,000 a day, in the discretion of the Federal Reserve Board, and if the violation is continued for six months after warning from the Board, the bank's franchise may be forfeited, if a national bank, or its membership in the Federal Reserve System may be forfeited, if a State Bank.

Id.

- 18. MATTHEW SHERMAN, CTR. FOR ECON. & POL'Y RES, A SHORT HISTORY OF FINANCIAL DEREGULATION IN THE UNITED STATES 11 (2009), http://cepr.net/publications/reports/a-short-history-of-financial-deregulation-in-the-united-states (stating that the loosening of regulatory oversight would allow investment banks to hold fewer reserves, take more debt, i.e. take more risks).
- 19. See European Commission, Economic Review of the Financial Regulation Agenda, at 5-8, COM (2014) 279 final (May 15, 2014) (concluding that the lack of regulation and oversight contributed significantly to the financial crisis).
- 20. Derivatives are financial instruments whose values depend on that of the underlying asset. *See Derivatives*, OFFICE OF THE COMPTROLLER OF THE CURRENCY, U.S. DEP'T OF TREASURY, https://www.occ.gov/topics/capital-markets/financial-markets/derivatives/index-derivatives.html.
- 21. See Michael Mirochnik, Credit Default Swaps and the Financial Crisis (2010), Columbia University Academic Commons, http://academiccommons.columbia.edu/catalog/ac%3A138122; Satyajit Das, Credit default swaps: Financial innovation or financial dysfunction? (2010), 14 FIN. STABILITY R. 46 (2010); David T. Llewellyn, The Northern Rock crisis: A multi-dimensional problem waiting to happen, 16 J. FIN. REG. & COMPLIANCE 35 (2008); Paul Krugman, Six Doctrines in Search of a Policy Regime, N.Y. TIMES, Apr. 18, 2010,

more nebulous when over-the-counter ("OTC") trades occur. OTC trades are not associated with clearing houses.²² There is no third party confirming the obligation of the buyer or the seller and both the buyer and seller bear a credit risk, thereby adding more risks to the use of OTC futures trading. In 1999, then chairwoman of the Commodity Futures Trading Commission ("CFTC"), Brooksley Born warned of the important risks of unregulated OTC derivative markets, quoting their lack of transparency, excessive leverage, and insufficient prudential controls.²³ Interestingly, the old "rule against difference contracts" in the United Kingdom, where difference contracts refer to derivatives, stated that a judge could not enforce an arrangement unless at least one party had an economic interest in the underlying asset or security,24 thereby giving preference to the physical owners of commodities. Still, 85-90% of non-commercial investment in commodities markets currently occur through OTC trading.²⁵ OTC trading of commodities, contracts, and other financial instruments occur generally over the phone or electronically²⁶ and not on a regulated exchange; hence, revealing OTC trading's opaqueness, but practical and speedy use. On both sides of the Atlantic, the financial system where the evolution of commodities has become more concentrated, complex and opaque.

 $http://krugman.blogs.nytimes.com/2010/04/18/six-doctrines-in-search-of-a-policy-regime/?\ r=0.$

^{22.} Glossary, CME GROUP, http://www.cmegroup.com/education/glossary. html (last visited Mar. 10, 2016) ("The procedure through which [a clearing house] becomes the buyer to each seller of a futures contract, and the seller to each buyer, and assumes responsibility for protecting buyers and sellers from financial loss by ensuring buyer and seller performance on each contract.").

^{23.} Brooksley Born, Chairperson, Commodity Futures Trading Commission Committee on Federal Regulation of Securities, Regulatory Reponses to Risks in the OTC Derivatives Market 2 (Nov. 13, 1998), http://www.cftc.gov/opa/speeches/opaborn-40.htm.

^{24.} Jennifer S. Taub, Other People's Houses: How Decades of Bailouts, Captive Regulators, and Toxic Bankers Made Home Mortgages a Thrilling Business 237 (2014).

^{25.} INST. FOR AGRIC. & TRADE POLICY, COMMODITIES MARKET SPECULATION: THE RISK TO FOOD SECURITY AND AGRICULTURE 6 (2008) [hereinafter IATP].

^{26.} *CFTC Glossary*, CFTC, http://www.cftc.gov/ConsumerProtection/EducationCenter/CFTCGlossary/index.htm#O (last visited Mar. 10, 2016) [hereinafter *CFTC Glossary*].

B. INSTRUMENTS IN AGRICULTURAL COMMODITIES MARKET

Agricultural commodities such as wheat, corn, and cotton are traded in the market in the form of derivative financial instruments because farmers around the world need to protect themselves from the risk of bad harvests and/or price fluctuations of the commodity they produce. To do so, they enter into contractual relations with intermediaries, fixing in advance the price of their products the quantity, the quality, and the date of delivery²⁷

As such, a future contract is an agreement to purchase or sell a commodity for delivery in the future at a price that is determined at initiation of the contract, which obligates each party of the contract to fulfill the contract at the specified price. This is used to assume or shift price risk and may be satisfied by delivery or offset.²⁸ Traders can also enter options contracts, contracts that give the buyer the right, but not the obligation, to buy or sell a specified quantity of a commodity or other instrument at a specific price within a specified period of time, regardless of the market price of that instrument.

Finally, traders can enter swap agreements. A swap is a technique where the parties involved exchange the payments derived from the prices of an underlying commodity without transferring the ownership of the commodities.²⁹ They play a peculiar role in the agricultural commodities market as seen further below.

The commodity futures market in the United States is covered by the Commodity Exchange Act 1936 ("CEA").³⁰ The CEA was amended in 1974 to establish the CFTC, a specialized and independent agency with the authority to regulate the futures and options markets in the United States. The proclaimed mission of the CFTC is to "protect the public interests" by providing means for managing and assuming price risks, discovering prices, and/or disseminating pricing information through trading in liquid, fair and financially secure trading facilities for commodities" (emphasis

^{27.} European Commission, Agricultural Markets Task Force: Issue Paper (2016), http://ec.europa.eu/agriculture/agri-markets-task-force/2016-06-28/paper-self-help-tools.pdf.

^{28.} IATP, supra note 25, at 4.

^{29. 7} U.S.C. § 1a(47) (2012).

^{30.} *Id.* §§ 2(a)(1)(A)-(B).

added).³¹ While the Commodities Exchange Act 1936 created the CFTC as the federal regulator for the futures and options market, the Commodity Futures Modernization Act of 2000 ("CFMA") was passed to streamline and eliminate unnecessary regulation from the CEA Act³² that were deemed too cumbersome for the competitiveness of the U.S. commodity market. One of its landmark provisions was to exclude from the application of the CEA, and therefore from the mandate of the CFTC, OTC derivatives transactions such as futures contracts between institutional participants.³³

Astronomic numbers of futures and options trades are conducted in financial centers such as London, New York, Paris or Frankfurt to serve the economy and answer the demand worldwide.³⁴ The further deregulation of the commodities futures markets has attracted more and more investors and increased the flow of money and of speculative activities in the market.

C. SPECULATION AND SPECULATORS: THE GOOD AND THE BAD

Speculating refers to the act of buying or selling an asset with the intention to resell or re-buy at a later date when the action is motivated by the hope of a modification of the current price and not by the advantage inherent to the usage of the asset, its processing, or the transfer of a market to another.³⁵ The belief of the crystallization of a future economic event may vary from one investor to the other, which is why speculation has to do with the "psychology" of the speculator or of the market.³⁶

^{31.} Id. § 5a.

^{32.} Commodity Futures Modernization Act, H.R. 5660, 106th Cong. § 2 (2000).

^{33.} See Title VI, 7 U.S.C. § 1a.

^{34.} These financial centers include the London International Futures Exchanges in London, the Chicago Board of Trade and the ICE US Futures in the United States, the "Marches a Termes Financiers" in Paris, and the Deutsche Börse in Frankfurt or CME Globex: electronic trading system.

^{35.} COURET ET AL., DROIT FINANCIER [FINANCIAL LAW] 672 (2012).

^{36.} See E. Glen Weyl & Eric Posner, A Proposal for Limiting Speculation on Derivatives: An FDA for Financial Innovation 3 (Coase-Sandor Institute for Law & Economics, Working Paper No. 594, 2012), http://www.law.uchicago.edu/Lawecon/index.html (explaining the numerous person and market-specific factors that create speculation).

