Global Forum on Competition

COMPETITION AND COMMODITY PRICE VOLATILITY

Background Note

-- Session I --

This background note is circulated under Session I of the Global Forum on Competition to be held on 16 and 17 February 2012.
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COMPETITION AND COMMODITY PRICE VOLATILITY

-- Background Note *--

Executive Summary

Governments give particular attention to commodities markets. Many food and agriculture commodities are essential goods and consumers would be unable to survive without access to affordable food staple commodities. In many parts of the world, basic cooking and heating fuel can also be a necessity.

Mineral commodities, too, gain government attention. The grant of exploration and exploitation rights over mineral deposits is particularly important for countries that rely on selling mineral products or who rely on cheap raw material inputs as a key source of comparative advantage upon which to build a diverse economy.

From 2008 and continuing, there have been significant increases in commodities prices and then large and unpredictable movements in commodities prices. These movements have been the combined result of a range of short and long run factors, some of which are likely to be permanent or recurring.

“[H]arvests have been endangered by floods in Pakistan and Australia, fires in Russia and drought in Latin America and China. In addition, geopolitical conflicts and popular uprisings in certain mainly oil-producing Arab countries explain the bulk of the problems to be seen on the oil market.”

“With respect to demand, the strain is also at its utmost. Consumption – whether of energy or other commodities – is being driven by the exponential growth of the emerging countries.”

Every significant commodity price movement causes concern for either producers or consumers of commodities and large unpredictable movements, in rapid succession, in both directions (i.e. high levels of volatility) can cause significant concerns for both sides of the market simultaneously. An immediate response is often to attribute the problems arising from price movements to speculation within the market but speculation is much more likely to be a symptom of a demand or supply problem, or even a partial solution to such a problem, rather than a cause.

As discussed in this paper, competition law enforcement and advocacy by competition authorities over a sustained period of years can assist commodities markets to provide sustainable livelihoods for producers, and deliver products affordably to consumers. Removing competitive impediments within markets can also assist producers, processors and consumers to cope as flexibly and quickly as possible to price shocks.

Competition problems in relation to production usually involve government policies rather than breaches of the law by commercial actors because the production of most commodities is highly competitive. However, in upstream markets (e.g. the supply of fertiliser) and downstream markets (e.g. the processing of commodities) there are often smaller numbers of market participants and in concentrated markets, breaches of competition law are typically much more common. Multiple competition problems at successive levels of the production and processing of commodities are particularly damaging to economic performance.

Often, however, competition authorities will be required to act much more quickly.

When prices move significantly in a short period, governments often decide that competition policy alone will not deliver a solution quickly enough if the price movements are considered to be too much for producers or consumers to bear.

* This note was prepared by Nicolas Taylor and Michal Petr, OECD Competition Division Secretariat.

There are many different forms that government action can take and in some cases the policies can unwittingly impede competition and lead to significant longer term harm. Therefore, many competition authorities have been involved in advocacy with other parts of government to help select between different policy options (or dissuading government from acting if all the options are damaging) and putting in place a future path for the period following the price shock, to enable the markets to become self correcting in the future.

Following a more detailed discussion of all of the above topics, this paper concludes with some suggestions for competition authorities to discuss at the OECD’s 2012 Global Forum on Competition concerning the constructive roles that they can play in assisting their societies cope with the challenges of unpredictable and significant commodity price movements.

1. Introduction

1. Commodities are any bulk, homogeneous (i.e. uniform) products. Almost all commodities are unprocessed primary products, or products that have had only an initial level of processing, including: (i) bulk agricultural products such as rice or wheat; and (ii) minerals such as iron ore, bauxite or coal.

2. Also included are products that have only received a very limited amount of processing such as flour milled from wheat or aluminium after bauxite has undergone processing. Other products such as milk, wool and timber are also commoditised products that have usually undergone a limited level of processing by the time they are widely traded in bulk.

3. To facilitate the discussion by the Global Forum on Competition on 16 February 2012, this paper provides an overview of the history of price movements in agricultural and mineral commodities markets and their apparent causes. It also identifies the nature of government and private sector impediments to the efficient working of markets. The paper then discusses the different policies that governments often use to address crises in commodities markets and finally an analysis is suggested on how the competition authorities can assist in achieving the best possible long run and short run outcomes for the producing and consuming sectors of their communities.

4. Following the discussion at the Forum, the OECD proposes to distil and publish these suggested proactive and reactive strategies.

5. This paper is structured as follows:

- Section 2 provides an analysis of price movements in agricultural commodities and mineral commodities over shorter and longer time frames and the causes of these movements;

- Section 3 addresses a number of conceptual issues concerning commodities markets including the importance of storage and inter-regional trade, implications for competition law and policy from the characteristics of the supply chain in commodities markets, role of speculation in commodities markets and the interaction between competition policy and trade policy;

- Section 4 sets out the various competition law enforcement and advocacy initiatives that competition authorities have taken; and

- The conclusion in Section 5 sets out a number of suggestions for discussion on the most constructive roles that competition authorities can play in assisting their societies cope with the challenges of unpredictable and significant commodity price movements.
2. Commodity price movements and their causes

2.1 Agricultural and food commodity prices and price volatility

6. International food and agricultural commodity price peaked in about 2008. Following the peaks, prices tended to remain higher than in the recent past and price levels have been volatile. At their summit in November 2010, G20 leaders requested OECD and other international institutions develop options for G20 consideration on how to better mitigate and manage the risks associated with the agricultural price volatility, without distorting market behaviour and ultimately to protect the most vulnerable. Following this, “Price Volatility in Food and Agricultural Markets: Policy Responses” (the “Report”) was published in June 2011.

7. The Report explains that “volatility” refers to large variations in prices over time. The technical definition of the term, based on statistical methodology, is put forward in Annex A to the Report. However, the term is more often associated with a vernacular concept in which the community demands action over extreme peaks resulting in consumers suffering or price collapses that significantly reduce rural incomes.

