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The Impact of Speculation on Global Food Accessibility and Food Security

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Abstract

The global food price spikes of 2008 and 2011 resulted in tens of millions of people being pushed into poverty. The cause of these spikes is diverse, including short, medium and long-term factors. The extent each respectively contributed is a matter of on-going debate. This article will explore the role of speculation and futures markets as one of the causes of the global price spikes. This will be followed by an exploration of the understanding of risk, uncertainty and speculation in Islamic law, and how these elements should be curbed in order to prevent food price spikes.

Keywords

food security – risk – futures – speculation – Islam

1 Introduction

In the last decade global food prices have been rising, with significant price spikes taking place in 2008 and 2011. Since 2011 global food prices have remained unusually high. Increases in food prices negatively affect the ability

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of people to access food, and therefore impacts nutrition and food security. This is particularly the case for the hundreds of millions who are already food insecure, and the substantial portion of the world's people who spend significant percentages of their household income on food. Although the specific cause of global food price increases and spikes is a matter of on-going debate, there are a number of short-term, medium-term and long-term influences that have been suggested.

Short-term causes include weather changes, such as drought, which affect food supply[1] as well as hoarding and export bans.[2] Medium-term causes include a trend of increased demand for meat[3] and bio-fuels,[4] both of which have put greater demands upon the existing stock of food and alter the type of crops produced on agricultural land. Production costs in the medium and long-term are affected by oil prices, as that impacts the cost of transportation and agricultural inputs, such as fertilizers.[5] A long-term cause of price increases is climate change, which affects production and supply.[6] Futures markets and speculation can cause price changes in the short-term,[7] and potentially long-term as well.[8]

1 T. Carty, *Extreme Weather, Extreme Prices* (Oxford: Oxfam International, 2012).

2 G. Welton, 'The Impact of Russia's 2010 Grain Export Ban', Oxfam Research Reports (Oxford: Oxfam International, 2011).

3 Worldwatch Institute, 'Meat Production Continues to Rise', retrieved from http://www.worldwatch.org/node/5443 (2013).

4 B. Babcock, *The Impact of US Biofuel Policies on Agricultural Price Levels and Volatility*, ICTSD Programme on Agricultural Trade and Sustainable Development, Issue Paper No. 35 (Geneva: ICTSD International Centre for Trade and Sustainable Development, 2011).

5 P. Abbott, 'Development Dimensions of High Food Prices', OECD Food, Agriculture and Fisheries Working Papers, No. 18 (OECD Publishing, 2009); Z. Bakucs and I. Ferto, *World Prices and Domestic Food Price Spikes*, Hungarian Academy of Sciences, Discussion Paper MT-DP 2013/4 (Budapest: Research Centre for Economic and Regional Studies, Hungarian Academy of Sciences, 2013).

6 International Food Policy and Research Institute (IFPRI), *Climate Change: Impact on Agriculture and Costs of Adaptation* (Washington, DC: International Food Policy Research Institute, 2009).

7 L. McPhail, X. Du and A. Muhammad, 'Disentangling Corn Price Volatility: The Role of Global Demand, Speculation, and Energy', *Journal of Agricultural and Applied Economics* 44(3) (2012): 401-410.

8 O. De Schutter, 'Food Commodities Speculation and Food Price Crisis: Regulation to Reduce the Risks of Price Volatility', United Nations Special Rapporteur on the Right to Food, Briefing Note 02 (2010).

This article will first elaborate on the impact that increasing food prices and price spikes have, in particular upon those already food insecure and those vulnerable to become food insecure, as a result of rising food prices and spikes. That will be followed by an exploration of the function and role of futures markets and commodity speculation, as one of the significant contributors to price increases and spikes. Many recommendations have been made with regard to how price spikes can be prevented, one of them being curbing excessive speculation as required under Islamic finance. This article will examine the framework of Islamic jurisprudence and thought on the issue of risk and uncertainty. This will first take the form of addressing the futures market and speculation. That will be followed with an exploration of areas for additional reform and regulation from the perspective of Islamic jurisprudence, which address a number of other short-term causes of food price spikes.

2 Background

Between 1990 and the mid-2000s the prices of food commodities were relatively stable, and price volatility was relatively low.[9] That started to change from 2002, when prices steadily rose through to 2008 and culminated in the 2008 price spike, which aligns with the increasing involvement of commodities trading during this period. In the 2008 food price spike consumers all over the world saw food prices spike dramatically. Between 2006 and 2008 the average world price of rice rose by 217%, wheat by 136%, maize by 125% and soybeans by 107%.[10] Mass riots occurred across the globe, including in Yemen, Senegal, Pakistan, Somalia, Indonesia, India, Egypt and Bangladesh. The increase in price affected food accessibility, and hence negatively impacted food security and nutrition of hundreds of millions of people—particularly affecting those families that were already vulnerable to food insecurity and/or living in poverty.[11]

9 S. Spratt, *Food Price Volatility and Financial Speculation*, Working Paper 047 (Brighton: Future Agricultures, 2013).

10 S. Murphy, D. Burch and J. Clapp, *Cereal Secrets: The World's Largest Grain Traders and Global Agriculture* (Oxford: Oxfam International, 2012).

