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## COMMODITY DERIVATIVES, CONTRACT LAW, AND FOOD SECURITY

**Anna Chadwick**

Speculation in commodity derivative markets has been linked to the causation of the 2007-11 global food crisis. Derivatives have also been implicated in the causation of the global financial crisis. Much of the legal scholarship on derivatives is concerned with how best to regulate their use. Other work has pointed to the role of transnational actors, such as the International Swaps and Derivatives Association (ISDA), in facilitating the growth of the global derivatives market. What is missing in this scholarship is an account of how the norms of contract law have been altered, extended, and even distorted to create a new generation of financial assets linked to food prices. In this paper, I begin a project of examining how the trade in commodity derivatives has disrupted some of the established principles of contract law, and I reflect on the significance of my findings for the debate about derivatives regulation.

**KEY WORDS:** Food Insecurity; Commodity Derivatives; Financial Speculation; Contract Law

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## COMMODITY DERIVATIVES, CONTRACT LAW, AND FOOD SECURITY

### INTRODUCTION

In the period between 2006 and the second quarter of 2008, the prices of maize, rice, and wheat on international commodity markets more than doubled.<sup>1</sup> These three staple grains account for almost half of the calories that are consumed by poor households in the Global South.<sup>2</sup> Consequently, as basic food prices spiralled higher, riots and protests broke out in more than twenty-five countries worldwide.<sup>3</sup> The World Bank has estimated that the global food crisis pushed up to an additional 155 million people deeper into poverty in 2008 alone.<sup>4</sup> Although grain prices did drop in 2009, by 2010 they surged once again reaching dangerous new heights.<sup>5</sup> A survey of food consumption patterns in some of the countries worst affected by the crisis—the Central African Republic, Ethiopia, Liberia and Sierra Leone—found substantial evidence of restricted dietary diversity and food intake reductions among poor households.<sup>6</sup> As well as increasing the risk of micronutrient deficiencies among poor communities, the rising cost of food forced many families to reduce spending on healthcare and education, with damaging long-term effects for children in particular.<sup>7</sup>

Numerous factors have been advanced to explain this episode of extreme food price volatility. A growing global population, climatic events impacting on harvests, high prices for oil, and the promotion of crop-intensive biofuels all feature in accounts of what happened to food prices during this period.<sup>8</sup> Undoubtedly, each of these factors played a role. Nevertheless, several studies have underlined that the food price volatility of 2007-11 cannot be explained by supply and demand fundamentals alone.<sup>9</sup> Since 2008, claims have emerged that part of the responsibility for the crisis lies with the creation of a new market in commodity derivative contracts that has enabled financial actors to speculate on

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<sup>1</sup> Donald Mitchell, World Bank, *A Note on Rising Food Prices* (2008) Working Paper WPS 4682, 3

<sup>2</sup> David Lobell et al, 'Prioritizing climate change adaption needs for food security in 2030' (2008) 319 *Science*, 5863: 607-610, 608

<sup>3</sup> Ray Bush, 'Food riots: Poverty, Power and Protest' (2010) 10 *Journal of Agrarian Change* 1, 121

<sup>4</sup> Ivanic Maros and Will Martin, World Bank, *Implications of higher global food prices for poverty in low-income countries* (2008) Policy Research working paper; no. WPS 4594 (Washington, DC)

<sup>5</sup> World food prices reach new historic peak', FAO Media Centre website, 3 February 2011, online: <<http://www.fao.org/news/story/en/item/50519/icode/>>

<sup>6</sup> Samuel H. Swan, Sierd Hadley, Bernardette Cichon, 'Crisis Behind Closed Doors: Global Food Crisis and Local Hunger' (2010) 10 *Journal of Agrarian Change* 1:107-118

<sup>7</sup> *Ibid.*

<sup>8</sup> FAO, *Report on The State of Agricultural Commodity Markets: What happened to world food prices and why?* (2009); Anuradha Mittal, United Nations Conference on Trade and Development (UNCTAD), *The 2008 Food Price Crisis: Rethinking Food Security Policies* (2009) G24 Discussion Paper Series 56

<sup>9</sup> FAO, *Volatility in Agricultural Commodities: An Update* (2008), FAO Food Outlook; M Robles, M. Torero, & J Von Braun, International Food Policy Research Institute, *When speculation matters*. (2009) Washington, DC.

agricultural commodity prices. In recent years, a coalition of NGOs including Oxfam, Global Justice Now (GJN), WEED, and SOMO has been lobbying governments to address the threat posed to food prices by banks, hedge funds, and pension funds who, to employ the characterization of GJN, have been ‘betting on food prices in financial markets’ and ‘causing drastic price swings in staple foods such as wheat, maize and soy’.<sup>10</sup>

In the years leading up to the global food crisis, levels of financial investment in commodity derivatives increased substantially, rising from less than \$100bn in 2005 to over \$400bn in 2011.<sup>11</sup> NGOs have gathered a compelling body of evidence to back up their claims about the relationship between speculation and price volatility. Their reports contain evidence of statistical correlations between rising levels of investment and price movements in underlying markets, accounts of historical episodes of price instability linked to speculative activity, and interviews with financial traders who have testified to the changes they have witnessed in commodity markets in the last decade.<sup>12</sup> Nevertheless, financial institutions have denied the possibility that their involvement in commodity derivative markets could have had the kind of impact suggested by anti-speculation NGOs.<sup>13</sup> While this remains a controversial debate, a series of investigations launched by the US Congress resulted in an affirmative finding that excessive levels of speculation in commodity derivatives was a cause of the price volatility.<sup>14</sup> G20 governments have been persuaded to take action, and, spearheaded by the US and the EU, have moved to introduce new regulations to restrict excessive levels of financial investment in commodity derivative markets.