8. As shown in Figure 1 (updated from the Report), the period since 2006 has been one of extraordinary volatility. Prices rose sharply in 2006 and 2007, peaking in the second half of 2007 for some products and in the first half of 2008 for others; for some products the run-up between the average of 2005 and the peak was several hundred percent. Prices then fell sharply in the second half of 2008, although they remained above the levels in the period just before the run-up began. Tensions re-emerged during 2010 and by early 2011, the FAO food price index was again at the level it had peaked in 2008.

Figure 1. Monthly Agricultural Commodity Price Indices (2002-04=100)

Source: FAO Monthly Prices

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2 FAO, IFAD, IMF, UNCTAD, WFP, the World Bank, the WRO, IFPRI and the UN HLTF.

3 A link to the Report can be found on the website for the OECD’s 2012 Global Forum on Competition www.oecd.org/competition/globalforum.
9. The Report’s primarily policy concern is with variations in prices that are large and *which cannot be anticipated* by producers, consumers and governments. Price volatility is of particular concern when it induces excessive risk adverse behaviour that leads to inefficient investment decisions, such as the hoarding of food commodity stocks. Such hoarded stocks may not be made available for consumption during a price increase and, worse, may degrade in quality such that even in the long run this quantity is permanently removed from circulation. By contrast, prices moving along a smooth and well-established trend reflecting market fundamentals or a predictable seasonal pattern do not pose the same problem.

10. Taking a longer term perspective (see Figure 2 below), there is no evidence suggesting that the volatility in international agricultural commodity prices is increasing but it has been higher during the decade since 2000 than during the 1980’s and 1990’s.

![Figure 2. Agricultural Commodity Prices in Real Terms (2005=100)](image)

*Source:* IMF eLibrary - Data, except for rice: OECD Secretariat.

11. The Report explains why agricultural commodity markets have long been volatile:

- agricultural output varies from period to period because of natural shocks such as weather and pests;
- demand and supply are not very price elastic, at least in the short run; in order to get supply and demand back into balance after a supply shock, prices therefore have to vary strongly in order to stimulate more supply or change the pattern of demand; and
- the lagged supply response to price changes can cause cyclical adjustments that add an extra degree of variability to the markets concerned.
12. The trends described above relate to international prices. Both price levels and degrees of volatility may differ significantly from place to place at any given time. The extent to which global prices are transmitted to domestic markets depends on how strongly integrated the latter are with the former. Both trade policies (such as import duties or export bans) and market structure influence the extent to which price changes in domestic markets mirror those in international markets. This is a key issue for competition authorities which will be a focus of discussion below and during the discussions at the Global Forum on Competition.

13. The Report identifies several key determinants of the underlying level of food prices and of food price volatility:

- By 2050, world population is expected to have reached 9 billion and income in emerging and developing countries to have grown significantly, thus increasing the demand for food by 70% to 100%.
- At least in OECD countries, the production of biofuels has been largely driven by government support policies and the Report recommended that governments should remove provisions of current national policies that subsidize or require the production or use of biofuels. Even so, a further significant growth in demand is expected.4
- Whether it is due to crops being substituted between food and biofuel, or because petroleum products are direct and indirect inputs into agricultural production, volatility in agricultural commodity prices has become increasingly correlated with volatility in oil prices.
- It is also believed that climate change will lead to more frequent extreme events such as droughts, heat waves and floods, endangering harvest in effected regions.
- Low stocks relative to use, and uncertainty about stock levels in some parts of the world, are likely to contribute to volatility (as is believed to have happened during the 2007/2008).

14. The Report found that during 2007–2008, some government policy measures (in particular export restrictions and commodity hoarding) contributed to increasing the amplitude of price movements and in some cases provoking price increases that were otherwise inexplicable in terms of the market fundamentals; additionally, private and public actors, responding to general nervousness of the markets or for speculative reasons, engaged in hoarding or precipitated purchases.

15. The Report concludes that even though the extent of potential future increases in prices and volatility cannot be estimated accurately, the likelihood of higher real prices and increased volatility in the future is significant. It therefore puts forward a set of policy recommendations on both reducing the future price volatility and mitigating its consequences.

16. It notes that deeper integration of global and regional markets, better defined safeguard mechanisms and improvements in the competitive environment may bring increased trade volume and more suppliers and buyers to markets that are currently very shallow. Since the greatest potential for increasing supply rests with developing countries, investment in increasing the productivity and resilience of agriculture in these countries is indispensable.

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2.2 **Mineral commodity prices and price volatility**

17. There are some similarities between agricultural and mineral commodities. Both sets of commodities are globally traded yet have distinct localised price movements. At both geographic levels, short term supply and demand inelasticity causes short run price movements to be very large.

18. Nevertheless, there are some distinct characteristics of agricultural markets and mineral markets. For example, agricultural commodities markets are influenced in the short term by supply side shocks induced by both predictable and unpredictable weather patterns. By contrast medium term price movements in mineral commodities markets tend to be correlated with the health of the global economy – when it grows, so does the demand and likewise the prices.

19. Figure 3 below drawn from the contribution of Professor Lagos\(^5\) illustrates the recent trends in the four significant mineral commodities and the IMF’s Metals Price Index.

*Figure 3. Metal Commodity Current Prices (2002-04=100)*

Source: UNCTADstat, World databank, IMF per Prof G. Lagos

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\(^5\) DAF/COMP/GF(2012)4
20. Professor Lagos considers that the principal causes of price levels and volatility in minerals markets are:

- variation of fundamental forces of the market, namely supply, demand, and stocks of physical metal but the details of these factors vary from one commodity to another:
  - the costs of transport, for example, is one key long run determinant of iron prices;
  - the cost of energy and governmental environmental policies are key long run determinants of aluminium prices;
  - the aggregate level of industrial production and construction are key determinants of the prices of iron, aluminium and copper and in recent times the boom in industrial production and construction in China has been particularly important; and
  - the fundamental drivers for gold are quite different because it is used almost wholly for jewellery (50%), technological uses (38%) and investment (12%) each of which have their own market cycles;
- financial trading affects price levels and volatility, principally (but not solely) by bringing forward anticipated price rises (or falls) due to physical supply and demand factors; and
- changes in the value of the US dollar, because that is the predominant currency in which these commodities are traded – even purchases and sales between other countries.