11 S. Fan, M. Torero and D. Headey, *Urgent Actions Needed to Prevent Reoccurring Food Crises*, Policy Brief 16 (Washington, DC: International Food Policy Research Institute, 2011); High Level Panel of Experts (HLPE), *Price volatility and food security*, Report 1 (Rome: A report

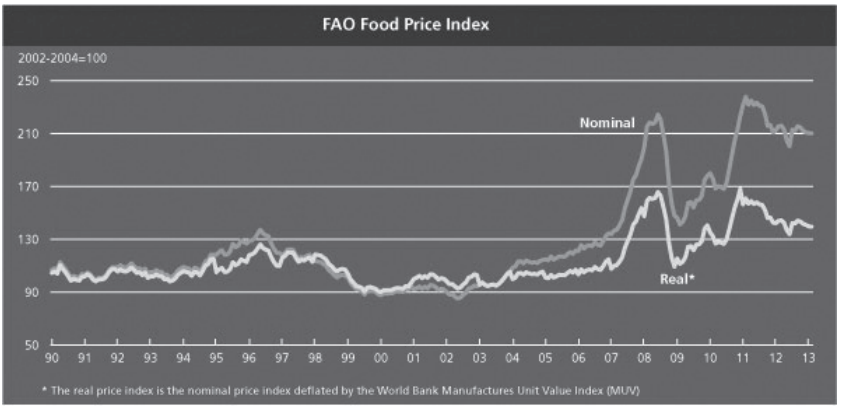

FIGURE 1 *FAO food price index*[12]

Global food prices fell after the 2008 spike, but soon thereafter began to rise. A second price spike occurred in 2011 (see Fig. 1). Following a drop in prices from that second peak, food prices have rallied and remained high since, as shown in the Food and Agriculture Organization Food Price Index above.[13] The rise of food prices is expected to continue in the decades to come.[14] Meanwhile, the World Resources Institute records that sustainable and consistent increases in per capita food production have been sustained over the last several decades.[15]

Trading in commodities has rapidly increased since the Commodity Futures Modernization Act was signed into law, which was also the Act that was one of the primary causes of the 2008 financial crisis. This Act deregulated commodity trading as the Commodity Futures Trading Commission no longer oversaw certain types of trades, including over-the-counter commodity trading. Investment in the food commodity market almost doubled between 2006 and 2011, and experienced a ten-fold increase since 2000.[16] The role of investors

by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, 2011).

12 Food and Agriculture Organization of the United Nations Food (FAO), 'Food Price Index', retrieved from http://www.fao.org/worldfoodsituation/wfs-home/foodpricesindex/en/ (2013). Reprinted with permission.

13 *Ibid*.

14 D. Willenbockel, *Exploring Food Price Scenarios Towards 2030 with a Global Multi-Region Model* (Oxford: Oxfam International, 2011).

15 World Resources Institute, 'Agricultural Indices: Food Production Per Capita Index', retrieved from http://earthtrends.wri.org/ (2011).

16 *Supra* note 9.

has contributed to increasingly volatile and unpredictable agricultural markets.[17]

Poverty tends to rise as the price of food rises, in particular in Africa and Asia, as a significant percentage of household income is spent on food and are therefore highly vulnerable to price fluctuations.[18] In Yemen, for example, 50-70% of household income is spent on food, with 97% of people reporting that they were not able to afford basic requirements.[19] The 50-70% of household income spent on food is not an extreme example, but is typical for the poorest consumers around the world.[20] The World Bank analysed the impact of food price spikes and estimated that the 2008 price spike kept or pushed 105 million people below the poverty line and another 48.6 million people during the 2011 price spike.[21] The FAO estimates that the 2008 spike increased the number of undernourished people by 173 million.[22]

In general, instability of food prices negatively impacts food security, on both the national and individual levels. Price increases erode purchasing power, and negatively impact consumption and nutrition, which push people into poverty and chronic food insecurity. Indirectly, these changes also negatively impact health, and in some cases led to increased criminal activity and decreased social cohesion.[23] Impacts do differ, however. Through the 2011 price spike, for example, maize prices declined in Zambia, while in Bangladesh, Indonesia and Kenya the price of staples, maize and/or rice, rose.[24] The general, and global, trend was rising prices for everything from important protein sources to vegetables and cooking oil.[25] Due to price increases and market volatility commodities speculators have the potential to earn large profits.