In this article, I explore a hitherto neglected aspect of the trade in commodity derivatives, which is the way in which derivative contracts are in tension with some of the established principles of contract law. In Part One of the article, I provide a brief introduction to commodity derivative markets, and I explain how the significance of law in this context is conceptualized in existing legal scholarship. In Part Two, I move to focus on a number of ways in which derivatives upset some of the key principles of contract law. In doing so, I problematize the pervasive tendency to think of contract as a neutral vehicle to facilitate financial transactions, and I offer a counterpoint to the prevalent view that the threat

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<sup>10</sup> Global Justice Now, *Food Speculation*, online: <[www.globaljustice.org.uk/food-speculation](http://www.globaljustice.org.uk/food-speculation)>

<sup>11</sup> M.O. Herman, R. Kelly, and R. Nash, Oxfam, *Not a game: speculation vs. food security* (2011) Oxfam Issues Briefing, 5

<sup>12</sup> The Institute for Agriculture and Trade Policy (IATP) provides a helpful compendium of much of this work, see B. Lilliston and A. Ranallo (eds), IATP, *Excessive Speculation in Agriculture Commodities: Selected Writings from 2008-2011* (2011) online: <[www20.iadb.org/intal/catalogo/PE/2011/08247.pdf](http://www20.iadb.org/intal/catalogo/PE/2011/08247.pdf)>

<sup>13</sup> Deutsche Bank supported its decision to continue investing in commodity derivatives in 2014, arguing that ‘there is no convincing evidence that the products we offer have a de-stabilizing impact on prices and cause more people to go hungry.’ Deutsche Bank, ‘Our position: the key questions and answers’, online: <[www.db.com/cr/en/concrete-current-questions-and-answers-may-2014.htm](http://www.db.com/cr/en/concrete-current-questions-and-answers-may-2014.htm)>

<sup>14</sup> United States Senate, *Excessive Speculation in the Wheat Market, Majority and Minority Staff Report* (2009) Permanent Subcommittee on Investigations, Washington, DC: US Senate.

posed to food prices by commodity derivatives can be addressed by curbing excessive volumes of speculative trading in these markets. Instead, I aim to demonstrate that it is the nature of these atypical contracts that has enabled financial actors to influence price directions in food commodity markets in the way that they have. This finding has implications for current debates on how to regulate derivatives, as I discuss in the concluding section of the article.

## I. COMMODITY DERIVATIVES FROM LEGAL PERSPECTIVES

Derivatives are financial contracts that enable a market actor to adopt a position in a market for an underlying asset and to use that position make a profit or a loss, or to hedge against risk, depending on how the market for the asset behaves in the future. The assets underpinning derivatives contracts can be tangible, like property and commodities (grain, metals, fuels), or they can be intangible, such as stocks, currencies, and interest rates.<sup>15</sup> Derivatives come in an array of different forms, including forwards, futures, options and swaps, all of which afford contracting parties different constellations of rights and obligations concerning the underlying asset. Many of these instruments are now linked to abstract financial indices, such as the ‘S&P/ASX 200 index’, and are priced using complex mathematical formulae. At root, however, derivatives have been developed from a more basic instrument known as a ‘futures contract’. A futures contract is a standardized contract through which two parties agree to exchange a fixed amount of a given commodity at an agreed date in the future for a sum of money negotiated in the present. Futures contracts allow parties to lock in a price at which to make an exchange in the future, thereby allowing farmers and manufacturers the means to avoid potentially disruptive price changes. Commodity futures contracts have a long history, and have been used for centuries as both a mechanism of agricultural insurance and as vehicles to facilitate profitable speculation.

For a long period of history, futures contracts were only legally sold via institutions known as ‘futures exchanges’. The most famous example of a futures exchange is the Chicago Board of Trade. This institution pioneered an organized trade in agricultural futures contracts in the US in the 19<sup>th</sup> Century, and was a prototype for the development of other futures exchanges around the world.<sup>16</sup> Since the 2000s, however, a new market in ‘over-the-counter’ (OTC) derivatives has overtaken the trade in exchange-traded futures contracts. OTC transactions are carried out bilaterally, between private parties, and are transacted outside of formal futures exchanges. OTC derivatives are principally traded by large banks and hedge funds, who, together with their lawyers, are responsible for developing the ‘exotic’

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<sup>15</sup> Michael Chui, Bank for International Settlements, *Derivatives markets, products and participants: an overview*, (2012) IFC Bulletin 35 online: <[www.bis.org/ifc/publ/ifcb35a.pdf](http://www.bis.org/ifc/publ/ifcb35a.pdf)> 3