21. Professor Lagos’ paper also contains detailed statistics about the levels of price volatility in metals in five year bands since 1970. This longer term analysis shows that the recent price volatility is similar to that which existed prior to the 1990’s although iron ore appears to have been more strongly affected in the recent bout of volatility while other metals were more strongly affected previously.

Figure 4. Metal Commodity Constant U.S. Dec-2010 Prices (2005-12=100)

Source: UNCTADstat, World databank, IMF. Deflactor: U.S. Producer Price Index-Commodities (All Commodities) per Prof G. Lagos.
22. Finally, Professor Lagos has provided a commentary on the economy wide challenges and possible strategies that governments can adopt when a country depends significantly on a particular mineral commodity that has a volatile price.

3. **Conceptual Framework**

23. This section of the paper discusses how four areas of analysis are relevant to competition authorities when undertaking their work in relation to commodities markets:

- commodity market outcomes are strongly linked to the performance of related markets for the transport and storage of commodities and these related markets therefore deserve close attention from competition authorities;
- an examination of the production chain in which commodities markets illustrates that there are vastly different levels of concentration at different levels of the production process which implies that any competition problems related to commodities markets are more likely to arise where concentrated ‘bottle-necks’ are apparent;
- whenever there are large price movements, speculation is suggested to be the cause and in some cases this suggestion is framed as a competition concern. The analysis of exchange markets and speculation suggests that concerns about speculation may often be misplaced but that there are some specific areas in which there may be a role for intervention; and
- the distinction between, and complementarity of, competition policy and international trade policy.

3.1 **The Importance of Storage and Transport to Commodity Market Outcomes**

24. Although every food commodity is different, in general:

- If prices rise, consumers of any good will usually try to consume less. Compared with many other goods (like houses or refrigerators), however, consumers have very little short term flexibility – each day they have to eat so each week they have to buy; and
- If prices rise, producers try to supply more. For some other goods producers can significantly increase production by paying workers overtime and running their machines longer. However, food commodities producers cannot usually make significant changes until the next spring.

25. The demand and supply of mineral commodities are somewhat more flexible but not much: customers cannot usually switch to other materials and mines take years to be expanded. In other words, in both agricultural and mineral commodity markets, demand and supply are both *inelastic* in the short term and this can be represented graphically by *steep* supply-demand curves.

26. Putting the supply and demand curves together in a market we can identify what would be the current price in a freely traded market on the price axis of the graph. The importance of the inelastic nature of supply and demand is apparent on the graph on the right hand side – if there is a drought and the crop size is halved, prices in the wheat market rise a great deal.
27. There are two fundamental improvements that can be made to this situation. The first is to introduce the possibility for storage. The effect of storage is that it significantly increases the flexibility of the market. In periods of abundance, the operator of the storage facility will purchase commodities so the price will not fall so low. In periods of shortage, the operator of the storage facility will make additional stocks available above the amount produced that season.

28. Consequently, supply will be more responsive and the depicted supply curve will be flatter (see the left hand graph below). Of course all storage has limits and eventually it will be exhausted and the curve will again become steep towards the top. The importance can be seen with the previous example in which there is a drought and half of the crop fails. It can be seen that a much smaller price rise occurs with storage even though demand is still inflexible (see the right hand diagram below).

29. Although it is not specifically depicted in the graphs above, the same type of improvement can be achieved if there is more flexibility on the demand side too – for example if the consumer has a traditional means of preserving food or preserving jars, the consumers have refrigerators or if canning companies supply tinned food that the consumer can store.

30. In section 4.8 this paper discusses the experience with the government acquiring and holding strategic stocks of food commodities to try and limit price movements that are considered undesirable. The experience with these policies is that they can be very costly and are rarely very successful. Somewhat
more successful has been the investment by the government in smaller emergency stocks that governments use to directly feed the most vulnerable consumers rather than over-all market prices but rather to be.

31. However, governments and competition authorities can, and historically have, devoted a great deal of policy attention to improving the working of the markets for the provision of storage by commercial organisations. Enabling or facilitating market participants such as co-operatives of farmers to invest in storage, and preventing dominant players from abusing their position in relation to storage can significantly improve commodity market outcomes.

32. The second important way to improve outcomes concerning price volatility arises from interregional trade. The principal advantage of trading is to take advantage of the comparative advantages of different geographic areas. For example, flat plains may be well suited to wheat production while steep rocky terrain may reasonably usable for sheep grazing but difficult to grow grain. In these circumstances, it would be a waste of effort to grow wheat on the hilly terrain and a waste of flat-land to graze sheep. The populations in both regions can benefit through specialising in one agricultural product and trading with each other. However, for the purposes of this discussion, another important role of interregional trade is relevant which relates directly to price volatility.6

33. To illustrate this secondary role of interregional trade, the left hand diagram below shows a highly simplified case of two regions in which neither region has any enduring comparative advantage. The grey lines show the markets in each region without permitting trade and the dark lines show the combined market when trade is permitted between the two regions. Note that in normal times, the price will not be different. At every point along the dark curves, double the quantity appears for any given level of price because two equally sized regions have been linked together. However, an important difference is that by combining the regions, the curves are flatter.

Figure 7. Role of International Trade on Commodities Supply & Demand

Source: OECD

34. Why is this important? The answer can be seen in the diagram of the right hand side. Imagine, once again, that there is a drought and a failure of half the wheat crop in one region (the other region in this hypothetical case is located well away with a different weather pattern). The effect is that the price rise will be a lot less than in an isolated market without trade. The much smaller price increase can be seen by comparing the different sizes of the two up-arrows on the pricing axis.

6 A third reason why trade can be beneficial is that it can provide a source of competition that does not exist (or in the case of small economies sometimes cannot exist) domestically. This is discussed separately below.
35. Although there are net gains for the combined regions, note that not everyone wins from trade all the time. In particular, the consumers in the exporting region suffer a price increase (albeit comparatively modest) even though their own region is not suffering any drought. Similarly, the producers in the region experiencing the drought not only have less quantity available to sell due to the drought but the price rise resulting from the drought (and therefore their incomes) are less than if trade had been prevented. This illustrates that some sections of the community may be opposed to trade even if it is over-all beneficial for society in the combined regions but, in fact, even if those who gain compensated those who loose, there would still be a net gain from trade.