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17 Oxfam, *Not a Game: Speculation vs Food Security: Regulating Financial Markets to Grow a Better Future* (Oxford: Oxfam International, 2011).

18 High Level Panel of Experts (HLPE), *Price volatility and food security*, Report 1 (Rome: A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, 2011).

19 N. Hossain and M. Tadros, *The Social Impacts of Crisis in Yemeni Communities*, Research Summary (Brighton: Institute of Development Studies, 2010).

20 S. Fan, M. Torero and D. Headey, *Urgent Actions Needed to Prevent Reoccurring Food Crises*, Policy Brief 16 (Washington, DC: International Food Policy Research Institute, 2011).

21 World Bank, *Food Prices, Nutrition, and the Millennium Development Goals* (Washington, DC: World Bank, 2012).

22 *Supra* note 18.

23 *Supra* note 21.

24 N. Hossain and D. Green, *Living on a Spike: How Is the 2011 Food Price Crisis Affecting Poor People?* (Oxford: Oxfam International, 2011).

25 *Ibid*.

3 Cause of Food Price Spikes

There are many contributing factors as to why the price of food has risen and spiked. This includes negative impacts on yields, such as weather events,[26] hoarding and export bans. These, however, only explain short-term price impacts. The increased demand for food commodities is also linked to greater global demand for meat. While production costs have risen along with oil costs which in turn have affected the cost of fertilizers. Another important change in the market is the role of bio-fuels, and a push towards increased bio-fuels use, such as the European Union's target for renewable energy use in transport by 2020.[27] The role and impact of climate change is one long-term impact that will affect supply, and therefore prices, of food commodities.[28]

Impacts on supply in the short-term (weather events, hoarding and export bans) do contribute to the rise in prices, but do not explain long-term trends of price increase. Nor are these events specifically tied to the timing of spikes that occurred, and more importantly that did not occur. Changes in demand (e.g. bio-fuels and livestock feed) contribute to the long-term increase of prices, but do not account for the causes of the spikes that have occurred. Similarly, higher production costs may contribute to price increases over the long-term. A crude oil price spike coincided with the food spike, compounding that additional and input cost, but causation of the spike of oil and food prices seems to lie outside these two markets, as opposed to one rise causing the rise of the other. Climate change may impact the short-term, through greater frequency of extreme weather events, and in the long-term through environmental changes in crop producing regions.

The increase of investment in food commodities and the deregulation of the market have both short-term and long-term implications. Speculation is not the sole cause of the rise of prices and spikes, but is a significant contributing factor.[29] UNCTAD, amidst on-going debate of causation of price spikes, has asserted that speculation does play a significant role, stating: "the trend towards greater financialisation of commodity trading is likely to have increased the number and relative size of price changes that are unrelated to

26 *Supra* note 1.

27 European Commission, *Renewable Energies in the 21st Century: Building a More Sustainable Future COM 2006 848* (Brussels: Renewable Energy Road Map, Communication from the Commission to the Council and the European Parliament, 2007).

28 *Supra* note 1.

29 *Supra* note 18.

market fundamentals".[30] The United Nations Special Rapporteur on the right to food stated "a significant portion of the increases in price and volatility of essential food commodities can only be explained by the emergence of a speculative bubble".[31]

4 Futures Markets and Speculation

The futures market is an exchange that facilitates the standardized sale of a commodity for a set price at a specified time in the future. This approach of trade was developed as a result of the nature of agricultural production: it is unpredictable and varies with time. The risk that results was shifted onto investors, who would speculate prices and outputs. Risk was accepted by speculators, as that risk opened the potential for large profit.[32] As such, commodity speculation is described as having above average risk for above average return in the short-term. In the case of food commodities, speculators earn profit from the price difference between the drawing of the contract and market value upon contract expiry. Often speculators do not intend to receive the product being bought and sold, and therefore seek to transfer ownership prior to the expiry of the contract. During this process, a contract might be bought and sold many times before expiry.

The introduction of an array of non-traditional investors in the food commodity market has resulted in a number of important changes in the futures market for food commodities. One shift is the large expansion of speculators involved in the commodity markets, which has resulted in higher food prices and greater volatility.[33] Another change is the deregulation of markets, which has facilitated the entrance of new investors and investment approaches within the commodities market. In 2000 the Commodity Future Modernization Act deregulated commodity markets, which weakened limits and opened loopholes for unregulated speculation.[34] This coincides with the rally that began

30 United Nations Conference on Trade and Development (UNCTAD), *Trade and Development Report* (New York: United Nations, 2009) 61.

31 *Supra* note 8 at 1.