<sup>16</sup> Ann Berg, ‘The Rise of Commodity Speculation: From Villainous to Venerable’ in Adam Prakash (Ed), *FAO, Safeguarding Food Security in Volatile Global Markets* (2011) online: <[www.fao.org/docrep/013/i2107e/i2107e.pdf](http://www.fao.org/docrep/013/i2107e/i2107e.pdf)>

credit and interest rate derivatives that were instrumental in bringing about the global financial crisis. Financial institutions have also created a more sophisticated range of financial instruments linked to commodity prices, such as ‘commodity index funds’, and ‘commodity exchange-traded funds’ (ETFs). These products enable a wide range of actors to gain profitable exposure to price movements in underlying commodity markets without having to engage directly in ‘costly and fiddly direct trading’ in the futures market.<sup>17</sup>

Credit derivatives, in particular, are now widely recognised as having played a leading role in the causation of the global financial crisis, principally by creating opaque webs of poorly collateralised debt between financial institutions who then relied on these elaborate forms of insurance to pursue speculative investment strategies with their own capital.<sup>18</sup> Taken together with the evidence of a connection between commodity derivatives and the global food crisis, pressure has mounted on policymakers to take action. In order to prevent a repeat of the global financial crisis, G20 governments have committed to enact new regulations that require institutions trading in derivatives to go through a more rigorous and transparent process in order to effect transactions. The Dodd Frank Act 2010 in the US, and the new rules under the European Market Infrastructure Regulation and second Market in Financial Instruments Directive II (EMIR-MiFID II) in Europe require banks and hedge funds to trade derivatives through regulated institutions known as clearing houses, to post greater collateral for their trades, and to report transaction data to government regulatory agencies.<sup>19</sup> NGOs concerned about practices of food speculation have also been successful in persuading policymakers to develop ‘position limits’ to restrict excessive levels of financial speculation in commodity derivative markets.<sup>20</sup> Position limits place an upper limit on the number of contracts other than ‘bona fide hedging’ positions which an investor, or combined group of investors, may hold for a specific commodity.<sup>21</sup> In the US, investors have been limited to controlling 25 percent of a given contract. In the EU, 25 percent is the recommended level set by the EU regulator, the European Securities and Markets Authority (ESMA), but national governments can make adjustments to the limits.<sup>22</sup>

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<sup>17</sup> World Development Movement, *Dangerous Futures: How are pensions fuel hunger* (2013) online: <[www.globaljustice.org.uk/sites/default/files/files/resources/pension\\_report\\_final.pdf](http://www.globaljustice.org.uk/sites/default/files/files/resources/pension_report_final.pdf)> 9

<sup>18</sup> ‘The Role of Derivatives in the Global Financial Crisis’, Testimony of Michael Greenberger before the Financial Crisis Inquiry Commission Hearing (Washington DC, 30 June 2010) online: <[http://digitalcommons.law.umaryland.edu/cgi/viewcontent.cgi?article=1036&context=cong\\_test](http://digitalcommons.law.umaryland.edu/cgi/viewcontent.cgi?article=1036&context=cong_test)>

<sup>19</sup> The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 Pub.L. 111–203, H.R. 4173 Title VII (Dodd-Frank); The Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties (CCPs) and trade repositories (TRs) (EMIR); Directive 2014/65/EU 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 Text with EEA relevance (Mifid II)

<sup>20</sup> Dodd-Frank Section 737; ESMA Regulatory Technical Standards 29 and 30.

<sup>21</sup> Due to the benefits that bespoke OTC derivatives afford to commercial participants, regulators are concerned not to prevent commercial hedgers from using OTC derivatives for hedging purposes.

<sup>22</sup> ESMA, ‘Opinion: Opinion Draft Regulatory Technical Standards on methodology for calculation and the application of position limits for commodity derivatives traded on trading venues and economically equivalent

Implementing the technical rules that give effect to the framework agreements of Dodd Frank and Emir-MiFID II has been a fraught process. A lawsuit challenging the US position limits on the grounds of limited evidence connecting speculative trading to commodity price volatility did result in the US limits being struck down; however, new rules that are largely similar to the original measures have been reinstated.<sup>23</sup> Campaigners have welcomed the regulations, and are currently working to ensure that the rules are not watered down by the financial lobby. As GJN has stated, ‘despite some weaknesses the agreement represents huge progress, meaning that for the first time the EU has rules to tackle food speculation’.<sup>24</sup> Unfortunately, however, there is cause to question this optimism. As I have discussed in other work, there is reason to consider that the regulations are unlikely to be effective in shielding commodity prices from speculative interference.<sup>25</sup> Position limits attempt to restrict the volume of speculative transactions that a single trader or financial institution can make in a market for a given commodity derivative contract, but this fails to account for the cumulative impact of dispersed market actors ‘herding’ together to influence price directions in commodity markets—a phenomenon described in the work of people in the behavioural school of economics, notably Robert Shiller.<sup>26</sup> More broadly, scholarship from the influential Social Studies of Finance (SSF) suggests that it may no longer be possible to convincingly distinguish between the ‘real’ or ‘fundamental’ values of food commodities and the prices of commodity derivative contracts. Work by Donald MacKenzie and Donatella Alessandrini encourages a reconceptualization of the financial formulas that purport to ‘measure’ or ‘record’ value, and points towards a new understanding of derivatives as complex assemblages of technology, institutional practice, and economic assumption that ‘do something to the value that they are supposed to measure’.<sup>27</sup> Viewed through an SSF lens of analysis, purging commodity derivative markets of ‘excessive’ volumes of speculation may do little to address the new market reality in which market actors who are assumed by economic theory to be ‘discovering’ commodity prices are, in fact, helping to produce those prices—prices that reflect the sentiments of financial markets, as opposed to fundamentals for grain or other commodities.