36. In principle, the analysis outlined above can apply the same way between regions within a country; between countries; or even between the principal continental regions of the world. However, the distances involved and the extent of the border controls between locations will affect the extent to which interregional trade is practical.

37. Of course once inter-regional trade is possible, it would also be possible for two regions to share in the cost of a single storage facility and then whenever either region experiences a drought, the price effect will be much reduced compared with the situation without storage and without trade:

![Figure 8. Effect of inter-regional trade and storage on Commodities S & D Curves](source: OECD)

38. In other words, there may be diversity benefits available specifically from improving storage, additional benefits from improving interregional trade and a third set of benefits that are available from the interaction of the two improvements taken together.

39. From this discussion, it is evident that a competition authority may be able to assist its country to deal with commodity price volatility by addressing private practices and government regulations that impede competition in any of the following product markets:

- the commodity itself;
- the markets for the provision of storage and the inputs to storage (including infrastructure markets, capital markets and construction materials); and
- the markets for the logistics services and infrastructure (ports, rail, road and their input markets).

3.2 Different Degrees of Competition at Different Levels of the Supply Chain

40. In most agricultural markets, both production and consumption is highly atomised. For example, in the grain market in South Africa, 18,000 commercial farmers account for 90% of grain production, with
the remaining 10% accounted for by 3 million smallholders and there are approximately 13 million households in South Africa. Similarly, very large numbers at both the production and consumption levels can be found in most agricultural products.

41. However, between the growers and the consumers agricultural commodities typically pass through a number of highly concentrated functional markets. For example, between the wheat field and the dining table, wheat passes through each of the following concentrated markets: the market for aggregating, storing and transporting grain, local flour milling markets, bread baking and grocery retail. Similar patterns can be seen in rice, beef, chicken, coffee and many other industries and can be graphically represented as follows:

![Figure 9. Common Downstream Bottlenecks in Agriculture](image)

Source: OECD

42. In fact, a further similar feature can be observed when looking further back in the production chain. Multitudes of growers in many agricultural industries are often caught between both upstream and downstream bottlenecks. Growers are often ‘price takers’ both when they are purchasing essential inputs and when they are selling their product. As identified in this paper, competition issues have arisen in the markets for the production and supply of fertilizers, proprietary seed suppliers and other genetic material (like the great-grand parent stock for chicken growing), suppliers of insecticides and suppliers of tractors and other agricultural equipment. Keeping with the example of wheat discussed above, only six transnational corporations controlled more than 75% of the global pesticide market.

43. Taking this supply chain analysis further, it is noticeable that there can be multiple layers of functional markets in which competition may be impeded – for example there may be an oligopoly of traders selling to an oligopoly of food manufacturers selling to an oligopoly of retailers before finally the consumer can purchase food.

44. Although there are notable exceptions, mining commodity industries also tend to exhibit a less extreme but similar supply chain shape. Many mining input markets (for example explosives and specialist mining equipment) are concentrated as are many processing markets (such as steel production and the production of consumer durables) before the final consumer purchase. By contrast, in many cases (but certainly not all) the activity of mining itself is often significantly less concentrated.

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8 This diagram is inspired by a diagram concerning the coffee industry which can be found in the contribution of the Consumer Unity & Trust Society (CUTS). See DAF/COMP/GF/Wd(2012)17.
45. One issue that competition authorities may confront is that at different levels of the supply chain, the geographic dimension of the market may be very different. For example, packaged meat may be a globally traded commodity and any given abattoir may be supplying a workably competitive market for its sales. However, the same abattoir may have a dominant position area as the sole purchaser of cattle or lambs within a particular geographic area. It may not, therefore, have any negative impact on consumers but it may have a significantly negative impact on small growers, reducing quantities and depressing production and therefore reducing society’s total welfare. This difference arises because the transportation of live cattle over long distances may only be economic for particular market niches (for example for Halal butchers) and not for the general market for meat. This issue is very common in agricultural commodity markets and can arise in relation to raw milk and cheese, wheat and collection and storage facilities, barley and hops plants. It can also arise in mineral commodities markets for example in the smelting of ores.

46. **Multi-layered competition problems** are worthy of further discussion because they can create particular competition concerns and particular strategies to address these problems. First, consider the problems. An oligopoly at any given level in the production chain can result in:

- single firm monopoly- and monopsony-like conduct (that is independently deciding to constrain output to raise selling prices or reduce purchasing costs); or
- cartel conduct (that is entering an anticompetitive agreement with other firms undertaking the same function to limit supply or raise prices).

47. The central question is what happens to the overall efficiency of a supply chain when there are two functional markets that are both affected by anticompetitive conduct? Are two monopolised markets better or worse than one? One intuitive response is to say, the more monopolisation there is anywhere up or down the supply chain, the worse it must be. On the other hand, competition authorities are often confronted in merger cases with the argument that it is better to match strength with strength – for example that retailers should be permitted to become stronger so that they can bargain better with food or beverage manufacturers.

48. To answer this question, it is helpful to start by deconstructing the bargaining power argument. Taking the example of a retail merger in which an argument is presented that it will improve the retail sector’s bargaining power against concentrated food manufacturers, this bargaining power can be comprised of either or both of the following:

- efficiency enhancing effects which restore output to competitive levels and the benefits accrue to the economy as a whole (for example enabling the retailer to gain volume and improve the economies of scale for the buyer and the seller or gaining volume that can be used to foster new entry); and
- anticompetitive monopsony effects where the retailer itself also sacrifices volume of throughput in order to take a margin at the expense of the other monopolist or the consumer or both of them.

49. So when an improved bargaining power argument is put to a competition authority, it is necessary to distinguish between pro-competitive and anticompetitive effects. In fact, when there are multiple layers of anticompetitive conduct, end consumers and the economy generally suffer from an effect known as “double-marginalisation”. “Double marginalisation” occurs when two monopolies exist and one is a supplier to the other (or similar situations such as two cartels or a monopoly at one level combined with a cartel at another).10

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At the first level, the monopolist may have an incentive to sacrifice some volume to significantly increase the prices and profits earned from selling the product. Two effects are noticeable:

- for the volume that is still purchased, value is transferred from the buyers to the monopolist; and
- by raising the price, the monopolist must usually sacrifice some sales quantity and for this quantity, both the buyer and the monopolist lose some value that would have been gained from the sale of this additional quantity (known as the dead weight loss).  