According to the CFTC, a speculator in commodity futures is "a trader who does not hedge, but who trades with the objective of achieving profits through the successful anticipation of price movements" and thereby reinforcing the idea that speculation is characterized by the mere search of economic profit, without adding any real value to the asset. By speculating on the occurrence of X or Y event, the speculator only creates risk where there was none before. In opposition, a traditional investment, in which the investor, while hoping to generate income in time, adds real value to the invested asset. However, one must keep in mind that speculating usually involves taking a high risk in exchange for equivalently high returns; hence, why speculating compares with gambling activities.

As we have seen earlier, agricultural commodities are traded under the form of futures contracts. There are therefore two prices to take into account in the agricultural commodities derivative markets: the value of the actual commodity, also known as the spot price, and the future price. The spot price stems from the physical or spot market. This spot market is where the cash transactions for the physical or actually commodity occur; hence the fact that the spot price refers to the current price of the commodity at any time for immediate delivery. On the contrary, the futures contract price is a construction of the speculator, an anticipation of the spot price at maturation of the contract when the delivery comes.³⁹ As such, speculators hold positions in the commodities derivatives market to take advantage of the evolution of the price in the spot markets. As the European Commission explains:

If a speculator expects the spot price on the expiry date of the futures contract to be higher than the price of the contract, he will buy the contract. If the spot price on the expiry date of the contract is lower than the contract price he loses. Similarly, if a speculator expects spot prices on the expiry date of a contract to be lower than the price of the contract

^{37.} CFTC Glossary, supra note 26.

^{38.} *See* IATP, *supra* note 25, at 4 (noting that excessive speculation leads to increased price volatility and greater risk in the market).

^{39.} European Commission, Task Force on the Role of Speculation in Agricultural Commodities Price Movements; Is there a Speculative Bubble in Commodity Markets?, at 5, SEC (2008) 2971 final (Nov. 21, 2008) [hereinafter Task Force].

he will sell the contract short. If the spot price at the expiry date of the contract is lower than the contract price, the investor earns a profit by buying the contract cheaper before expiry and delivering it to the counterparty. 40

1. Commercial Traders and Hedging

Commercial traders, also known as "hedgers," are the original financial intermediaries between the holder of the physical commodity and the commodity markets. Generally, they are the specialists of the markets and make informed decisions to keep their profits and losses within a certain margin. Moreover, their purchases of futures contracts provide the necessary liquidity to the functioning of the market, 41 the price of which provide an indication of the value of the commodity based on the fundamentals of the real economy, the transportation costs of the product, and the availability of supplies. 42 The British "rule against difference contracts," referred to above, 43 was primarily meant to favor these traders with physical ownership of the underlying commodity with hedging purposes.⁴⁴ The transparency of the determination of the price makes it reliable information for all the parties involved. Consequently, they support the good functioning of the market and serve the purpose of the agricultural commodities market: helping farmers managing risks; hedging against it, and participating in the due price discovery process of the commodities. According to De Schutter, this type of speculation "reduces price volatility, because speculators provide a market for hedgers, and because they buy when the price is low and sell when the price is high, thus evening out extremes of prices."45

^{40.} *Id.* at 6.

^{41.} Rens van Tilburg & Myriam Bander Stichele, *Feeding the Financial Hype: How Excessive Financial Investments Impact Agricultural Derivatives Markets*, 9, 21-22 (SOMO, Amsterdam, Neth., Nov. 2011).

^{42.} PETER WAHL, WORLD ECON. ECOLOGY & DEV., FOOD SPECULATION: THE MAIN FACTOR OF THE PRICE BUBBLE IN 2008 11 (2009).

^{43.} See supra note 24 and accompanying text.

^{44.} See Lynn. A. Stout, Derivatives and the Legal Origin of the 2008 Credit Crisis, 1 HARV. BUS. L. REV. 1, 11 (2011) (stating that derivative contracts between speculating parties who did have ownership were void and legally unenforceable).

^{45.} Olivier de Schutter (Special Rapporteur on the Right to Food), Food Commodities Speculation and Food Price Crises: Regulation to Reduce the Risks of Price Volatility, 4 (Sept. 2010), http://www2.ohchr.org/english/issues/food/docs/Briefing Note 02 September 2010 EN.pdf [hereinafter Food Commodities]

2. Noncommercial Traders and Financial Speculation

Non-commercial traders play also a large role in the agricultural commodity market in the sense that they do not deal with the same physical risks that commercial traders face. As a balance, they usually take the opposite position of commercial traders,⁴⁶ taking higher risks for greater returns. Non-commercial traders are usually opposed to commercial traders in that their interest lies solely in maximizing profits. The fact that they are supposed to take higher risks explained their initial relative minority in the market compared to commercial traders.

De Schutter estimates the surge of arrival of these non-commercial investors, such as pension funds, hedge funds, sovereign wealth funds, and large banks, came into the agricultural commodity markets as early as 2001.⁴⁷ In 2007, the mortgage crisis in the United States also triggered the arrival of this new type of investors to cover the shortcomings of the real estate market. Pursuant to the repeal of the Glass-Steagall Act and the application of the CFMA, which excluded OTC markets from the regulatory mandate of the SEC and of the CFTC, there was a shift in the commercial/non-commercial composition of the agricultural commodity market.⁴⁸ The figures went up to 60% for financial speculators in the market.⁴⁹ The Research Center SOMO acknowledges that financial speculators compose 70% of the market with 30% comprising of commercial hedgers.⁵⁰ The CFTC observed an increase from 12% speculators and 78% hedging/traditional investors in 1996 to 69% speculators and 31% hedging/traditional investors in 2011.⁵¹

Speculation].

^{46.} See CFTC, STAFF REPORT ON COMMODITY SWAP DEALERS & INDEX TRADERS WITH COMMISSION RECOMMENDATIONS 68 (2008) (stating that non-commercial traders have different objectives that oppose those of commercial traders).

^{47.} Food Commodities Speculation, supra note 45, at 6.

^{48.} BENOIT GUILLEMINOT, JEAN-JACQUE OHANA & STEVE OHANA, LES NOUVEAUX MODES D'INVESTISSEMENT SUR LES MARCHES DERIVES DE MATIERES PREMIERES AGRICOLES [NEW METHODS FOR INVESTING IN AGRICULTURAL RAW MATERIALS DERIVATIVES MARKETS] 79-80 (2012).

^{49.} Stephen Spratt, *Food Price Volatility and Financial Speculation* 5 (Future Agric, Consortium, Working Paper No. 047, 2013).

^{50.} See van Tilburg & Bander Stichele, supra note 41, at 22.

^{51.} *Id.*; Letter from Dennis M. Kelleher et al., President & CEO, Better Markets, Inc., on Position Limits for Derivatives to David A. Stawick, Secretary,

This structural change affected the dominant strategy of the agricultural commodities market by not "betting" on commodities for insurance and hedging, but strategizing solely for profits from price arbitrage. To that end, swap agreements have been very instrumental. Swaps are widely used by non-commercial market participants, notably commodity index funds. A commodity swap agreement usually refers to a "bilateral contract between counterparties who agree to exchange a series of cash flows at periodic dates."52 The exchange of cash flows in a swap agreement can derive from the price changes in a wide variety of commodities. Index traders mostly trade on OTC markets via swap dealers reflecting their position on the market. The swap dealer, acting as a bridge between the commodity index fund and the futures market, will then hedge the financial risk of the underlying commodity price fluctuation in the spot market by buying futures contracts on a listed exchange;53 hence, the tradition to identify swap dealers as commercial traders, or a unique category, because they take positions in the market to hedge risks. A swap agreement is advantageous because it offers the involved counterparties the possibility to customize the agreement terms to their hedging needs⁵⁴ because they are not as strictly regulated as futures.⁵⁵ As such, swaps are a crucial OTC instrument to access the agricultural commodity market and its futures contracts, notably for commodity index funds seeking to diversify their portfolio.

These index funds are characterized by the simultaneous trade over a variety of soft and hard commodities in an index.⁵⁶ They base their "investment" on a mathematical formula that follows the price movement of up to twenty-four hard and soft commodities to capture

CFTC (Mar. 28, 2011), http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=34010&SearchText=better%20markets (concluding that speculation in commodity markets has increased significantly).