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OTC contracts’ ESMA/2016/668, 2 May 2016, online: <[www.esma.europa.eu/sites/default/files/library/2016-668\\_opinion\\_on\\_draft\\_rts\\_21.pdf](http://www.esma.europa.eu/sites/default/files/library/2016-668_opinion_on_draft_rts_21.pdf)> 7, para 25

<sup>23</sup> See International Swaps and Derivatives Association Inc. and Securities Industry and Financial Markets Association v. United States Commodity Futures Trading Commission, District Court For The District Of Columbia (Civil Action No. 11-CV-2146 (RLW)). For an insightful analysis of the case, see further James. W. Williams, ‘Dodging Dodd- Frank: Excessive Speculation, Commodities Markets, and the Burden of Proof’ (2015) 37 *Law & Policy* 120

<sup>24</sup> ‘Food Speculation’ Global Justice Now website, online: <[www.globaljustice.org.uk/food-speculation](http://www.globaljustice.org.uk/food-speculation)>

<sup>25</sup> Author’s article to be inserted after blind-peer review

<sup>26</sup> Robert J. Shiller, *Irrational exuberance* (Princeton University Press, 2015)

<sup>27</sup> Donatella Alessandrini, ‘Financial Derivatives and the challenge of performance,’ in Emile Cloatre and Martin Pickersgill (eds), *Knowledge, Technology and Law* (Routledge, 2014) 154; Duncan MacKenzie, *An Engine, Not a Camera: How Financial Models Shape Markets* (MIT Press, 2006); Edward Lipuma, ‘Ritual in Financial Life’ in Lee and Martin, ‘Derivatives and the Wealth of Societies’ (The University of Chicago Press, 2016) 59

Much of the legal scholarship on derivatives since 2010 has centred on the question of how best to regulate their use. Debate continues over how to ensure regulatory harmonization, how to promote effective compliance, and to what extent the US and European measures can have extraterritorial effect.<sup>28</sup> Other legal scholarship on derivatives explores the operations of the International Swaps and Derivatives Association (ISDA) and its role as a ‘global’ ‘private’ law-maker. In the main, this body of work is concerned to describe the evolution of new forms of transnational governance, and to consider whether the ISDA regime is an autonomous and anational legal system.<sup>29</sup> Scholars have sought to connect the activities of ISDA to broader developments in transnational law making investigating whether the contractual documentation, guidelines, and boilerplate legislation produced by ISDA to facilitate a global trade in derivatives really ever ‘takes off’ from the national legal system, or whether it is, in fact, dependent on domestic legal regimes to function.<sup>30</sup> The answer from John Biggins, Joanna Braithwaite, and a number of other scholars is clear: financial actors are dependent on national courts and domestic law, and particularly the Common Law regimes of the US and the UK (the jurisdictions nominated by ISDA to govern disputes) in order to function.<sup>31</sup> Nevertheless, while contract law is central to transnational scholarship on derivatives markets, overwhelmingly, the focus is on contractual standardization and what the actions of innovative actors like ISDA reveal about the changing role of the state with respect to the governance of financial markets. As with the practitioners-guides to ‘the law on derivatives’, contract law tends to emerge from this debate as a mechanism for managing legal and market risk—albeit in standardized form.<sup>32</sup> Little attention is being paid to how these financial contracts may actually extend, innovate, or disrupt established principles of contract law, or to how contract law may be implicated in the socially-harmful effects of derivatives trading.

I now turn to consider the relevance of contractual innovation in the trading of commodity derivatives. I confine my analysis to principles of contract law from Common law jurisdictions, as it is the Common law jurisdictions of England and the State of New York that underpin the transnational contract documentation of ISDA.

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<sup>28</sup> Christian Johnson, ‘Regulatory arbitrage, extraterritorial jurisdiction, and Dodd-Frank: the implications of US global OTC derivative regulation’ (2013) 14 *Nevada Law Journal* 542

<sup>29</sup> Gabriel Rauterberg and Andrew Verstain, ‘Assessing Transnational Private Regulation of the OTC Derivatives Market: ISDA, the BBA, and the Future of Financial Reform’ (2013) 54 *Virginia Journal of International Law* 9

<sup>30</sup> John Biggins, ‘Targeted Touchdown and Partial Liftoff: Post-Crisis Dispute Resolution in the OTC Derivatives Markets and the Challenges for ISDA’ (2012) 13 *German Law Journal* 1297

<sup>31</sup> *Ibid*, Biggins, Joanne, P Braithwaite, ‘Standard Form Contracts as Transnational Law: Evidence from the Derivatives Markets’ (2012) 75 *The Modern Law Review* 779

<sup>32</sup> Alisdair Hudson, *The Law on Derivatives* (Sweet&Maxwell, 2012); Stephen Henderson, *Henderson on Derivatives* (Butterworths, 2009)



## II. COMMODITY DERIVATIVES AND INNOVATIVE CONTRACT LAW

New types of derivative linked to commodity prices, such as index funds and commodity ETFs, cater to investors seeking to profit from price changes in underlying markets. These instruments are typically retailed by large banks, such as Barclays and JP Morgan, or ‘boutique investment management firms’, such as Invesco PowerShares.<sup>33</sup> ETFs are traded on securities exchanges and are backed by physical commodities or long futures positions held in a trust.<sup>34</sup> Commodity index funds are funds that enter into swap contracts that track published commodity indexes such as the S&P Goldman Sachs Commodity Index or the Dow Jones AIG Commodity Index.<sup>35</sup> The vast majority of commodity index trading by banks and funds is conducted off-exchange using OTC derivative contracts. Significantly, however, many institutions engaging in index trading provide investors with ‘exposure’ to commodities by buying and selling exchange-traded futures contracts to replicate the performance of a basket of commodities including fuels, metals, and agricultural commodities.<sup>36</sup> Financial investment in commodities often entails the use of combinations of OTC derivatives and exchange-traded futures to create exposure to underlying commodity prices.