Now consider the situation in which the above monopolist sells its product to a buyer who itself is also a monopolist. This second monopoly may also be able to profitably sacrifice some volume for a significant increase in price. A ‘second round’ of similar effects is observable:

- for the volume that is still purchased, value is transferred from the second monopoly’s buyers to the monopolist; and
- by raising the price, the monopolist must usually sacrifice some sales quantity and for this quantity, both the buyer and the monopolist lose some value (known as the dead weight loss).

In other words, there are two quantity reducing decisions being made, one by each monopoly. There are two transfers of profits and there are two ‘dead weight losses’ and the sum of the two dead weight loss is greater than the single dead weight loss that would result from a vertically integrated monopolist. There is another effect going on too – the two monopolists must trade with each other and where they trade with each other, there is a monopoly facing a monopsonist. To some extent, therefore, there will be bargaining tension between them over how much profit each monopoly will extract vis-à-vis the other monopolist. If one of the monopolists can undermine or even defeat the other’s monopoly power, they may be able to extract a greater share of the transferred portion of surplus.

Strategies that may be available to one monopolist to undermine the other’s power may include a decision to vertically integrate forward or vertically integrate backward or to sponsor the entry of a new firm at the other functional level. This type of strategy is likely to be particularly attractive when the other monopolist cannot retaliate by itself expanding vertically into the other monopoly’s market. When one either monopoly is defeated, the efficiency of the production chain will be improved even if the other monopoly persists.

On the other hand, the two monopolists’ interests may not be wholly opposed and perhaps even more so of two cartels operating at different levels of the supply chain:

- If both monopolies are capable of defeating each other through simultaneous forward and backward vertical integration or other commercial strategies then it may be in their joint interests to come to an explicit or implicit understanding that each of them will not do so.
- Where there are two monopolies facing each other, they may be able to play a role in policing each other’s cartel to detect or punish cheating.
- Where competition law and competition law enforcement are present and it may be in the interests of two monopolies or two cartels to reach an accommodation to avoid detection or hinder the authority from making out a case that the law has been breached.

As the diagram above points out, often monopolists are also monopsonists and similar effects occur on the buying side – a transfer of value from, say, coffee growers and a dead weight loss.
55. Indeed it is quite common that when a competition authority finds a cartel at one level of production, there are also cartels at other levels of the production chain. This can partly be explained from the above effects and also by a third point. It is quite common in oligopolistic industries for some businesses to be vertically integrated and not others. Where there is one or more firms that are vertical integrated, they are often observed to be the ring-leader in multiple cartels.

56. Some observations that may assist competition authorities in fighting against multiple layered competition problems are as follows:

- In merger cases in which the parties argue that their merger will improve their bargaining power against a supplier which itself has market power, the competition authority should take care to “deconstruct” the argument to distinguish between efficiency enhancing and monopsony forms of bargaining power.
- In cartel cases, “amnesty plus” is a feature that can be included in a leniency policy by which the discovery of one cartel can lead to others being uncovered.
- If it is possible to introduce import competition as close to the consumer level as possible it can expose an entire chain of domestic monopolised production to competition.

3.3 Exchange Traded Markets and Speculation

57. At times of high commodity price volatility, it is common for concerns to be raised within the community by a wide range of consumer, business and political figures that speculation has caused or exacerbated the situation. On the other hand, the New Zealand contribution\textsuperscript{12} refers to a 2010 initiative undertaken by the NZ stock exchange to introduce a milk futures market precisely designed to assist parties to ameliorate price volatility and the difficulties it can cause. The attached Appendix to this paper explores this apparent contradiction and a number of related issues.

58. As a general proposition, speculation and speculators in markets tend to assist in stabilising prices by providing liquidity and speeding up price discovery, even though they may at times exacerbate price volatility in the short run. There have also long been repeated concerns expressed that speculation is most profitable (reaping potentially excessive profits) when prices have undergone substantial price swings; however, these swings would have often been even greater if speculation had not dampened them.

59. Despite this, there have long been repeated concerns expressed about speculation probably because speculation is most profitable when prices have undergone substantial price swings when other market participants are under most pressure. The thesis of the Appendix is that these concerns are largely unfounded because in most cases there would have been even greater price movements if speculation had not been present to ameliorate the magnitude of the movements.

60. There are only a small number of circumstances in which speculation may be damaging to societal welfare. One notable case is in respect of price gouging practices in relation to basic food items and other necessities during abnormal trading conditions where small parts of the market become isolated during emergencies. Specific profiteering or price gouging laws can be framed to address this issue but the conceptual underpinning and elements of proof should be distinguished from those that apply in a competition law case.

61. When it comes to conventional competition law cartel or abuse of dominance cases in relation to exchange traded markets or speculation, these are rare indeed and often concern horizontal agreements or

\textsuperscript{12} DAF/COMP/GF/WD(2012)40.
alleged abuses of dominance to limit the availability of information about the prices and quantities traded so that particular parties can appropriate the value of this information to the exclusion of their competitors.

3.4 International Trade and Competition

62. Almost every international trade issue has a competition dimension. Even where two countries both have perfectly competitive domestic markets for the production of a particular good, a ban on trade between them will protect the producers in the country that has a comparative disadvantage of production from their competitors in the country that has the comparative advantage in that good’s production. The consumers in the first country, and the producers in the second country, will both suffer from this trade ban and, as the effects flow through the economy of each country, ultimately society in both countries will suffer.

63. However, almost all countries there are government policy officials who specialise in multilateral and bilateral trade negotiations. For the competition authority to become involved in every trade issue is unlikely to be a good use of its scarce resources. Similarly, the tools of trade negotiations (i.e. multilateral and bilateral agreements) can mandate that a country adopts competition laws but such agreements do not necessarily ensure that the competition regime is well staffed, motivated and effective.