^{52.} GERALD D. GAY & ANAND VENKATESWARAN, THE PRICING AND VALUATION OF SWAPS IN FINANCIAL DERIVATIVES: PRICING AND RISK MANAGEMENT 405, 405 (Robert W. Kolb & James A. Overdahl eds., 2010).

^{53.} Letter from Dennis M. Kelleher et al. to David A Stawick, *supra* note 51, at 17.

^{54.} See id.

^{55.} *Id*.

^{56.} See Food Commodities Speculation, supra note 45.

the slightest benefit from a price arbitrage.⁵⁷ According to U.S. Congressman Bart Stupak in 2008, "[s]ince 2003, commodity index speculation has increased 1,900 percent, from an estimated \$13 billion to \$260 billion. Lehman Brothers recently estimated that the crude oil price goes up about 1.5 percent for every \$100 million in commodity index investments."⁵⁸

The size of commodities indices such as the S&P Goldman Sachs Commodity Indices ("GSCI"),⁵⁹ Dow Jones Commodity Indices, and the Rogers International Commodities have led them to become a commodities price referencing tool in the industry, even though they are inherently tools of speculation on commodities prices.

Index traders generally put pressure on price to go up while having no physical ownership of the underlying commodities. GSCI, for example, had a strategy of holding only long positions for buying pressure. All in all, it is a question of scale in purchasing important amounts of future contracts. Index traders may affect prices through their actions. For example, prices go up when index traders buy large amounts of money in the food commodities market and thereby pour large amounts of money in the commodities market. Prices go down when index traders sell large amounts of money in the food commodities market and thereby pull large amounts of money in the commodities market.

^{57.} IATP, supra note 25.

^{58.} See Commodity Exchange Act: Hearing on H.R. 6330 Before the House Agric. Comm., 110th Cong. (2008) (statement of Rep. Bart Stupak).

^{59.} See U.N. Dep't of Econ. and Soc. Affairs, *The Global Social Crisis*, 1, 29, U.N. Doc. ST/ESA/334 (2011).

^{60.} See Food Commodities Speculation, supra note 45, at 4 (noting that while the index was advertised as a tool for price reference, its underlying principle and function was momentum speculation to "hedge against adverse movements in the financial markets..."); U.N. Trade and Dev. Rep., The Financialization of Commodity Markets, 1, 56, U.N. Doc. UNCTAD/TDR/2009 (2009); Michael W. Masters, Managing Member/Portfolio Manager, Masters Capital Management, LLC, Testimony Before the Commodities Futures Trading Comm'n (Aug. 5, 2009).

^{61.} See Anis Chowdhury, Food Price Hikes: How Much is Due to Excessive Speculation, ECON. & POL. WKLY., 13, 13 (July 2011).

^{62.} Michael W. Masters & Adam K. White, *How Institutional Investors are Driving Up Food and Energy Prices*, ACCIDENTAL HUNT BROTHERS, 1, 13 (July 2008).

^{63.} *Id.* at ii (asserting that when Index Speculators spend large amounts of money into a small number of commodities, future prices rise significantly while

The traditional schism between commercial and non-commercial speculators, and hedgers and index speculators in the agricultural commodities market can seem obsolete considering that at times both could per se meet definition of speculators; hence, the reference to good speculators and bad speculators. However, they have different consequences on the market and often stem from different rationales: either the fundamentals of the real economy, the parameters of supply and demand, or profits. Many believe that the large number of index speculators trading agricultural commodities just like any other asset and in disconnection with the rules of supply and demand eventually result in abhorrent commodities prices. 64 The CFTC itself observed that "instead of pricing just supply and demand factors, commodity markets have begun to price commodities' value as an asset class as well, creating a price distortion or possibly even a bubble."65 All the same, Michael W. Masters and Adam K White stated:

Index Speculators have bought more commodities futures contracts in the last five years than any other group of market participant. They are now the single most dominant force in the commodities futures markets. And most importantly, their buying and trading has nothing to do with the supply and demand fundamentals of any single commodity. They pour money into commodities futures to diversify their portfolios, hedge against inflation or bet against the dollar (emphasis added).⁶⁶

The 2008 food price crisis has fostered a tumultuous debate on the potential effects of financial speculation in agricultural commodities markets. At its crux, the issues revolve around the existence or lack thereof of an actual causal link between excessive speculation and price volatility and/or increase. This causal link could also be indirect as some suggested that speculation might just have triggered or amplified the price volatility of 2008. With that being established, can speculators be held responsible for unreasonably increasing

commodity markets "expand . . . to absorb this influx of money.").

^{64.} *Id.* (providing quotations from recent research reports on how institutional investors have caused commodities prices, such as food, to increase by investing in commodities futures).

^{65.} See Michael V. Dunn, Commissioner, Commodity Futures Trading Commission, Testimony Before the Swiss Futures and Options Ass'n (Sept. 5, 2008).

^{66.} See Masters & White, supra note 62.

commodities prices?

III. A LEGAL FINDING OF FAULT?

The weight of financial speculation, as opposed to traditional speculation for hedging purposes, has increased due to the financial liberalization of commodity markets and created a temptation of excess. According to the CEA Section 4a, speculation in the commodities futures market is prohibited when the following cumulative conditions are met: it is excessive; it is causing sudden or unreasonable fluctuations or changes in the price of such commodity; and is an undue and unnecessary burden on interstate commerce in such commodity.⁶⁷

The above conditions lead to the following legal reasoning of determining an act, a damage, and a link of causality between the act and the damage.

A. THE ACT: EXCESSIVE SPECULATION

Excessive speculation has been defined as the "amount of speculation beyond that which is necessary or normal relative to hedging needs," insofar as speculation in the agricultural commodity market provides liquidity for hedgers to trade in the market. Logically, determining *excessive* speculation requires data on speculating activities from which we could excerpt a quantitative notion.

The Working T's Index uses an algebraic formula to analyze the balance between speculative activity and the net demand for hedging in the agricultural commodity market, based on the assumption that non-commercial traders also provide liquidity for hedgers.⁶⁹ The excessive character of speculation in Working T's index is then ascertained by comparison to historical norms which at the time were considered excessive or not.⁷⁰ Nevertheless, the index is only truly

^{67. 7.} U.S.C. § 4(a) (2000).

^{68.} See Commodity Future Markets, OECD FOOD, AGRIC, & FISHERIES, 1, 1 (2010).

^{69.} See Valentina G. Bruna et al., The Financialization of Food?, BANK OF CANADA, 1, 8 (2013).

^{70.} See Dwight R. Sanders et al., The Adequacy of Speculation in Agricultural Futures Markets: Too Much of a Good Thing?, in MKTG. & OUTLOOK RESEARCH REPORT 1, 15 (Dep't of Agric. & Consumer Econ., Univ. Ill. Urbana-Champaign

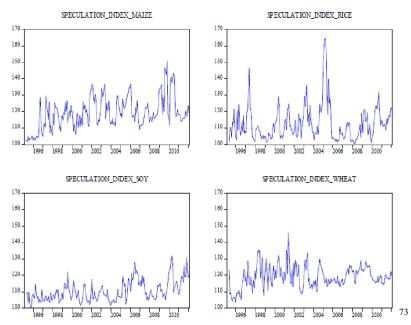
informative if there is a clear identification of the market participants as commercial and institutional speculators or non-commercial traders and hedgers, as well as the details in quantity of their trading activities.⁷¹ The Working T's Index is the quantitative indicator of excessive speculation but just like any equation, its results will be contingent to the data. For instance, a recent study of Hilary Till on excessive speculation in the U.S. oil futures market concluded that there is no evidence of excessive speculation in the U.S. oil market based on traditional speculative metrics; but only if the definition of excessive speculation applies. It is acceptable to use the historical agricultural futures markets as a guide to the adequacy (or excess) of speculation,⁷² excluding futures-spreading activity over the past three years that could have constituted excessive speculation.