As the weighty tomes on how to manage risk associated with derivatives and the prevalence of ISDA’s standardized derivatives documentation would testify, contract law is integral to the operation of derivatives markets. That being the case, there remains substantial ambiguity as to how to classify derivatives contracts. Derivatives are commonly defined as ‘contractual agreements that obligate parties to exchange assets or cash flows’.<sup>37</sup> However, as Hudson, a leading scholar on the law on derivatives notes there are six possible ways of interpreting derivatives contracts, namely, as financial forwards, as executory contracts, as mutual debts, as repayments, as condition precedents, and as disjointed options.<sup>38</sup> Davrados has also pointed to the tendency to ignore the matter of the precise legal characterization of derivatives, observing that the issue is frequently dismissed because ‘it is seemingly

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<sup>33</sup> Shelia Olson, ‘Top 3 Commodities ETFs for 2018’ Investopedia, online:

<[www.investopedia.com/investing/commodities-etfs/](http://www.investopedia.com/investing/commodities-etfs/)>

<sup>34</sup> Long positions are positions taken in expectation that the value of the commodity rises. Commodity Futures Trading Commission, ‘Staff Report on Commodity Swap Dealers & Index Traders with Commission Recommendations’ (2008) available at: <

<http://www.cftc.gov/idc/groups/public/@newsroom/documents/file/cftcstaffreportonswapdealers09.pdf>> 11-13

<sup>35</sup> *Ibid.*

<sup>36</sup> The main futures markets for agricultural commodities are located in the US. The Chicago Mercantile Exchange (CME) is the leading exchange for several commodities. Exchanges for agricultural commodities have traditionally been less active in the EU, as the Common Agricultural Policy functioned to offer European farmers guaranteed prices, but this has changed with reforms to the CAP, sparking a new wave of activity in European futures markets. European Commission, *Agricultural commodity derivative markets: the way ahead* (2009) European Commission Staff Working Document, [COM(2009)59, 28 October 2009, online: <[http://ec.europa.eu/economy\\_finance/publications/pages/publication16071\\_en.pdf](http://ec.europa.eu/economy_finance/publications/pages/publication16071_en.pdf)> 5

<sup>37</sup> Alan N. Rechtschaffen, *Capital Markets, Derivatives and the Law: Evolution After Crisis* (Oxford University Press, 2014) 51-2

<sup>38</sup> Alistair Hudson, *The Law on Financial Derivatives* (London: Sweet & Maxwell, 1998) 62-75

obvious that these financial instruments fall within the category of peculiar (*sui generis*) financial trade contracts, without the need for any further qualification whatsoever'.<sup>39</sup>

While these critiques clearly apply to more complex types of derivative, one might think that the classification of the humble 'futures contracts' might be more straightforward. In reality, probing into the mechanisms of contemporary trading on futures exchanges exposes some unusual characteristics of these contracts. One such characteristic is that exchange-traded futures contracts are highly standardized, and the quantities of commodities to be bought and sold, contract length, and delivery dates are already pre-determined. Often the only variable to be agreed on by the parties is the price. Furthermore, futures contracts are subject to a distinctive regime of time-allotted trading with contracts typically being divided into several (usually four or more) expiry dates throughout the year. Each of the futures contracts is active (can be traded) for a specific amount of time. The contract then expires, and cannot be traded any more.<sup>40</sup> The high levels of standardization and time-allotted trading featured in futures trading make this practice distinct from other forms of contractual negotiation. Perhaps most significantly, however, in spite of the highly prescriptive terms of the contracts, the vast majority of futures contracts do not result in the delivery of tangible commodities.<sup>41</sup> This is a long-standing feature of futures trading. It was reported in 1971, for example, that approximately 99% of wheat futures traded in the Chicago Board of Trade were liquidated before making delivery.<sup>42</sup>

Considering the mechanisms of futures trading highlights the unconventional relationship between derivatives and norms of ordinary contract law. As Johnson and Hazen—two legal scholars writing on derivatives regulation—have put it futures trading is 'one of humanity's 'more impenetrable' concepts in that it 'involves selling what one does not own and, as a rule, buying what one does not want. It is shrouded in terminology that conceals its meaning'.<sup>43</sup> To strike such a bargain would appear to flout some of the well-established principles of contract law. Making an agreement for the purpose of selling you do not own has all the hallmarks of misrepresentation: you are making a false statement of fact and inducing your contractual partner to enter into a contract based on the false representation that you have a quantity of grain, or currency, or shares to sell, when in fact you do not.<sup>44</sup> Similarly, committing to buy something you don't intend to take possession of suggests an intention to breach the agreement from the very beginning. Since when was offering to buy a bushel of wheat and then failing to pay for