64. On the other hand, there are clearly many circumstances in which there are strong complementarities between these two specialist areas of policy making which, in the case of competition authorities, most obviously arises in those industries in which a limited number of firms have monopoly power or there is explicit or tacit co-ordination.

65. For example, if a country pushes for a particular market to be liberalised in trade negotiations and the producers of the liberalised commodity are located hundreds of kilometres behind an international border where a monopoly port and a monopoly train line, there is a risk that privately imposed transport and handling charges will replace government import tariffs. The implication here is that where there are efforts to liberalise trade there may be an important complimentary role for competition authorities to ensure the liberalisation to be fully effective. Discussed below are a number of instances where removals of trade barriers have not resulted in the price reductions (fully) flowing through to consumers and one potential cause of this is that there are anticompetitive market impediments behind the border.

66. Another example concerns addressing the cumulative damage that can be done from a monopoly protected by an import tariff. As small countries are often acutely aware, in some circumstances even the most effective competition law and advocacy efforts cannot change the fact that some industries may be natural monopolies or the minimum efficient scale may support only a limited number of oligopolistic participants. International trade can be an important (or even the sole) source of competition. In these circumstances, the competition authority has an important role to play in contributing to the development by the country of its trade negotiating position because there may be considerable benefits from liberalisation that does not solely arise from the value created through trade related comparative advantage but also from the elimination of monopoly rents.

67. A third example concerns export cartels which are discussed further below. For these reasons, many of the competition reforms discussed below have been undertaken jointly with trade reforms.

4. Competition Law and Policy

68. Often competition law enforcement is undertaken very separately from competition advocacy before the government to encourage it to remove regulatory impediments to competition. However, it is striking that in commodity markets generally, and agricultural markets in particular, these two activities are closely inter-twined.
69. As the Chinese Taipei contribution notes\(^\text{13}\), agricultural industries are often excluded from the ambit of competition laws:

“Currently there are ... two types of exemptions ... governing agricultural products market in advanced countries’ competition laws. The first type consists of explicit exemptions in the competition laws; additionally, the provisions of competition laws shall not apply to any acts performed by an enterprise in accordance with other laws.”

70. Indeed it is very common to have explicit exemptions, particularly when competition laws are first passed. For four years, there was a provision in the Czech competition act that the Act does not apply to the conduct of undertakings concerning production and trade in agricultural commodities, as long as their conduct is in compliance with the EU law. In Hungary, resale below cost of agricultural commodities is prohibited.\(^\text{14}\) Article 56 of China’s Antimonopoly Law, for example, provides that the law does not apply to the concerted actions of agricultural producers and rural economic organizations involved in production, processing, sales transportation or storage of agricultural products.

71. In other cases, laws have been passed that require agricultural products to be sold to statutory marketing boards governed by grower representatives or that set prices for commodity products. A number of these laws are discussed below. Such laws implicitly centralise the determination of prices, quantities and other factors into mandatory state sanctioned frameworks that would be illegal if undertaken privately by competing businesses so that even if there is competition law coverage, there will not be any remaining private conduct upon which it can attach.

72. As we will see, anticompetitive action in agricultural markets can be as damaging as in any other market so there is no \textit{a priori} reason to treat this industry differently. However, it is also understandable why countries may decide that competition law should first be applied to other parts of the economy. In many developing countries, agricultural industries lag well behind other industries in terms of economic reforms. In many cases property rights remain uncertain, there may be collectivisation, agricultural industries (particularly where barter is the main form of exchange) may not yet be brought within the taxation system and rural populations may not yet be able to fully participate in education or have access to health and other basic services. Sequencing the order and timing of market reforms can be important and it is not necessarily the case that competition law is the first reform to be adopted.

73. Even in developed economies, agricultural industries are often comprised of very small family businesses who may have limited capacity to apply or adapt to the requirements of competition law. As discussed below, there is often a legacy of market intervention through tariffs or statutory marketing boards that cannot be abolished in a simple one step process and, again, there may be a logic to the sequence of market reforms.

74. In other cases, there may not be a strong policy reason for long term lenient treatment of the agricultural industry and the ongoing competition law exemptions or government intervention in the market may simply be the product of strong farming lobby groups (often organised as political parties) who have a better organised way to resist competitive reforms and argue for special treatment and exemptions than other industries.

75. Nevertheless, all countries should be able to benefit substantially from applying competition principles to agricultural industries for the very same reasons as competition is of benefit in any other industry. The challenge, however, is often to identify and address all the elements of the policy picture that

\(^\text{13}\) DAF/COMP/GF/WD(2012)27.

are required for competition to emerge and to introduce reforms in a suitable sequence that enables the participants a reasonable opportunity to adjust.

76. The discussion below illustrates how closely linked competition law and policy can be in these industries. First, there is a summary of the four areas that commonly raise competition law enforcement:

- Cartels and other horizontal conduct issues (a separate discussion specific to export cartels follows the discussion of cartels and horizontal conduct issues generally);
- Vertical integration both of a beneficial and damaging nature;
- Other forms of abuse of dominance; and
- Anticompetitive mergers.

77. Perhaps more than in most industries, competition advocacy and reform work is often closely intertwined with the competition law enforcement discussed above. The paper then turns specifically to a discussion of the following competition advocacy topics. Again, advocacy reform focused work in relation to commodities often imply a subsequent or concurrent role for competition law enforcement:

- Pro-competitive reform of commodity industries; and
- The role of competition authorities when governments are confronted with commodity price related crises.