According to Working's equation, there is excessive speculation when the result is superior to 1. E.g., a result of 1.19 would indicate speculation in excess of 19%. However, that alone is not sufficient to conclude the existence of price damaging speculation: a comparison must be made with historical norms of speculation. The charts below resulting from a study of Algieri (2012) of ZEF highlight the difficulty in defining excessive speculation. Depending on the markets concerned, the economic context of the period at hand and that is, the exogenous circumstances have to be similar enough to construe a comparison.

eds., 2008), 1, 15 (2008) (disagreeing with the postulation that speculation led to "bubbles in the agricultural futures prices... [because] it is not outside of historical norms... recent price increases do not neatly fit a bubble explanation... high prices have been observed for commodities without futures markets...." it will incentives storage for commodities).

^{71.} *Id.* at 7-8.

^{72.} See Hillary Till, Has There Been Excessive Speculation in the U.S. Oil Futures Market?, PRIMA RES., EDHEC-RISK INST., 1, 6 (2009).



The U.S. CFTC often condemns traders not for speculating excessively, but for being in violation of the position limits set by the regulatory agency.⁷⁴ In accordance with Section 5(d) of the CEA, which gave regulatory mandate to the CFTC, designated contract markets ("DCM") are required to adopt speculative position limits or position accountability for speculators, where necessary and appropriate, to reduce the potential threat of market manipulation or congestion, especially during trading in the delivery month.⁷⁵ The

^{73.} See Bernardiana Algieri, Price Volatility, Speculation, and Excessive Speculation in Commodity, UNIV. BONN CENTER FOR DEV. RES. 1, 21 (2012) (Charts extracted from ZEF Discussion Papers on Development Policy No. 166 of Bernardina Algieri).

^{74.} See U.S. COMMODITY FUTURES TRADING COMM'N, Enforcement Actions, http://www.cftc.gov/LawRegulation/Enforcement/EnforcementActions/index.htm (stating that the CFTC will take enforcement actions against individuals and firms registered with the Commission, who are engaged in commodity futures and option trading on designated domestic exchanges, and those who improperly market futures and options contracts).

^{75.} See Glossary Explanation of Speculative Limits, CFTC, http://www.cftc.gov/industryoversight/marketsurveillance/speculativelimits/index. htm (last visited Mar. 18, 2016) (citing to the CFTC's Speculative Limits Guidelines which aims to protect future markets from excess speculation through regulating "the size (or levels of the limits themselves; the exemptions from the limits (for example, hedged positions)); and the policy on aggregating accounts for

traders found with speculative position in excess of those set by the CFTC are then sentenced to fines.⁷⁶

All in all, an analysis of the Working T Index leads question what a finding of excessive speculation actually looks like. Clearly it must be above the value of 1 and also far above historical norms pushing even further the notion of excess.

B. THE DAMAGE

Food price hikes and volatility are undermining the right to food, a socio-economic notion derived from the U.N. International Covenant on Economic, Social and Cultural Rights right to an adequate standard of living including adequate food. According to the FAO, the right to food corresponds to the right to feed oneself, which requires not only that food is available, but also that it is accessible – i.e. that each household either has the means to produce or buy its own food. However, accessibility is threatened by prices defying the rules of supply and demand. The price volatility of agricultural commodities can have a significant impact on the lives of people with little purchasing power or create an uncertainty that impedes economic growth.

A price increase of basic foodstuffs can push certain populations towards extreme poverty while others might not see their purchasing power affected substantially. A study of nine low income countries has demonstrated that short-term price increases in foodstuff can increase the level of poverty on the national level by 4.5%.⁷⁸

the purposes of applying the limits.").

^{76.} See CFTC, ORDERS CHINA-BASED WEIDONG GE AND SHEENSON INVESTMENTS, LTD. TO PAY MONETARY SANCTIONS FOR VIOLATING SPECULATIVE POSITION LIMITS IN COTTON AND SOYBEAN FUTURES (Sept. 25, 2012).

^{77.} See U.N. Special Rapporteur on the Right to Food, Mission to Canada (May 2012) (by Olivier de Schutter) (asserting that the right to food is comprehensively indoctrinated in the International Covenant on Economic, Social and Cultural Rights under article 11.1 and provides that the meaning of "adequacy" extends to "prevailing social, economic, cultural, climatic, ecological and other conditions, while 'sustainability' incorporates the notion of long-term availability and accessibility).

^{78.} Maros Ivanic & Will Martin, *Implications of Higher Global Food Prices for Poverty in Low-Income Countries*, WORLD BANK DEV. RES. GROUP, 1, 20 (Apr. 2008).

Moreover, the risk of price volatility is born not only by the consumers but also the producers and in the long-run the governments which are naturally held responsible by its people to have "sovereignty" over food and to provide food security. According to Lagi et al. 2011, when food becomes inaccessible to the population, "the underlying reason for support of the system is eliminated";⁷⁹ hence, actions taken to oppose the failing government. Food insecurity aggravates any other failures of the government, which alone may take a long time to surface. In 2007-2008, the correlation between high food prices and food riots in several countries was evident: Mexico, Mexico in 2007; India, New Delhi in 2008; Burkina Faso, Ouagadougou, in 2008; to quote only a few. In Ouagadougou, the Secretary General of the Confédération Nationale des Travailleurs du Burkina (National Confederation of Workers) even referred to increasing prices as "having matches near cotton that can catch fire at any moment."80 The mere suggestion of a causal link between excessive speculation and potentially to the risk of social unrest, can leave some to question the interdependence movement that the world has known.

C. CAUSAL LINK

The cause-effect relationship between futures contracts prices (or changes in open interest) and spot prices is not always clear and causality tests have not been able to provide a straight answer either. The Granger causality test is a statistical instrument widely used by econometrists to identify the temporal precedence between two set of events in a time series.⁸¹ For instance, if it is observed that 100% of

Id.

^{79.} See Marco Lagi et al., The Food Crises and Political Instability in North Africa and the Middle East, NEW ENGLAND COMPLEX SYS. INST., 1, 3 (Sept. 2011).

^{80.} Food Riots Shut Down Main Towns, IRIN, (Feb. 22, 2008), http://www.irinnews.org/report/76905/burkina-faso-food-riots-shut-down-maintowns.

^{81.} See Commodity Future Markets, supra note 68, at 1. The test is defined as: Granger causality is a standard statistical technique for determining whether one time series is useful in forecasting another. It is important to bear in mind that the term causality is used in a statistical sense, and not in a philosophical one of structural causation. More precisely a variable A is said to Granger cause B if knowing the time paths of B and A together improve the forecast of B based on its own time path, thus providing a measure of incremental predictability.

the time an increased participation of index funds in the commodities derivative market was followed by an increased commodities price, then one could conclude that that increased participation of index funds "Granger caused" an increase in commodities prices. Obviously, one might argue that it does not prove causality, but a probability in the sense that it is difficult (even impossible) to "sanitize" this analysis from all other exogenous factors that could play a role in the occurrence of a specific event.

It is true that there are other influential factors that can act alone or simultaneously to influence the price of agricultural commodities. Professor Chowdhury⁸² listed long term factors in the food price crisis of 2008: increasing demand, growing population, agricultural productivity (liberalization of trade; priority on exports, etc.), production of agrofuels,⁸³ and reduction of food stocks (notably in the EU). Chowdhury listed the short-term factors: increase in oil prices (and fertilizer prices notably in 2007/2008), bad harvests, U.S. dollar exchange rate fluctuations (the U.S. agricultural futures markets is highly influential and futures and cash contracts are denominated in dollars), export restrictions on agricultural products (fail of Doha negotiations on agriculture), and financial speculation.⁸⁴

These short and long-term factors can only form a "faisceau d'indices" allowing us to understand the construction of commodity prices. For instance, Brazil Finance Minister Guido Mandega stated that high food prices were due to strong demand but also bad weather, subsidies in developed economies, and financial speculation. The U.N. Special Rapporteur, Olivier de Schutter, also notes that "while the food price crisis may have been sparked off... by developments affecting demand and supply, its effects were exacerbated by excessive and insufficiently regulated speculation in commodity derivatives."

^{82.} See Chowdhury, supra note 46, at 12.

^{83.} See Donald Mitchell, A Note on Rising Food Prices, WORLD BANK DEV. PROSPECTS GROUP, 1 (July 2008) (stating that the increased biofuel production raised the demand for food commodities).

^{84.} See Chowdhury, supra note 46, at 12.

^{85.} See Joe Leahy, Brazil Opposes Commodity Price Controls, FIN. TIMES, Feb. 15, 2011.