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<sup>39</sup> Nikolaos Davrados, 'OTC Derivatives and the Conflict of Laws,' (2012) 65 RHDI 181, 190

<sup>40</sup> Adam Milton, 'Guide to Futures Market Expiration Dates' 17 August 2017, online: <[www.thebalance.com/guide-to-futures-market-expiration-dates-1031175](http://www.thebalance.com/guide-to-futures-market-expiration-dates-1031175)>

<sup>41</sup> Andrew Hecht, 'Basis Risk: The Spread Between Futures and Physical Prices' 5 April 2017, online: <[www.thebalance.com/futures-prices-versus-physical-prices-808962](http://www.thebalance.com/futures-prices-versus-physical-prices-808962)>

<sup>42</sup> *Cargill, Inc. v. Hardin*, 452 F.2d 1154, 1157 (8th Cir. 1971).

<sup>43</sup> P Johnson and T.L. Hazen, *Derivatives Regulation* (Apsen Publishers, 2004) 1397

<sup>44</sup> Smith describing the conditions for misrepresentation in contract law. S. A Smith, *Atiyah's Introduction to the Law of Contract* (Oxford University Press, 2006) 254

it, or offering to sell a bushel of corn, and then failing to deliver it, no longer considered a breach of contract?

A possible reply to this argument is that it is predicated on the flawed premise that futures contracts are like contracts for the sale of goods. In fact, as Davrados points out, a derivative cannot be safely labelled a sales contract because the traditional concept of a sale is understood as the transfer of an already existing object or right under the law.<sup>45</sup> In the UK, a Sales contract assumed that the trader has rights in the goods to be transferred.<sup>46</sup> Similarly, in the US, A ‘sale’ consists in the passing of title from the seller to the buyer for a price.<sup>47</sup> The peculiarity of a derivatives contract, Davrados underlines, ‘stems from the fact that the object of the contract (i.e. the financial position) is not pre-existent, but is created from the contract itself.’<sup>48</sup> Indeed, futures contracts are defined and regulated as a distinct type of contract under both the Financial Services and Markets Act 2000 in the UK, and the Commodities Exchange Act in the US.<sup>49</sup> Nevertheless, even if we accept they are a new category of contract to which ordinary principles relating to misrepresentation and breach do not apply, many types of futures and derivatives still fall foul of other fundamental requirements of contract law relating to certainty and completeness.

As Christopher Chen exposes in his analysis of several US and UK cases, it is not easy to separate commercial sales from commodity futures contracts used for investment purposes.<sup>50</sup> As it is quite common to see commercial contracts with a delivery date some time in the future, he argues, the distinction between regulated futures contracts and unregulated commercial contracts is precarious.<sup>51</sup> Chen notes that some commentators have suggested that intention to deliver the physical commodities should be the factors distinguishing these types of contracts; however, as his analysis reveals, such an approach puts the certainty and specificity of the contract into question. Every commodity futures contract traded on the Chicago Board of Trade calls for delivery, and every trader has the right to hold the contract through expiration and to deliver or receive the cash commodity. This means that it is only possible to know whether delivery has been made in hindsight.<sup>52</sup> Hence, it is left to courts try to establish the intentions of the parties after the fact. Perversely, in the event that it was to be found that parties did

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<sup>45</sup> Davrados (n 39) 89

<sup>46</sup> See Consumer Rights Act 2015 Chapter 2 Section 5 ‘Sales Contracts’

<sup>47</sup> Uniform Commercial Code › U.C.C. - ARTICLE 2 - SALES (2002) Section 2-401

<sup>48</sup> Davrados (n 39) 89

<sup>49</sup> In the UK ‘futures’ is a kind of regulated investment. The term ‘futures’ is defined as ‘rights under a contract for the sale of a commodity or property of any other description under which delivery is to be made at a future date and at a price agreed on when the contract is made’. If it is traded on an exchange, it is assumed to be a futures contract traded for investment purposes. Financial Services and Markets Act 2000 (Regulatory Activities) Order 2001 SI 2001/544 art 84(1); FSMA 2000 §285 et seq.

<sup>50</sup> Christopher Chao-hung Chen, ‘The Boundary of Futures Regulation: From U.K. And U.S. Judgments Regarding Commodity Forward Contracts’ (2009) 6 *Soochow Law Journal* 1:165-198, 170

<sup>51</sup> *Ibid.*

<sup>52</sup> *Ibid.*, 184

not intend delivery, this would mean that the court would have to make a finding that contradicted the express written terms of the parties' contract. This situation undermines the requirement of certainty that is traditionally understood to be needed in order to effectuate a valid contract. The parties cannot rely on their written agreement to determine whether they have a contract for the sale of goods dated in the future, or a futures contract that does not require the delivery of goods.