4.1 Cartels and other Horizontal Conduct Issues

78. Hard core cartels, in particular price fixing, market sharing and bid rigging, are considered to be the most egregious violations of competition law, injuring consumers by raising prices and restricting supply, thus making goods and services completely unavailable to some purchasers and unnecessarily expensive for others.\(^\text{15}\)

79. Hard core cartels may be concluded in any market. However, as the OECD has observed in the past,\(^\text{16}\) there are certain characteristics common to markets where anticompetitive collusion might be expected, in particular:

- small number of competitors – the smaller the number of companies, the easier it is for them to reach agreement;
- little or no entry – when few businesses have recently entered or are likely to enter a market because it is costly, hard or slow to enter, firms in that market are protected from the competitive pressure of potential new entrants;
- market conditions – significant changes in demand or supply conditions tend to destabilize ongoing collusive arrangements, whereas constant, predictable flow of demand tends to increase the risk of collusion; at the same time, during periods of economic upheaval or uncertainty, incentives for competitors to collude increase as they seek to replace lost business with collusive gains;


\(^\text{16}\) Detecting Bid Rigging in Public Procurement. Even though these characteristics were identified specifically with respect to bid rigging, they are applicable to cartels in general.
industry associations, which can be used as legitimate, pro-competitive mechanisms for members of a business sector to promote standards, innovation and competition, but when subverted to illegal, anticompetitive purposes, may be used by company officials to meet and conceal their discussions about ways and means to reach and implement an anticompetitive agreement;

repetitive bidding – repetitive purchases increase the chances of collusion, as the bidding frequency helps members of a bid-rigging agreement allocate contracts among themselves; in addition, the members of the cartel can punish a cheater by targeting the bids originally allocated to him;

identical or simple products or services – when the products or services that individuals or companies sell are identical or very similar, it is easier for firms to reach an agreement on a common price structure;

few if any substitutes – the colluding undertakings are more secure knowing that their trading partners have few, if any, good alternatives and thus their efforts to raise prices are more likely to be successful; and

little or no technological change - little or no innovation in the product helps firms reach an agreement and maintain that agreement over time.

80. As far as the primary production markets themselves, i.e. the actual growing of agricultural commodities or mining of minerals, are concerned, it may be observed that production of agricultural commodities is inherently less susceptible to anticompetitive collusion, especially due to very high quantity of companies involved, whereas mining business may be more prone to cartelization (see the table below). These observations however apply to private cartels. As will be discussed later, commodities markets are often subject to specific state regulation, which can significantly alter the market characteristics and the motivation and ability of large numbers of growers to act together.

Table 1. Characteristics of Agricultural and Mineral Commodities Markets that Help Support Collusion

<table>
<thead>
<tr>
<th></th>
<th>Agricultural commodities</th>
<th>Mineral commodities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small number of competitors</td>
<td>X</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>Very high number of farmers</td>
<td>Limited number of mining companies in several industries</td>
</tr>
<tr>
<td>Little or no entry</td>
<td>X</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>Low barriers to entry</td>
<td>Expensive investments and long lead times to prove up new deposits</td>
</tr>
<tr>
<td>Market conditions</td>
<td>?</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>Generally rising demand</td>
<td>Attempts to stabilise fluctuations on the market</td>
</tr>
<tr>
<td>Industry associations</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>Usually on national level, concerning specific commodity</td>
<td>Usually international, concerning specific commodity</td>
</tr>
<tr>
<td>Repetitive bidding</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>Generally seasonal sales repeat but often large repeat contracts are not the primary means of trade</td>
<td>In some industries there have historically been annual contract negotiations e.g. coal, iron ore</td>
</tr>
<tr>
<td>Identical or simple products or services</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>Generally interchangeable on commodity level</td>
<td>Generally interchangeable on commodity level</td>
</tr>
<tr>
<td>Few if any substitutes</td>
<td>?</td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>There can be supply side and demand side substitution but it is limited</td>
<td>Limited substitution in most commodities</td>
</tr>
<tr>
<td>Little or no technological change</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>Important changes in farming techniques, seeds, fertilizers occur but incremental changes</td>
<td>Important changes in mining techniques (e.g. fracking to unlock coal seam gas) but incremental changes</td>
</tr>
</tbody>
</table>

Source: OECD
81. As discussed in Section 2 of the paper, the most striking feature is that a very large number of producers would usually have to be involved for a commodities cartel to be established. Not surprisingly, it is rare to find cartels amongst growers of agricultural commodities. One example was the case of the poultry breeders in the Czech Republic, who agreed on a price to be achieved in course of negotiations with a major meat processor to be started the next day; the agreement was even publicised in a local newspaper. In this case, fines were imposed on the undertakings concerned.17

82. However, competition law exemptions have sometimes been given in these circumstances where authorities have recognised that it is legitimate to strengthen farmers’ bargaining position while negotiating with the food processors. Similar agreements to the above Czech example were entered into by chicken growers in several states in Australia, without raising competition concerns. Under the Australian collective bargaining provisions a number of such arrangements between many small poultry growers were formally notified to the Australian Competition and Consumer Commission (ACCC) and, since the ACCC did not find a negative net public benefit from the arrangements, they thus enjoy immunity.18

83. **Mineral commodity markets** are often considerably more concentrated; the top 10 companies constituted approximately one third of global non-fuel minerals production,19 and for example in iron ore, three top companies controlled over a third of global production and almost two thirds of seaborne trade.20 Nevertheless, cartels at the production level organised between producers without the assistance of government are only slightly more common than in agricultural industries.

84. A market sharing cartel of alluvial garnet producers in Australia was uncovered in which the undertakings involved agreed on restrictions in relation to the geographic territories into which each would be permitted to supply alluvial garnet.21

85. In some cases (but nevertheless rare), such cartels are international in scope. A salt cartel involving **Cyprus**22 23 and **Israel** is an example. Production and marketing of salt in Israel, for industrial, agricultural and human consumption purposes, was controlled for a long time by a single firm, Israel Salt Industries. Until 2004, it had an agreement with Dead Sea Works, a company with exclusive rights to exploit salt and other minerals of Dead Sea, under which Dead Sea Works undertook not to sell salt for retail purposes to any firm other than Israel Salt Industries, and Israel Salt Industries, in turn, undertook not to export the salt that it had purchased. This agreement was nullified by the Israeli competition authority in 2002.

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17 The Czech competition authority issued a decision in 2008. The single cartel meeting took place at the end 2006; six local poultry breeding cooperatives, including Agrodržstvo Jevišovice or Zemědělské družstvo Petřín, participated.

18 The Australian competition authority thus authorised, for example, the collective bargaining of chicken growers in South Australia in 2009 or in Western Australia in 2011.