32 T. Kerckhoffs, R. van Os and M. Vander Stichele, *Financial Food: Financialisation and Financial Actors in Agriculture Commodity Markets* (Amsterdam: Centre for Research on Multinational Corporations (SOMO), 2010).

33 *Ibid.*

34 *Supra* note 9.

shortly thereafter, whereas stronger regulation in decades past was associated with relatively stable prices.

Speculation can cause price volatility.[35] Excessive speculation on futures may lead to "sudden or unreasonable fluctuations or unwarranted changes in the price of such commodity."[36] The "negative impacts of food price volatility are concentrated on producers and consumers in developing countries" and benefit a segment of speculators.[37] When a market is driven by speculation, as the food commodities market currently is, prices of goods are not determined by demand and supply of goods, rather by the value, and speculative value, of the future contracts. Greater speculative trading of this sort results in a rise of prices unrelated to supply and demand. Rapid rises and drops in prices can occur as a product of speculative trading, wherein prices are driven up or down due to investor involvement, not supply and demand, resulting in volatile markets.

As a significant contributor to global price spikes, speculative trading and futures markets require regulation so as to ensure stable prices based upon supply and demand dynamics. To regulate speculation the case of Islamic finance and the principles of Islamic jurisprudence is explored. Islamic finance is the conduct of finance in accordance with principles of *Sharīʿah* or Islamic law.

5 Islamic Prohibition of Food Commodity Speculation

In Islam gambling and games of chance are clearly prohibited.[38] *Gharar* is also prohibited in Islam. *Gharar* has been defined as 'danger',[39] 'risk'[40] and also a transaction equivalent to 'a zero-sum game with uncertain payoffs'.[41]

35 *Supra* note 7.

36 Commodities Exchange Act, 'Excessive Speculation', retrieved from http://www.law.cornell.edu/uscode/text/7/6a (2013).

37 *Supra* note 9.

38 Chapter 2, Verse 219.

39 W. Al-Zuhayli, *Financial Transactions in Islamic Jurisprudence*, M. El-Gamal, trans. vol. 1 (Damascus: Dār al-Fikr, 2003) 82.

40 M. El-Gamal, 'An Economic Explication of the Prohibition of Gharar in Classical Jurisprudence', in Proceedings of the 4th International Conference on Islamic Economics (Leicester, 2000) 2.

41 S. Al-Suwailem, 'Towards an Objective Measure of Gharar in Exchange', *Islamic Economic Studies* 7(1, 2) (1999 & 2000): 61-102.

Al-Zarqā'[42] defined a *gharar* sale as the sale of probable items whose existence or characteristics are not certain, due to the risky nature that makes it similar to gambling.[43] Excessive risk, uncertainty and any forms of gambling is thus prohibited in *Sharīʿah*. This can be seen from the Prophetic narrations and practice of the Prophet, where he forbade uncertain and risky transactions, for example concluding a sale with the throwing of a stone,[44] and transactions involving non-existent or not present items.[45]

Imām al-Nawawī regards it a fundamental principle for business transactions involving risk such as selling: runaway slaves; what is unknown; what is non-existent; what the seller is unable to supply; what the seller does not possess, fish in lots of water; milk that is in the udder; the foetus that is in the stomach, etc. All these transactions, according to him, are invalid as the result of *gharar*.[46] He further distinguishes between significant and insignificant risk. The latter, in his view, includes the selling of a house without having seen its foundation, based on the difficulty associated with this and because of the need for it. In this regard, he cites the scholarly consensus regarding the permissibility of insignificant risk such as selling an overcoat without having seen its stuffing, renting a house, animal or garment for a month even though the month could consist of twenty nine or thirty days. For this type of risk to be acceptable, the scholars have stipulated that the risk should be insignificant with there being a definite need for it and that it cannot be avoided except with great difficulty.[47]

Besides the aforementioned narrations that prohibit transactions involving risk in general, there are others that outline specific types of transactions which are prohibited:

> Jābir ibn ʿAbd Allāh narrated: The Prophet forbade *al-muḥāqalah*, *al-muzābanah* and *al-mukhābarah*. He also forbade *al-thunyā*, unless it was explicit [a known sum].[48]

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42 M. al-Zarqā', Al-Madkhal al-Fiqhi al-Am (vol. 1, p. 97) in W. Al-Zuhayli, (ed.), *Financial Transactions in Islamic Jurisprudence*, M. El-Gamal, trans. vol. 1 (Damascus: Dār al-Fikr, 2003:83).

43 *Supra* note 39 at 83.

44 M. al-Ḥajjāj, *Ṣaḥīḥ Muslim*, N. al-Fāryābī, ed., vol. 2 (Riyadh: Dār Ṭayyibah, 2006) 707.

45 S. Razali, 'The Dominance Entry of the Principles of Gharar in Electronic Contracts', *Arab Law Quarterly* 23 (2009): 207-216.