Attempting to distinguish between futures contracts and contracts for the sale of goods based on an intention to deliver the physical commodity raises further issues when one considers how Common Law courts go about determining the intentions of the parties. Under Common law approaches to contract, judges do not insist on a harmony of subjective intentions with respect to the necessary agreement to form contractual relations. Rather, parties are held to have agreed to what a reasonable man would infer from their communications with respect to their contract. Interestingly, this further complicates the situation of parties trading commodity futures contracts. The mismatch between the stated terms of the contract and the true intentions of the parties could perhaps be salvaged by contractual reading focused on the actual subjective intentions of the parties. Say both parties knew that neither of them possessed nor intended to sell or take delivery of the grain in question, thus, they could be understood as have agreed on the actual nature of their bargain in spite of the written terms of their contract. Under the Common law, by contrast, the parties should be held to what a reasonable man would have understood from their negotiations. 'The words and acts of the parties are themselves the basis of contractual liability' Williston underlines, 'and not merely evidence of a mental attitude required by the law'.<sup>53</sup> This would suggest that in order for a futures transaction in which neither party actually intends to sell or to take delivery of the grain to be a valid contract, then the parties should have communicated to one another that their real intentions did not correspond to the written terms of the contract that they agreed together. Otherwise, the only contract that exists is a contract for the sale, purchase, and delivery of grain—*there is no contract for the exchange of payments based on the market price of grain*. To put it another way, if the real intention of the parties to contract to exchange payments based on the market price of grain is nowhere in evidence, then to what terms can the parties be held to have agreed by the hypothetical reasonable man?

Chen offers an alternative criterion to distinguish between futures contracts and sale of goods contracts. In his view, the boundary should depend not on the intentions of the parties, but on 'whether a trading scheme offers a factual facility to offset contrary trades between two or among multiple parties'.<sup>54</sup> The practice of 'offsetting' is common place in exchange-traded futures markets. In order to offset the position that they hold in a market for a given contract, traders close out their market positions

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<sup>53</sup> Samuel Williston, 'Mutual Assent in the Formation of Contracts' (1919) 14 Illinois Law Review 85, 87

<sup>54</sup> Chen, (n 50) 165

by entering into an equal and opposite position in the market, bringing their net position in the market back to zero (i.e. if an investor contracted to sell six October corn contracts, then he must buy six October corn contracts to truly offset the position).<sup>55</sup> Closing out transactions in this way is known as ‘liquidating’, ‘off-setting’, or ‘reversing’ the position. As long as the trader competently liquidates their position, they will not be obligated to deliver the commodity or asset, nor will they be obligated to take delivery.<sup>56</sup> As the transactions go through an intermediary, ‘the net position is what’s important’.<sup>57</sup> Chen identifies the practice of offsetting as characteristic of futures trading, and posits that the ambiguity between these terminologically identical contracts can be resolved by reference to the existence of ‘a factual facility to offset contrary trades’.<sup>58</sup> That being said, Chen’s approach does not adequately attend to the tensions between futures trading and accepted doctrines of contract law. In Chen’s formulation, the nature of the contract and the agreement between the parties is made to depend on the existence of a factual facility for offsetting transactions, that is, a factual state that is external to the contract itself. As discussed above, under the Common law, parties should be held to what a reasonable man would have understood from their negotiations, with a critical role for the words and acts of the parties. Making the rights and obligations of the contract hinge on the existence of a criterion external to the contract at least raises the question as to whether the contract satisfies normative requirements of completeness and certainty.<sup>59</sup>

Settling futures contract with a cash payment (instead of the delivery of the commodity contracted for) has been a prevalent practice since standardized futures contracts began to be bought and sold as articles of value on the Chicago Board of Trade. A practical solution has thus been found to address the mismatch between stated terms of futures contracts and the parties’ actual economic position and their true contractual intentions. Nevertheless, the question as to if and how futures contracts—and, now, a host of other derivatives contracts—can be reconciled with traditional understandings of a contract entailing a meeting of minds remains unanswered.<sup>60</sup> Thinking about the derivatives as comprising a vast network of legal obligations the written terms of which do not accurately reflect the true intentions of the parties highlights the inconsistencies between the operations of this market and traditional doctrines of contract law. In addition, the practice of off-setting has only been made practicable by the development of another innovative contractual technique: novation. Novation is the act of either replacing a party in contract with another or replacing one contractual obligation with another, requiring

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<sup>55</sup> Investopedia, ‘Offsetting Contracts, Settlements and Delivery’ online: <[www.investopedia.com/exam-guide/series-3/studyguide/chapter4/offsetting-contracts-settlements-delivery.asp](http://www.investopedia.com/exam-guide/series-3/studyguide/chapter4/offsetting-contracts-settlements-delivery.asp)>

<sup>56</sup> *Ibid.*

<sup>57</sup> *Ibid.*

<sup>58</sup> Chen, (n 50) 165

<sup>59</sup> For a discussion of these requirements, see Elizabeth Macdonald and Ruth Atkins, ‘Certainty and Completeness’ in Elizabeth Macdonald, Ruth Atkins, *Koffman & Macdonald’s Law of Contract* (8<sup>th</sup> edition, Oxford University Press, 2014)

<sup>60</sup> As Choi and Gulati have noted, ‘[t]he traditional model of contract interpretation focuses on the ‘meeting of the minds’ Choi S. J. and Gulati M. G., ‘Contract as statute’ (2006) 104 *Michigan Law Review* 1129, p. 1130.

the consent of all parties involved. As Chen's analysis highlights, it is through a series of novations that futures contracts are able to be offset, thereby avoiding the need for delivery.<sup>61</sup> Futures exchanges, or, in other cases, institutions known as 'clearing houses', interpose themselves between the two parties making the trade effectively becoming the buyer to every seller and the seller to every buyer meaning that the original contracting parties no longer have a direct obligation to one another regarding delivery.<sup>62</sup> Novation, as Braithwaite underlines, is 'notable as the only means in English law whereby the benefits and burdens of a contract may effectively be transferred to a third party'.<sup>63</sup> For centuries, society has placed high value on the liquidity of property, but not, traditionally, on the liquidity of contracts. The doctrine of privity of contract has traditionally held that contractual rights are only binding on and enforceable by the immediate parties to the contract.<sup>64</sup> Once again, the trading of futures contracts is premised on a departure from this norm.