^{86.} See Food Commodities Speculation, supra note 45.

The precise quantitative impact of excessive financial speculation of commodities prices is still very much debated, all the more since the bulk of futures commodities trading occur over-the-counter. However, it is admitted that excessive speculation has a negative impact on markets. On this note, Section 4a of the CEA reads:

Excessive speculation in any commodity under contracts of sale of such commodity for future delivery made on or subject to the rules of contract markets or derivatives transaction execution facilities causing sudden or unreasonable fluctuations or unwarranted changes in the price of such commodity, is an undue and unnecessary burden on interstate commerce in such commodity.⁸⁷

Interestingly, Professors Irwin and Sanders add to the definition that a large part of technically excess speculation is economically necessary for a well-functioning market. 88 They also suggested in an OECD report that speculation did not cause price volatility in food and energy markets, 89 while others put the blame directly on the financialization of commodities. The joint study of the FAO, IMF, World Bank, OECD and others affirm that "increased participation by non-commercial actors such as index funds, swap dealers and money managers in financial markets probably acted to amplify short term price swings and could have contributed to the formation of price bubbles in some situations."90

There is at least a connection between the value of futures contracts held by speculators and the establishment of the price of the underlying commodity. Futures contract prices are intertwined with the evolution of the spot or cash prices and vice-versa, ⁹¹ and in

^{87. 7} U.S.C. § 6a (1936).

^{88.} See Irwin, supra note 52, at 5 (stating the weight of evidence clearly suggests that increased index fund activity in 2006-08 did not cause a bubble in commodity future prices).

^{89.} Id.

^{90.} See U.N. FAO ET AL., PRICE VOLATILITY IN FOOD AND AGRICULTURAL MARKETS: POLICY RESPONSES 12 (2011).

^{91.} See T.V. SOMANATHAN & V. ANANTHA NAGESWARAN, THE ECONOMICS OF DERIVATIVES 46-47 (2015); Communication From the Commission of the European Communities to the Council, the European Parliament, the European Economic and Social Committee, and the Committee of the Regions Food Prices in Europe, at 5-6, SEC (2008) 2971 final (Nov. 21, 2008) (stating that while there is no complete clarity or consensus on the degree of causality and the manner in which the influence works, it is almost universally accepted that forward/futures

theory, futures contracts prices converge with that of the spot market by the date of delivery. The arrival of index speculators post-CFMA 2000 has drastically changed the market by pouring large amounts of liquidity in the market and facilitated the invasion index traders, traditionally holding long positions on futures contracts to benefit from price increases in the long term. ⁹³

In 2008, the inconsistency between supply and demand data and the price of commodities signaled the shift in the price discovery process of agricultural commodities. In theory, futures prices and spot prices should converge by the date of delivery. However, from January 2007 to June 2008, futures prices were much higher than spot prices (also known as contango), where they were able to influence spot market prices during that period in a manner totally detached from supply and demand data. "Excessive" speculation leads to important price misalignment; hence, the imposition of position limits by the CFTC to "reduce the potential threat of market manipulation or congestion." Protracted positions in one direction can intrinsically affect spot prices which themselves lead to increased costs for the use futures contracts even for hedging purposes.

According to certain academics, "rapid drops in prices are more attributable to bubbles and crash dynamics because the rapid upwards and downwards movements are difficult to reconcile with normal fundamentals supply and demand factor." The burst of a speculative bubble and price swings would therefore translate the market participants' reaction to the "real" supply but virtual demand created in the futures market. For others, including the European Commission, the correction of prices could also be a sudden reassessment of market fundamentals by investors based on a good

prices are closely linked to spot prices and that changes in one can, ad in fact generally do, affect the other).

^{92.} Steve Suppan, Commodity Market Deregulation and Food Prices, INST. FOR AGRIC. & TRADE POL'Y.

^{93.} DEREK HEADEY & SHENGGEN FAN, REFLECTIONS ON THE GLOBAL FOOD CRISIS 40-43 (Int'l Food Policy & Res. Inst., 2010); Daryll E. Ray & Harwood D. Schaffer, *Index Funds and the 2006-2008 Run-Up in Agricultural Commodity Prices*, U. TENN. AGRIC. POL'Y ANALYSIS CTR. (2011).

^{94.} See SOMANATHAN & NAGESWARAN, supra note 91, at 53.

^{95.} See CFTC, supra note 58.

^{96.} See Lagi, supra note 62.

harvest or declining consumption of the commodity.⁹⁷ There is little evidence to suggest that trading in futures markets has driven the price run-up or has destabilized the commodity markets during the first half of 2008.⁹⁸

This striking absence of consensus and uncertainty of leading economists is mostly due to the opaqueness of financial flows into commodity derivatives. Nevertheless, the potential adverse effects of excessive speculation on the commodities prices could be disastrous enough to undermine the food security of millions. A correlation exists, but the debate still rages on even with talks about the contribution of excessive speculation in food price spikes.⁹⁹

Moreover, one can question the social usefulness of that amount of financial speculators; especially those principally driven by price arbitrage without ownership of the physical underlying commodity, but with the largest positions in the market. If the question is to know whether or not excessive speculation triggers or amplifies price hikes, the burden of proof should lay on its authors for the sake of protecting the consumers and to promote the integrity of the market.

IV. POLICY AND LEGAL RESPONSES

When high prices make it impossible for millions of people to access food, it threatens the sovereign duty to ensure food security. Financial deregulation, particularly that of derivatives, has increased the role of institutional investors in agricultural commodities. As mentioned earlier, there is a multitude of elements that enter into consideration in determining price commodities, but speculation is one of the few elements that private or public persons perform under the rule of law.

^{97.} See Suppan, supra note 72.

^{98.} See IMF, IS INFLATION BACK? COMMODITY PRICES AND INFLATION, WORLD ECONOMIC OUTLOOK 92, (Oct. 2008) (explaining that other than gold, there seems to be no systematic connection between financialization and price volatility or changes).

^{99.} OECD, RISING FOOD PRICES: CAUSES AND CONSEQUENCES (2008), http://www.oecd.org/trade/agricultural-trade/40847088.pdf (explaining that there has been an increase in investing in agricultural derivatives by non-traditional sources, likely contributing to the rise in short term futures prices and is a factor in the spike in spot market prices).

In 2009, the G8 Summit of L'Aquila tackled the issue of agricultural price volatility. The G8 Joint Statement on the Global Food Security Initiative notably insisted upon the rejection of factors potentially affecting commodity price volatility, including speculation, 100 and coined the term "damaging speculation" probably to circumvent the issue of defining excessive speculation. 101

In April 2011, the G20 Meeting of Finance Ministers and Central Bank Governors was particularly fruitful as well. The Meeting stressed "the need for participants in commodity derivatives markets to be subjected to appropriate regulation and supervision" Two months later, the G20 Summit in Paris, 2011 further pinpointed the need of financial regulation. Proposals included the establishment of a central clearinghouse to register global agricultural transactions, the standardization of derivatives trading rules in over-the-counter markets, and the control of agricultural prices. France also proposed a global mechanism to control prices of agricultural commodities much to the dislike of major agricultural producer such as Brazil. 104

Finally, the G20 Summit of Cannes in November, 2011 welcomed the IOSCO Principles for the Regulation and Supervision of

^{100.} L'Aquila, Joint Statement, L'Aquila Food Security Initiative (AFSI) (July 10, 2009), http://www.g8italia2009.it/static/G8_Allegato/LAquila_Joint_Statement_on_Global_Food_Security%5B1%5D,0.pdf [hereinafter L'Aquila, Joint Statement] (stating that the group is committed to reduce trade distortions and refrain from raising new barriers to trade and investment and to aim for an ambitious, comprehensive, and balanced approach to end the Doha Round).

^{101.} L'Aquila, Chair's Summary, G8 Summit 2009, July 10, 2009, http://ec.europa.eu/economy_finance/publications/publication15572_en.pdf (stating to address excessive price volatility in energy and agricultural products, effective regulation and supervision of derivative markets would enhance transparency and also combat "damaging speculation"); see L'Aquila, Joint Statement, supra note 100 (stating that factors potential affecting commodity price volatility and speculation must be monitored and analysed further).