46 Y. al-Nawawī, *Ṣaḥīḥ Muslim bi Sharḥ al-Nawawī*, vol. 4 (Cairo: al-Maṭbaʿah al-Miṣriyyah, 1929) 156.

47 *Ibid*.

48 A. al-Nasā'ī, *Sunan al-Nasā'ī*, ʿA.-F. Abū Ghuddah, ed. vol. 7 (Aleppo: Maktab al-Maṭbūʿāt al-Islāmiyyah, 1994) 296; M. al-Tirmidhī, *al-Jāmiʿ al-Kabīr*, B. Maʿrūf, ed. vol. 2 (Beirut: Dār al-Gharb al-Islāmī, 1984) 296; Al-Tirmidhī, graded it as authentic.

> Jābir ibn ʿAbd Allāh narrated: "The Messenger of Allāh forbade *al-muḥāqalah, al-muzābanah, al-muʿāwamah* and *al-mukhābarah*—one of them said: selling years ahead is *al-muʿāwamah*—and exemption of something unspecified, but he granted a concession with regard to *al-ʿarāyā*".[49]
>
> Anas narrated: "Allāh's Messenger forbade *al-muḥāqalah, al-mukhāḍarah, al-mulāmasah, al-munābadhah* and *al-muzābanah*".[50]

Whereas *al-muḥāqalah*[51] is the selling of unharvested grain in the field for already harvested grain, *al-muzābanah* is the exchange of fresh dates that are still on the tree for dry (picked) dates by measure,[52] and *al-mukhābarah* is the rent of unused land to a farmer who spends on it and cultivates it and the owner takes a part of the produce in return.[53] What is forbidden in this narration is the specified yield of a certain portion of the land belonging to the owner, while agreed-upon percentages are permissible. *Al-mukhāḍarah* is the buying of a crop before its reaching fruition, and before it is ready for harvest.[54] *Al-mulāmasah* is when each person touches the garment of the other without examining it further. *Al-munābadhah* is when each person throws his

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49 M. al-Ḥajjāj, *Ṣaḥīḥ Muslim*, N. al-Fāryābī, ed., vol. 2 (Riyadh: Dār Ṭayyibah, 2006) 721. *ʿArāyā* refers to the produce of one or two date palms that is assigned to a household in return for an estimated measure of dry dates, so that they can eat fresh dates. See M. al-Ḥajjāj, *Ṣaḥīḥ Muslim*, N. al-Khattāb, trans., vol. 4 (Riyadh: Darussalam, 2007) 242.

50 M. al-Bukhārī, *al-Jāmiʿ al-Ṣaḥīḥ*, M. al-Nāṣir, ed. vol. 3 (Beirut: Dār Ṭūq al-Najāt, 1422 AH) 78.

51 This is one of the explanations of *al-muḥāqalah* provided by Jābir ibn ʿAbd Allāh. The version of Abū Saʿīd al-Khudrī states that *al-muḥāqalah* is the leasing out of land. See M. al-Ḥajjāj, *Ṣaḥīḥ Muslim*, N. al-Khattāb, trans., vol. 4 (Riyadh: Darussalam, 2007) 249, 256.

52 According to the sub-narrator, ʿAṭāʾ ibn Abī Rabāḥ, this is the explanation of the Companion Jābir ibn ʿAbd Allāh. See al-Ḥajjāj, *Ṣaḥīḥ Muslim*, vol. 4, *ibid*., 249. In one version ʿAbd Allāh ibn ʿUmar explains *al-muzābanah* as the selling of ungathered dates from one's garden for measured dried dates; or fresh ungathered grapes for measured dried grapes; or standing crops for measured quantity of foodstuff. In another version he states that *al-muzābanah* means selling what is up on the palm trees for dried dates of a specific amount (by saying), "If there is more, then it is mine, and if there is less, I owe you." In a third version he states that it means selling any kind of produce for an estimated measure of the same kind of produce. See M. al-Bukhārī, *Ṣaḥīḥ al-Bukhārī*, M. Khan, trans. vol. 3 (Riyadh: Darussalam, 1997) 226; M. al-Ḥajjāj, *Ṣaḥīḥ Muslim*, N. al-Khattāb, trans. vol. 4 (Riyadh: Darussalam, 2007) 245.