Only by virtue of the innovative contractual techniques of offsetting and novation have financial actors been able to enter into hundreds of different derivative transactions in which they purport to buy and sell what they do not own, simulating the buying and selling of commodities and assets in underlying markets and then exiting the market with an economic benefit (or loss). The fact that the ownership is only simulated, however, does not make the effect that all of this financial market 'positioning' has in the underlying economy any less real. This article has already impressed that commodity derivatives exceed existing categories of contract, require the suspension of ordinary rules concerning misrepresentation, breach, certainty, completeness, and privity of contract, and depend on innovative contractual techniques to be effectuated. The final and perhaps most fundamental point that I wish to raise about these financial contracts is whether they should be conceptualized as contracts at all.

A key division between derivatives and securities (e.g. stocks and bonds) is that derivatives do not create proprietary interests in the assets from which they derive their value. Yet, through the innovative approach to contract taken in the development of these markets, financial institutions are able to create a 'position' in a market for an underlying commodity in which they have no pre-existing property, rights, or claims, and to benefit from changes in the price of that commodity as if they owned it. Traditionally, regimes of property law have enabled only those persons that bear the responsibilities and obligations of physical ownership to enjoy the economic benefit of a property or commodity. The development of derivatives has enabled innumerable parties to enter into contracts that derive their

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<sup>61</sup>Chen, (n 50) 186

<sup>62</sup> Niti Nandini Chatani, *Commodity Markets: Operations, Instruments, and Applications* (Tata McGraw-Hill Education, 2010) 93

<sup>63</sup> J.P. Braithwaite, 'Private Law and the Public Sector's Central Counterparty Prescription for the Derivatives Markets' LSE Law, Society and Economy Working Papers 2/2011, 16.

<sup>64</sup> S. A. Smith, *Atiyah's Introduction to the Law of Contract* (Oxford University Press, 2006) 337

value from underlying commodities that neither party owns. While it is not the owner of the real commodities that pays the parties to a derivative transaction, derivatives nonetheless enable parties to simulate the ownership of existing commodities and to benefit, or to make a loss, from changes in their price. In the case of commodity index funds, it is possible to simulate ownership of multiple commodities all at the same time. Legally speaking, definitions of property ownership demand a number of features such as exclusive rights of possession, burdens of ownership, and actionability against all the world—as opposed to against an identifiable contractual party—that derivatives—at least on the face of it—would not appear to meet.<sup>65</sup> This article will not seek to substantiate a claim that derivatives are a new form of property. However, I do want to suggest that derivatives blur the lines between traditional regimes of contract and property law.

So why does this matter with respect to the debate about food commodity speculation? It matters because the ability of financial investors to speculate on the future direction of food prices has depended on their ability to misrepresent their true economic position with respect to underlying agricultural commodities, and to enjoy a productive ambiguity with respect to their contractual intentions with respect to the agricultural commodity. Derivative markets are widely positioned as areas in which the prices of underlying assets and commodities are ‘discovered’. This means that the actions of financial traders with respect to commodity derivative contracts are frequently interpreted in the broader economy as containing information about supply and demand for the commodities underpinning the contracts. The written terms of futures contracts enable financial actors to manifest intent to buy and sell quantities of grain and other commodities, and, thereby, to influence *market perceptions* of supply and demand for commodities, which in turn influences market prices—hence how speculative activity in commodity derivative markets influences price directions in physical markets for agricultural commodities.

### III. CONCLUSION

Commodity derivatives, as with other financial instruments, have no existence outside of their contractual form. Both exchange-traded futures and the more complex financial derivatives that are traded in contemporary markets are intrinsically dependent on contract law in order to be effective as transactions. Yet, the very nature of these instruments would appear to contradict some of the foundational principles of contract doctrine. This has implications for current debates on the regulation of derivatives, since policymakers appear largely content to introduce procedural mechanisms to make

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<sup>65</sup> For a discussion of the distinctions between property and contract and their relevance with respect to financial assets see David Pearce, ‘Property and Contract: Where are we?’ in Alisdair Hudson (ed), *New Perspectives on Property Law, Obligations and Restitution* (Cavendish Publishing Limited, 2004); and Tamar Frankel, ‘Securitization: The Conflict Between Personal and Market Law (Contract and Property)’ (1999) 18 *Annual Review of Banking Law* 197

derivatives trading less systemically risky, to give regulators greater powers of scrutiny and oversight, and to try to prevent market actors adopting monopoly-like positions in commodity derivative markets in order to stop them from ‘manipulating’ prices. This brief foray into the contractual dimensions of derivatives trading would suggest that there is an urgent need to problematize the kinds of entitlements and powers that parties entering into derivative contracts are wielding in the first place. It may be that it is the nature of these ‘contracts’, and not the volume in which they are traded, that poses a threat to food prices. I would argue that instead of fixating on position limits, ensuring the food security of future generations might require contesting some of the extensive liberties that the financial services industry has been taking with respect to contract law.