^{102.} Press Release, G20 France, Meeting of Finance Ministers and Central Bank Governors (Apr. 2011), https://www.mof.go.jp/english/international_policy/convention/g20/20110415.pdf (calling for enhance transparency and asking IOSCO to finalize their suggestions for regulations and supervision of commodity derivatives markets).

^{103.} G20 RES. GROUP, G20 Plans and Preparations, (Sept. 15, 2011) (stating that Brazil would oppose any G20 effort to introduce controls or regulations over international commodities prices and they will fall naturally).

^{104.} See id.

Commodity Derivatives Markets and called upon market regulators to use formal position management powers, including the power to set ex-ante position limits, particularly in the delivery month where appropriate, among other powers of intervention.¹⁰⁵

The policy works aimed at improving the transparency of the agricultural market and preventing market abuse. On the latter, the legal follow-up on both side of the Atlantic was significant with the adoption of ex-ante position limits. Clearly, the inconclusive debate on excessive speculation has not paralyzed legislators. The law has taken a step ahead and it is quite interesting to see how financial regulation handles uncertain risks.

A. Position Limits: The Precautionary Approach

Position limits are, by essence, preventive measures that ensure the integrity of the commodity derivatives market. They impose the maximum, either net long or net short, in one commodity future (or option) or in all futures (or options) of one commodity combined that may be held or controlled by one person. ¹⁰⁶ The latest legal reforms impose stricter position limits in the United States and present a brand-new regime of position limits in the European Union.

1. Position Limits in the European Union

In the aftermath of the financial crisis, the European Union undertook a wide-ranging financial reform.¹⁰⁷ In 2010, the European Parliament marked the will of the Union to tackle excessive speculation and called upon the European Commission to develop measures to ensure that regulators were able to set position limits to counter disproportionate price movements and speculative bubbles.¹⁰⁸ The Directive 2014/65/EU ("MiFID II"), which repeals

^{105.} Cannes Summit Final Declaration: Building Our Common Future: Renewed Collective Action for the Benefit of All, G20 France, Sixth Meeting (Nov. 4, 2011) (calling on the report to be finished by the end of 2012).

^{106.} See CFTC Glossary: A Guide to the Language of the Futures, CFTC, http://www.cftc.gov/ConsumerProtection/EducationCenter/CFTCGlossary/index.h tm (last visited Mar. 8, 2016).

^{107.} See generally Erkki Liikanan, Chairman, High-Level Expert Group on reforming the structure of the EU banking sector 1 (2012).

^{108.} European Parliament Resolution of 15 June 2010 on Derivatives Markets: Future Policy Actions, P7_TA (2010) 0206 [hereinafter European Parliament Resolution] (asking the Commission to consider other things such as that the

the previous MiFID I Directive 2004/39/EC, and Regulation No 600/2014 ("MiFIR") on Markets in Financial Instruments will shake up the commodities markets and the market participants even more so. MiFID and MiFiR are both set to take effect in 2017, as they complete each other and should be applied in the continuity of one another.¹⁰⁹

MiFiD II imposes position limits on the size of a net position which a person can hold at all times in commodity derivatives traded on trading venues and economically equivalent OTC contracts. The limits shall be set on the basis of all positions held by a person and those held on its behalf at an aggregate group. The European Securities and Market Authority ("ESMA") will coordinate and facilitate the implementation of position limits and generally of both MIFID II and MIFIR to harmonize the rules applicable to financial instruments throughout the Union and to restore the integrity of the financial market.

The application *ratione materiae* of MiFiD II is what really brings novelty to curb excessive speculation. Indeed, the Directive applies not only to agricultural commodities traded on exchange but also to economically equivalent derivatives traded over-the-counter or other

valuation of derivatives not traded on exchange is conducted in an independent and transparent way and reducing the overall volume of derivatives so the volume is proportionate to the underlying securities).

109. See Directive 2014/65, of the European Parliament and of the Council of 15 May 2014 on Markets in Financial Instruments and Amending Directive 2002/92/EC and Directive 2011/61/EU, 2014 O.J. (L 173) pmbl. para. 7 [hereinafter Directive 2014/65] (stating that both legal instruments should form the legal framework for requirements that are applicable to investment firms, regulated markets, and data reporting); Regulation 2014/600, of the European Parliament and of the Council of 15 May 2014 on Markets in Financial Instruments and Amending Regulation 2012/684, 2014 O.J. (L 173) pmbl. para. 3 [hereinafter Regulation 2014/600].

110. See Directive 2014/65, supra note 109, pmbl. para. 9 (stating that position limits are created to prevent market abuse and support orderly pricing and settlement conditions, but will not apply to positions held by or on behalf of a non-financial entity and are objectively measurable as reducing risks relating to the entity's commercial activity).

111. See Regulation 2014/600, supra note 109, art. 44(1) (explaining that ESMA will ensure a consistent approach is taken to the powers exercised, the nature and scope of the imposed measures and the duration of follow-up of measures while publishing and maintaining a database with summaries of measures in force).

trading venues. 112 Moreover, the scope of the Directive extends also to other financial instruments that can give rise to regulatory issues comparable to traditional financial instruments, 113 which is very likely to be an extension to swaps. The European Parliament insisted in a proper, although difficult, distinction between speculation and hedging.¹¹⁴ It noted in its resolution of 2010 that "a distinction must be made between derivatives used as a risk management tool for hedging a real underlying risk to which the user is exposed and derivatives used solely for speculation."115 Additionally, MiFiD II adds that "position limits shall not apply to positions held by or on behalf of a non-financial entity and which are objectively measurable as reducing risks directly relating to the commercial activity of that non-financial entity."116 More precisely, according to Commission Delegated Regulation 149/2013, OTC derivatives contracts such as agricultural futures derivatives could apply for a hedging exemption, such as contracts objectively measurable as reducing risks and directly relating to the commercial activity, if they meet one of the following three criteria. Criteria A includes covering the risks arising from the potential change in the value of assets, services, inputs, products. commodities or liabilities that the non-financial counterparty or its group owns, produces, manufactures, processes, provides, purchases, merchandises, leases, sells or incurs or reasonably anticipates owning, producing. manufacturing. processing, providing, purchasing, merchandising, leasing, selling or incurring in the normal course of its business. Criteria B requires that they cover the risks arising from the potential indirect impact on

^{112.} See Directive 2014/65, art. 57(4), supra note 109 (mandating that a competent authority will set limits for each contract in commodity derivatives or their equivalents based on ESMA's calculation).

^{113.} *Id.* pmbl. para. 8.

^{114.} See Financial Services Authority & HM Treasury, Reforming OTC Derivative Markets: A U.K. Perspective, 34, 2009 (UK) (disagreeing with the approach and does not consider that there should necessarily be a distinction made between "large speculative" and "large non-speculative" positions for the purposes of combating manipulation – the focus should be on combating "large positions that lead to manipulation" irrespective of whether they are held by financial participants or not. Still, this goes back to the idea of tackling damaging speculation in the absence of consensus on the causal link between prices hikes and financial speculation).

^{115.} See Resolution on Derivative Markets: Future policy actions, EUR. PARL. DOC. P7 TA(2010)0206 para. no. 8 (2010).

^{116.} See Directive 2014/65, supra note 109, art. 57(1)(b).

the value of assets, services, inputs, products, commodities or liabilities referred to in criteria a, resulting from fluctuation of interest rates, inflation rates, foreign exchange rates or credit risk. Lastly, criteria C requires that they qualify as hedging contracts pursuant to International Financial Reporting Standards ("IFRS") adopted in accordance with article 3 of Regulation (EC) No 1606/2002 of the European Parliament and of the Council.¹¹⁷

ESMA will be in charge of determining the methodology for calculation of the positions limits for physically settled and cash settled derivatives at the European level while the national authorities will have competence to set the actual limits, subject to possible amendments and confirmation of ESMA.¹¹⁸ In doing so, ESMA will take into account the following factors: (a) the maturity of the commodity derivative contracts;(b) the deliverable supply in the underlying commodity; (c) the overall open interest in that contract and the overall open interest in other financial instruments with the same underlying commodity; (d) the volatility of the relevant markets, including substitute derivatives and the underlying commodity markets; (e) the number and size of the market participants; (f) the characteristics of the underlying commodity market, including patterns of production, consumption and transportation to market; and(g) the development of new contracts (emphasis added).¹¹⁹

In its consultation paper of December 2014, ESMA established that the baseline figure for each commodity derivatives will be 25% of the deliverable supply that would be available for the spot month contract. National authorities will have the discretion to set that

^{117.} See Commission Delegated Regulation 2013/149 of 19 December 2012 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council with Regard to Regulatory Technical Standards on Indirect Clearing Arrangements, the Clearing Obligation, the Public Register, Access to a Trading Venue, Non-Financial Counterparties, and Risk Mitigation Techniques for OTC Derivatives Contracts Not Cleared by a CCP, 2013 O.J. (L 52) art. 10 (supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council with regard to regulatory technical standards on indirect clearing arrangements, the clearing obligation, the public register, access to a trading venue, non-financial counterparties, and risk mitigation techniques for OTC derivatives contracts not cleared by a CCP).