53 Y. al-Nawawī, *Ṣaḥīḥ Muslim bi Sharḥ al-Nawawī*, vol. 10 (Cairo: al-Maṭbaʿah al-Miṣriyyah, 1929) 193.

54 A. al-ʿAsqalānī, *Fatḥ al-Bārī bi Sharḥ Ṣaḥīḥ al-Imām Abī ʿAbd Allāh al-Bukhārī*, ʿA-Q Shaybat al-Ḥamd, ed. vol. 4 (Riyadh, 2001) 472.

garment to the other, and neither of them examines the garment of the other.[55] *Al-thunyā* is the sale of a crop yet to be harvested at a set price, while the owner will retain some, which is forbidden as the amount is not clearly set. If the amount is set, this transaction is permissible.

These narrations indicate that buying and selling that is based upon unharvested crop, unrealized yield, uncertainty or unknown future gains, is not permissible. This is the position of the majority of scholars,[56] while some clarifications on certain areas of trading non-existent goods and barring trade due to uncertainty have been made.[57] In contemporary terminology we call this speculative trading, with regard to food this form of trade largely takes place within the futures market for commodities. Excessive risk taking and speculation is forbidden in Islam. It is for this reason that the majority of scholars in Islamic finance have not approved futures use in Islamic capital markets.[58] A lesson could be learnt from Islamic jurisprudence and transferred to modern day capital markets.[59] That is, regulation of excessive risk taking is needed to prevent excessive speculation and in turn to prevent spikes in food prices.

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55 This is the explanation of Abū Hurayrah for these two terms. See M. al-Ḥajjāj, *Ṣaḥīḥ Muslim*, N. al-Khattāb, trans., vol. 4 (Riyadh: Darussalam, 2007) 215.

56 H. M. Kamali, 'Uncertainty and Risk-Taking (Gharar) in Islamic Law', in Proceedings of the International Conference on Takaful Insurance (Kuala Lumpur, 1999).

57 M. El-Gamal, 'An Economic Explication of the Prohibition of Gharar in Classical Jurisprudence', in Proceedings of the 4th International Conference on Islamic Economics (Leicester, 2000:2); M. Zahraa and S. Mahmor, 'The Validity of Contracts When the Goods Are Not Yet in Existence in the Islamic Law of Sale of Goods', *Arab Law Quarterly* 17(4) (2002): 379-397.

58 U. Chapra, 'The Role of the Stock Exchange in an Islamic Economy: Comments', *Journal of Research in Islamic Economics* 3(1) (1985): 75-81; A. Khan, 'Commodity Exchange and Stock Exchange in Islamic Economy', *The American Journal of Islamic Social Sciences* 5(1) (1988): 91-114; M. Khan, 'Islamic Futures Markets as a Means for Mobilizing Resources for Development', in A. Ausaf and T. Khan (eds.), *Islamic Financial Instruments for Public Sector Resource Mobilization* (Jeddah: IRTI, 1997) 133-161; M. Obaidullah, 'Financial Engineering with Islamic Options', *Islamic Economic Studies* 6(1) (1998): 73-103; M. Obaidullah, 'Financial Options in Islamic Contracts: Potential Tools of Risk Management', *Journal of the King Abdulaziz University* (Islamic Economics) 11 (1999): 3-26; M. Obaidullah, 'Financial Contracting in Currency Markets: An Islamic Evaluation', *International Journal of Islamic Financial Services*, Retrieved from http://islamic-finance.net/journals/journal11/obaidvol3no3.pdf (2001); S. Naughton and T. Naughton, 'Religion, Ethics and Stock Trading: The Case of an Islamic Equities Market', *Journal of Business Ethics* 23 (2000): 145-159; R. Wilson, 'Islamic Financial Instruments', *Arab Law Quarterly* 6 (1991): 205-214.

59 S. Kunhibava and B. Shanmugam, 'Shariah and Conventional Law Objections to Derivatives: A Comparison', *Arab Law Quarterly* 24 (2010): 319-360.

Many suggestions for reform, and stabilization of the market and therefore food prices, are related to the need for greater regulation.[60]

Futures markets developed in response to a need, in order to reduce the risk faced by farmers, for example due to variation in crop prices from year to year. In the case that speculation is regulated as prescribed by Islam, there remains a challenge faced by farmers that requires addressing. Although more research must be done in this realm, one alternative to futures markets, which reduces risk burdens of farmers, is that of collective, or shared, responsibility, known as *takāful*.

Takāful is the guaranteeing of one another in order to protect against defined loss or damage, and in this case the potential of low yield. This practice was done during the time of Prophet Muhammad, and has continued for the last fourteen centuries.[61] *Takāful* is derived from the Qurʾān: "and help one another is righteousness and piety and do not help one another in evil deeds and enmity".[62]

The key principles of *takāful* are *taʿāwun*, which means mutual help or cooperation and solidarity, and *ʿāqilah*, which means trusteeship and brotherhood. The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) defines *takāful* as:

> an agreement by a group of people to cover losses arising from specific risks to which they are exposed. This is done through subscriptions on the basis of binding pledges to make donations. This will result in the formation of a fund that will be treated as a legal entity with independent financial responsibility. [The fund] will compensate any participant for loss suffered due to the occurrence of any insured risk, in accord with the guidelines and rules of the insurance policy.[63]

60 High Level Panel of Experts (HLPE), *Price volatility and food security*, Report 1 (Rome: A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, 2011); O. De Schutter, 'Food Commodities Speculation and Food Price Crisis', United Nations Special Rapporteur on the Right to Food, Briefing Note 02 (2010); T. Kerckhoffs, R. van Os and M. Vander Stichele, *Financial Food: Financialisation and Financial Actors in Agriculture Commodity Markets* (Amsterdam: Centre for Research on Multinational Corporations (SOMO), 2010).

61 O. Fisher and D. Taylor, 'Prospects for Evolution of Takaful in the 21st Century', retrieved from http://www.takaful.com.sa/m4sub3.asp (2000).

62 Chapter 5, Verse 2.

63 Accounting and Auditing of Islamic Financial Institutions (AAOIFI), *Sharīʿah Standards* (Bahrain: AAOIFI, 2008). *Sharīʿah* Standard No. 26.

Thus *takāful* is a system whereby participants contribute to a common fund and intend to jointly guarantee each other. The development of *takāful* for farmers would be similar to the operation of cooperatives, whereby loss is protected through the paying of dues by all and the collective financial protection by distributing those funds. This does not, for the farmer, represent a major shift, from the contracting process within the futures market. However, rather than have external actors deal in the sale and re-sale of that risk, the farmers collectively manage risk. In this way, a greater degree of profits are retained by farmers, while still maintaining protection from risk. Further, with the absence of speculative activity unnecessary risk taking behaviour will be reduced and volatile food price hikes will be contained.

6 Improving Business Policy and Practice

Other reforms suggest the need for greater, and more inclusive, business ethics and corporate responsibility. Some, such as the World Bank,[64] tend to focus on national responses to ensure food security, which might take the form of expanding production, safety nets, increasing agricultural productivity and policy, without much attention given to the international influences of price spikes. Other reform suggestions include: food prices ought to encapsulate the cost of externalities, which will push for improvement in production, procurement, and transportation systems[65] and the creation of a global grain reserve to protect against emergencies.[66]

One of the short-term causes of price spikes is that of hoarding goods for the sake of seeking higher prices.[67] In this case, a person knows that during a certain time the market price of a good is low so they may keep those goods off the market until there is a shortage, and then selling them for a high price at a later date. There is, it ought to be clarified, an important difference between hoarding and risk mitigation. The Qur'ān, in chapter 12, gives the example of

64 *Supra* note 21.

65 High Level Panel of Experts (HLPE), *Price volatility and food security*, Report 1 (Rome: A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, 2011).

66 S. Fan, M. Torero and D. Headey, *Urgent Actions Needed to Prevent Reoccurring Food Crises*, Policy Brief 16 (Washington, DC: International Food Policy Research Institute, 2011).

67 International Food Policy and Research Institute (IFPRI), *High Food Prices: The What, Who, and How of Proposed Policy Actions* (Washington: International Food Policy and Research Institute, 2008); P. Wahl, *Food Speculation: The Main Factor of the Price Bubble in 2008* (Berlin, World Economy, Ecology & Development, 2009).

Prophet Yūsuf who filled the grain stores in preparation for, and protection against, the low yields he foretold in the years to follow. This case is different in that the intention is to ensure that the people have sufficient goods, whereas the intention of the other is to hide needed goods to secure high prices. The hiding and hoarding of goods is not permitted, as is shown in the report of Maʿmar ibn ʿAbd Allāh who narrated that Allāh's Messenger said: "None withholds goods till the price rises but a sinner".[68]

On one occasion the Prophet was asked what type of earning was the best, one of the answers given included: "Every business transaction which is truly and honestly executed", recorded by al-Bazzār.[69] That acts as an encouragement, while the following Prophetic narration has legal implications: ʿIbn ʿUmar narrated: A man told Allāh's Messenger that he was being deceived in business transactions, and he replied: "When you make a purchase say 'Deceiving is not allowed'".[70]

Deception and cheating, however, are not limited to stealing and the like. It also includes purposely not disclosing all the information regarding a certain product. Not doing so, is also considered a form of deception and is not permitted. The following Prophetic narration provides a concrete example of this: Abū Hurayrah narrated:

> Allāh's Messenger once came upon a heap of grain, and when he put his hand inside it, his fingers felt dampness. He asked: "What is this, O' owner of the grain?" He replied: "Rain had fallen on it, O' Allāh's Messenger". He said: "Why did you not put it on the top of the foodstuff so that people might see it? Whoever cheats has nothing to do with me."[71]

The commodities market is largely controlled by a few key players, who may signal to other players in the market their price expectations. This in turn may lead to rallies in prices. Doing so for the purpose of rallying prices, rather than a reflection of the actual market, is a form of deception that is not acceptable in both the Islamic and contemporary legal realms. Both systems advocate that monitoring should be made more rigorous and investigations made when data indicates that volatility is incited for the purpose of profiteering.