^{118.} See Directive 2014/65, supra note 109, arts. 57(1), 57(3) (explaining this will be based on the characteristics of the relative derivative).

^{119.} *Id*.

figure depending on the evaluation of the 8 factors cited above. In any case, there cannot be a position limit lower than 10% of deliverable supply or higher than 40% of deliverable supply. The competent national authorities will also have supervisory power to control the said positions limits and the power to enforce them notably via: article 69(o), request any person to take steps to reduce the size of the position or exposure and article 69(p), limit the ability of any person from entering into a commodity derivative, including by introducing limits on the size of a position any person can hold at all times. 121

ESMA will implement these standards in collaboration with the Member States national authorities, such as the Financial Conduct Authority for the United Kingdom or the Autorité des marchés financiers in France, etc., by: (a) request[ing] from any person all relevant information regarding the size and purpose of a position or exposure entered into via a derivative; (b) after analyzing the information obtained in accordance with point (a), require any such person to reduce the size of or to eliminate the position or exposure; and (c) as a last resort, limiting the ability of a person from entering into a commodity derivative. 122

The quantitative thresholds set by MiFiD II aim at preventing market abuse and in particular distorting positions that occur when there is no convergence between prices of derivatives in the delivery month and spot prices for the underlying commodity, ¹²³ such as *contango* and *backwardation*.

2. Position Limits in the United States of America

In 2010, the U.S. Congress enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act, which defines itself as "an

^{120.} See European Securities and Markets Authority, Consultation Paper on the Markets in Financial Instruments Directive 2004/39/EC, 534 (Dec. 19, 2014) (defining the deliverable supply as" the commodity that is used either as settlement for, or as a pricing reference to, that commodity derivative contract).

^{121.} Directive 2014/65, art. 69.2(o)-(p), *supra* note 86.

^{122.} Regulation 2014/600, art. 45.1, *supra* note 87.

^{123.} Directive 2014/65, art. 57.1, *supra* note 86 (explaining further that these limits do not apply to positions held by or on behalf of a non-financial entity and are measurable as reducing risks directly relating to the commercial activity of the entity).

Act to promote the financial stability of the United States by improving accountability and transparency in the financial system, to end 'too big to fail,' to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and for other purposes." Title VII of the Dodd-Franck Act, also known as the Wall Street Transparency and Accountability Act of 2010, considerably changed the rules of the game for OTC derivatives trading. Is substance, it amended the CEA to tackle excessive speculation and its *undue and unnecessary* impacts on the market and mandated the CFTC to impose position limits including aggregated position limits.

The purpose of these position limits is clear in the U.S. legislation. It is meant to diminish, eliminate, or prevent *excessive speculation*; deter and prevent market manipulation, squeezes, and corners; ensure sufficient market liquidity for bona fide hedgers; and ensure that the price discovery function of the underlying market is not disrupted. 126

The application "ratione personae" of position limits is as follows: the Section 737 a. 2(a) of the Dodd-Franck Act provides:

[W]ith respect to physical commodities other than excluded commodities as defined by the Commission[the CFTC], the Commission shall by rule, regulation, or order establish limits on the amount of positions, as appropriate, other than bona fide hedge positions, that may be held by any person with respect to contracts of sale for future delivery or with respect to options on the contracts or commodities traded on or subject to the rules of a designated contract market (emphasis added). 127

Once again, a distinction is made by the legislator according to the purpose of the speculative activity (offsetting price risks or else). A bona fide hedger can benefit from a hedging exemption.¹²⁸

^{124.} See Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376-2223, pmbl. (2010).

^{125.} See id. tit. VII.

^{126.} See 7 U.S.C. § 6a (2010) (mandating the commission have the power to shall take actions to the maximum extent possible in its discretion to combat things like excessive speculation; market manipulation, squeezes, and corners; ensure market liquidity; and ensure the price discovery function is not disrupted).

^{127.} *Id.* § 6a(4)(2)(A).

^{128.} See id. § 6a(c)(1) ("No rule, regulation, or order issued under subsection (a) of this section shall apply to transactions or positions which are shown to be bona fide hedging transactions or positions, as such terms shall be defined by the Commission by rule, regulation, or order consistent with the purposes of this

Application *ratione materiae*: As stated in section 737 paragraph 5(a) of the Dodd-Franck Act, position limits set by the CFTC apply to physical commodity futures, physical commodity options, and economically equivalent swaps. 129 Title VII of the Dodd-Frank Act also gives primary jurisdiction to the CFTC to regulate and oversee swaps while the SEC has competence over security-based swaps. Finally, the CFTC and the SEC will share the regulatory and oversight responsibility of mixed swaps. 130 Similar to EU regulations, the CFTC rule 1.3 (z) defines hedging transaction and position as "transactions or positions normally represent a substitute for transactions to be made or positions to be taken at a later time in a physical marketing channel, and where they are *economically appropriate to the reduction of risks* in the conduct and management of a commercial enterprise." 131

As we have seen with the European Union, position limits can be flexible. For physical delivery contract, the U.S. Code of Federal Regulations provides that the spot month limit level must be no greater than necessary "to minimize the potential for manipulation or distortion of the contract's or the underlying commodity's price."¹³² For individual non-spot month, the position limit shall not be greater than 10 percent of the contract's first 25,000 of open interest and 2.5% thereafter.¹³³

Act.").

^{129.} See Dodd-Frank Act, § 737 (notwithstanding any other provision of this section, the Commission shall establish limits on the amount of positions, including aggregate position limits, as appropriate, other than bona fide hedge positions, that may be held by any person with respect to swaps that are economically equivalent to contracts of sale for future delivery or to options on the contracts or commodities traded on or subject to the rules of a designated contract market subject to paragraph (2)).

^{130.} See 15 U.S.C. § 8302 (2010) (mandating that the CFTC and SEC consult and coordinate before commencing rulemaking over swaps, swap dealers, major swap participants, swap update repositories, derivative clearing organizations in regards to swaps, people associated with swap dealers or major swap participants, eligible contract participants, or swap execution facilities).

^{131.} See 17 C.F.R. § 1.3(z) (2014).

^{132.} See 17 C.F.R. § 150.5 (2012).

^{133.} See id. (explaining how a contract market must provide for speculation limit levels).

B. IMPLEMENTING A PRECAUTIONARY MEASURE

As we have seen above, the CFTC has imposed position limits before and enforced them on several occasion by fining the dissident market participants. In essence, the rationale behind the act of the authority was the simple excess in the number of contract held by one participants at a certain time to prevent market disruptions. With the Dodd-Frank amended version of the CEA, the New Regime of Position Limits is inherently linked with the limitation of speculative activities within the market. This interpretation of the Act, with which no necessity finding is required, has therefore attracted the attention ISDA and SIFMA, two of the biggest trade associations representing respectively participants in the privately negotiated derivatives industry and securities firms, banks and asset managers in the financial industry. In 2011, they brought a claim again the CFTC claiming the vacatur and remand of the New Position Limits rule taken pursuant to the mandate granted by the Dodd-Frank amended version of the CEA; position limits that applied to twenty-eight agricultural, energy and metals futures contracts and swaps, futures and options that are economically equivalent to those contracts.

In *International Swaps & Derivatives Ass'n v. U.S. Commodity Futures Trading Commission*, ¹³⁴ before the U.S. District Court of the District of Columbia on December 2, 2011, the legal issue was the interpretation of the newly adopted Dodd-Frank Reform that amended the CEA 1936 and in particular section 4a of the CEA, which was codified at section 6a of the U.S.C. ¹³⁵ The claimants contested the CFTC's authority to impose position limits on speculative position in the commodities derivatives market without a positive finding that these position limits are necessary and will be efficient. ¹³⁶

^{134. 887} F.Supp.2d 259 (D.D.C. 2012).

^{135.} See id. at 266 (stating that the case turns on whether the CFTC correctly interpreted section 61 as amended by the Dodd-Frank Act); see also id. at 273 (declaring that the Plaintiff was correct the plain language of section 6(a)(1) does not permit the establishment of limits, even if prophylactic or remedial, without any necessity finding at all).

^{136.} See id. at 264 (stating that Plaintiffs asserted a violation of failure to determine the rule necessary and appropriate under section 6a and insufficient evaluation of costs and benefits under section 19).

The International Swap and Derivatives Association ("ISDA") and the Securities Industry and Financial Markets Association ("SIFMA") contended before the court that the CFTC misinterpreted the statutory authority mandated by Title VII of Dodd-Frank to impose the "required" position limits. They suggested that the U.S. Congress authorized the CFTC to establish position limits only if it finds first that they were "necessary to diminish, eliminate or prevent . . . an undue and unnecessary burden on interstate commerce caused by excessive speculation, and are otherwise appropriate as required in 7 U.S.C. § 6a(a)(1), (a)(2)(A), (a)(5)(A)."138 Moreover, they added that in accordance with 7 U.S.C. § 19(a)(3), a satisfying cost-and-benefits evaluation must be made before the promulgation of the rule. 139

Conversely, the CFTC put forward that the new financial reform set by the Dodd-Franck Act unambiguously mandates the CFTC to impose position limits¹⁴⁰ and more importantly that it is not subordinated to an affirmative finding that position limits are necessary to prevent sudden or unreasonable fluctuations or unwarranted changes in prices or otherwise necessary for market protection or required to find that an undue burden on interstate commerce resulting from excessive speculation exists or is likely to occur in the future¹⁴¹ to impose position limits.

The decision of the court was based on the interpretation of the U.S. Congress intent, which in this case was not clear enough to deduct a clear-cut public policy to see a precautionary application of position limits. To vacate the CFTC Rule, the judge analyzed successively the "seriousness of the order's deficiencies" and "the disruptive consequences of an interim change that may itself be changed." In both cases, it found in disfavor of the CFTC. Judge

^{137.} See id. at 266.

^{138.} See id. at 262 (stating that prior to Dodd-Frank, the Commission had discretion to set positions limits on futures and options contracts in commodity derivatives markets).

^{139.} Id. at 265.

^{140.} See 7 U.S.C.A. § 6a (West 2010) (stating the commission should place limits on the amount of positions, some of which are very specific, and they extend to economically equivalent contracts).

^{141.} See CFTC, 76 Fed. Reg. 4752 (proposed Jan. 26, 2011) (to be codified at 17 C.F.R. pt. 1, 150-51).

^{142.} See Int'l Swaps & Derivatives Ass'n v. CFTC, 887 F.Supp.2d 259, 283

Wilkins recognized the ambiguities in the statute so as to conditions to impose position limits but was simply not convinced that the interpretation proposed by the CFTC was the one in line with the intent of the Dodd-Franck Act.¹⁴³ As the CFTC rule has not been put in effect at the time of the decision, the Judge chose to vacate the rule to avoid disruptive consequences.¹⁴⁴

In this case, the fear of red tape won as the absence of a cost-benefit analysis of the CFTC rule was highly instrumental in this decision. It prevailed over an ease of precautionary action, the imposition of stricter position limits to regulate activities with the potential to have a terrible impact on the real economy and the society as a whole versus the risk of non-action analysis. Nevertheless, applying a precautionary principle to the financial industry is not a far-fetched idea when taking into consideration what is at stakes globally and the exponential use of high risk, opaque, and extremely complex financial products. Precaution is not a zero-risk policy; in EU law, it is subordinated to the identification of potentially adverse effects, the evaluation of the scientific data available, and the extent of scientific uncertainty.¹⁴⁵

On the contrary, the U.S. traditionally prefers a cost-benefit approach over a precautionary approach. The threshold in the U.S. is higher with a required cost-benefit analysis and a finding of significant risk before triggering regulation in case uncertainty posing a threat to the public. To say the least, as the landmark Benzene case 1980 put it, notwithstanding the fact that the defendant (a health and safety administrative agency) contended that in order to overturn a standard the onus to prove the absence of risk should lay on the industry, 146 the Supreme Court found that there must be

⁽D.D.C. 2012) (writing that the result of both tests favored vacating the rule on remand).

^{143.} See id. at 280 (holding that the court cannot uphold the CFTC's interpretation of the amendments under Chevron Step One).

^{144.} See id. at 283-84 (analyzing that the Court considers two factors when deciding to vacate: seriousness of the order's deficiencies and disruptive consequences of an interim change that may itself be changed).

^{145.} European Commission, Communication from the Commission on the Precautionary Principle 5.1 (2000) (triggering factors leading to recourse to the precautionary principle).

^{146.} See Antonin Scalia, A Note on the Benzene Case, AMERICAN ENTER. INSTIT. J.L. ON GOV'T & SOC'Y 25 (1980) (explaining the issue to be whether

significant risk¹⁴⁷ to trigger regulation. These were the exact same contentions of ISDA and SIFMA in the case before Judge Wilkins. ISDA and SIFMA stated that the CFTC can impose position limits if "it makes an informed determination that there is a reasonable likelihood that excessive speculation will pose a problem in a particular market, and that position limits are likely to curtail it without imposing undue costs."¹⁴⁸ Their claims as to the existence of a burden of proof are very dangerous and it is regrettable that Judge Wilkins did not answer the question whether or not the CFTC must make an affirmative finding of excessive speculation causing high commodities prices and volatility before triggering actions.¹⁴⁹

The affirmative would presume that position limits are a "cure" to excessive speculation and not a measure of precaution. At worst, it could be that legislators have to bend before the uncertainties of the financial market. If that happens, we must wonder *who serves whom* in the state-market relationship.

Excessive speculation poses a threat to the right to food of millions. It is a threat that cannot go unnoticed especially since the food price crisis of 2008. Undoubtedly, and as the study above of causality have demonstrated, the financial industry evolves in an esoteric and endogenous environment, which deprives the state of any predictability power in some instances. Still, society should not have to wait for —a global financial crisis or hunger revolts to tackle rampant issues in the financial industry.

A strong case of excessive speculation distorting the commodities derivatives market is dependent upon correct data and a correct interpretation of these data. However, since finance cannot be an exact science, financial studies are rarely epistemological, in the French philosophical sense, and rarely reach true objectivity. Consequently, in the case of excessive speculation and commodities

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before OSHA issues a toxic standard it must establish that the condition the standard addresses is probable and presents a material health risk).

^{147.} *Id.* at 27 (writing that the doctrine of unconstitutional delegation has become more popular, including in Supreme Court opinions to give a statute narrow construction).

^{148.} See Int'l Swaps & Derivatives Ass'n v. CFTC, 887 F.Supp.2d 259, 273 (stating that the plaintiffs do not contest that the CFTC may impose position limits "prophylactically").

^{149.} See id. at 280.

prices, the question should pertain to what level of risk uncertainty is high enough to trigger regulation? If the actions of financial speculators might or might not have been the cause of denial of a right to food in 2008, the level of risk of crystallization of public harm should be enough to trigger political and legislative action.

Regulating excessive speculation in the commodities derivatives markets is no easy task, but it has been done before. Unambiguously, Title VII of Dodd-Frank and MifiD II fight damaging speculative activities. The position limits instituted both in the European Union and the United States are variables put to the discretion of regulatory authorities. Only time will tell whether these position limits as well as transparency requirements and reporting obligations will pass the test of efficiency and extend to global standards.

In the midst of all these uncertainty, one thing is for certain: that test of efficiency does not depend on data or the occurrence of another financial crisis, it depends on public policy. A policy of precaution when navigating in rough water: imposing transparency, reporting, disclosure of swaps data, increasing predictability power of the state, etc. As such, this case of excessive speculation and agricultural prices might just be the epitome of the actual ramble in the financial market-state relationship.