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68 *Supra* note 44, at 754.

69 A. al-Bazzār, *Musnad al-Bazzār*, M.-R. Zayn Allāh, ed. vol. 9 (Medina: Maktabat al-ʿUlūm wa al-Hikam, 1997) 183.

70 M. al-Bukhārī, *al-Jāmiʿ al-Ṣaḥīḥ*, M. al-Nāṣir, ed. vol. 3 (Beirut: Dār Ṭūq al-Najāt, 1422 AH) 65; M. al-Ḥajjāj, *Ṣaḥīḥ Muslim*, N. al-Fāryābī, ed., vol. 2 (Riyadh: Dār Ṭayyibah, 2006) 713.

71 *Supra* note 44, at 58.

Another in the realm of ethics clarified within the Islamic framework, which is inclusive of business, is that of ensuring that oppression, or injustice, is prevented. This is quite similar to a do-no-harm approach, whereby actions should be analysed before engagement in order to do no harm, as opposed to outweigh the good with the harm. Although the do-no-harm model is difficult to put into practice, as the term harm is vague and subjective, the prevention of oppression and injustice, as understood within the Islamic framework, can operate within the realm of asserting, and not violating the rights of individuals. 'Abū Dharr al-Ghifārī narrated from the Prophet, from that which he narrated from his Lord, that He [God] said: "My slaves, I have forbidden injustice to Myself and have forbidden it between you, so do not wrong one another"'.[72]

Al-Ẓulm, translated above as injustice, has often been explained as putting things in other than their correct places. Injustice has been made completely forbidden for all believers, and in the context of being done to others is mentioned in the following Prophetic narration 'Imām Aḥmad recorded that the Prophet said, during the Farewell Pilgrimage: "Listen to me and you live: Do not wrong! Do not wrong! Do not wrong!"'[73]

The prevention of doing injustice as a circumventive measure applies to a number of potential causes of price spikes, including: speculation, hoarding and agricultural investment that forcibly relocates people from their land and livelihood. Research needs to be done with regard to each specific practice and no generalized formulas can be made with regard to what types of action ought to be banned as they result in, or create, injustice. Rather, this is a call to reinvigorate the ethical component within business and a push for reflection on the current operational processes as they relate to deception and injustice. This ought not be restricted to the realm of corporate social responsibility, but also include reform in the legal arena, which would ensure that changes are monitored and enforced. A functioning system that fosters a more ethical business environment will contribute towards the prevention of millions being pushed into hunger as a result of the actions of a few.

7 Conclusion

The rise in the price of food and price spikes is multifaceted and complex. This article aimed to examine some of the contributing factors, and particularly

72 *Supra* note 44, at 1198.

73 A. Ḥanbal, *Musnad Aḥmad ibn Ḥanbal*, A. 'Abd al-Karīm, ed. vol. 9 (Cairo: Jam'iyyah al-Maknaz al-Islāmī, 2008) 4796.

the role of speculation, from a global and Islamic perspective. Although speculation is not the only factor involved in price spikes, it is clear that this process plays a significant role in affecting food prices. The impact of rising food prices and price spikes has devastating impacts upon hundreds of millions of people, who are living below, or near, the poverty line. For the poorest of the global community, on-going food insecurity is worsened as vulnerability to price shifts is high and capacity to adapt to these changes is low.

The Islamic framework outlines that certain types of speculation, which contribute to price spikes, ought to not be allowed as those transactions are trading goods that are not in existence and based entirely on uncertainty. Furthermore, some of the practices that push prices are considered unlawful, such as deception in the market and the creation or outcome of injustice as a means to increase profitability. It is recommended that an alternative to futures markets should be explored, this research recommends *takāful* as an alternative. In *takāful* risks are mitigated unlike in the futures markets where risks are often created through speculative trading.

The recommendations that may be derived from this analysis will not address all the causes of price increases and spikes. Rather, it addresses one piece of the puzzle that may contribute to the prevention, or improved management, of prices and spikes. Other areas that can be investigated from the framework of Islam as it relates to the topic are the creation of grain stores and social safety nets. The legality of export bans and parameters of stores versus hoarding also require additional research. Improved agricultural performance, more rigorous monitoring and enhanced regulation are recommendations suggested by most commentators, and this too is encouraged and supported by the Islamic framework.