19 Reuters. Factbox – the world’s biggest mining companies. 2008.


21 Barton Mines Corporation and Barton International Inc were ordered to pay penalties totalling $1.525 million by the Federal Court of Australia in an action brought by the ACCC.

22 Footnote by Turkey: The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the “Cyprus” issue.

23 Footnote by all the European Union Member States of the OECD and the European Commission: The Republic of Cyprus is recognized by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.
86. In 2006, the Israeli competition authority uncovered yet another agreement between Israel Salt Industries and a Cypriot salt production and marketing company MP Theodorou, under which the Cypriot firm undertook to become an agent of the Israeli company and to refrain from exporting salt to Israel. Israel Salt Industries supplied half of the salt consumption of Cyprus, whereas MP Theodorou exported salt to Israel; since 1997, the two companies competed in both Cypriot and Israeli market. Israel Salt Industries threatened that should the Cypriot company not stop its export to Israel, the Israeli firm would dump the Cyprus market with under-priced salt; it exported to Cyprus 1000 tons of salt in 10 days, which constituted 1/7 of the yearly consumption of Cyprus. Subsequently, the agreement was concluded in 1999.

87. Global cartels in major commodities have also been observed such as the International Copper Cartel which was established in 1935; its members were copper mines, accounting for more than a half of the refined copper market. The cartel was abandoned in 1939.

88. As with agricultural products (discussed further below), governments can become involved in establishing cartels. The International Tin Council was formed by international intergovernmental agreements between tin producing countries and it lasted for most of the 20th century. It collapsed due to debt in 1985, when it announced it was unable to repay its debts or fulfil its contractual obligations, after the member states had refused to pay any of its debts.

89. In certain circumstances, horizontal co-operation among undertakings in the same market can, however, lead to substantial economic benefits, in particular if they combine complementary activities, skills or assets. Horizontal co-operation can be a means to share risk, save costs, increase investments, pool know-how, stimulate research and development, enhance product quality and variety and launch innovation faster. Private or state organised associations of growers have often been established based, in part, on these pro-competitive considerations.

90. The presence of associations and co-operatives of farmers, usually nation-wide and commodity-specific, is a distinctive characteristic of these markets. They perform a number of functions, from providing services of interest to all of the members, including training, research and development and marketing promotion campaigns. However, there is sometimes a fine line between potentially pro-competitive initiatives such as joint research and development and promotional marketing and an association or statutory authority becoming a monopoly seller of the commodity concerned (single-desk selling) and two examples outlined below illustrate this point.

91. Co-operation, principally in the area of research and development, is frequently supported by governments, both with specific legislation and with funding. In this respect, the Australian system of levies and charges is noteworthy. The government stands ready to organise levies to be paid by growers if an industry representative body comes forward with an identified problem or opportunity facing the industry and the need to respond with collective industry funding. The representative body submits the proposal to the Australian Government; if imposed, the levy or charge is imposed and collected under legislation and paid to recipient bodies to fund their activities. These activities include research and development, marketing and promotion, plant and animal health programmes or residue testing. For example, such a levy was imposed on dairy products; it is transferred to Dairy Australia, a service company for dairy industry, which invests in more than 300 research and development projects for the farm and manufacturing sectors; performs trade policy analysis; promotes health and nutritional benefits of dairy products; collates industry statistics; and manages issues such as criticism of dairy products, environmental concerns etc. Similar organisations are also active in cotton, eggs, pork, wool, fisheries, forestry and grain sectors.

24 For example, such associations undertake marketing of the merits of wool compared with proprietary owned branded fabrics such as Gortex.
92. National legislation may, however, also provide implicit or explicit immunity from competition law. The Canadian Wheat Board (CWB) may serve as an example of this. The CWB is a marketer of western Canadian producers’ wheat and barley that can be traced to the 1920s when it initially operated on a voluntary basis. In 1935, the CWB was formally established by way of the Canadian Wheat Board Act, with the Canadian government providing financial guarantees for its operations. As a result of this and subsequent legislation, it became the sole body responsible for marketing western Canadian wheat and barley, both for export and for human consumption domestically. The system was mandatory (i.e., the crops could not be exported or sold for human consumption directly by the farmers). The CWB was the largest single seller of wheat and barley in the world (over 80% of the wheat was exported), co-ordinating the sales of grain produced by 85,000 farmers. Apart from single desk selling, the CWB also negotiated terminal handling and rail-freight agreements on behalf of the farmers; operated a grain testing lab, funded research in areas such as grain storage, product development and variety enhancement; and operated a substantial private weather network.

93. A similar single desk selling system of Australian Wheat Board (AWB) was abolished in Australia in 2008. The economic analysis suggested that the AWB could command higher prices that would be eroded in the absence of its exclusive trading rights and, although some growers may receive greater returns, some may not be able to access markets that they would like to supply. After the monopoly was dismantled, the destinations for Australian wheat exports diversified significantly from 17 countries purchasing Australian wheat before the AWB was dismantled to 41 currently.

94. On December 15, 2011, the Government of Canada proclaimed new legislation, entitled Marketing Freedom for Grain Farmers Act, which will result in the dismantling of the CWB’s monopoly over the purchase and sale of western Canadian wheat and barley for export and domestic human consumption as of August 1, 2012. As of that date, western Canadian farmers have the ability to market their product directly to any purchaser. The legislation includes five Parts, which come into force at different times, in order to transition to an open market for western Canadian wheat and barley. Part 1 amended the Canadian Wheat Board Act to change the governance structure of the CWB as of December 15, 2011. This Part also allows forward contracting to take place in order to permit the purchase and sale of wheat and barley for execution on or after the day Part 2 came into force (August 1, 2012). Part 2 of the legislation repeals the Canadian Wheat Board Act and enacts a new piece of legislation that establishes a new, voluntary Canadian Wheat Board that is expected to remain in place for a maximum of five years. At the end of the five-year (or shorter) period, Parts 3 and 4 of the bill provide for two alternatives: either the privatization or the dissolution of the new voluntary Canadian Wheat Board established by Part 2.

95. Governments fix production prices in a range of products such as in Pakistan where the price of sugarcane to be processed in the sugar mills is fixed. Similarly in India – the second largest producer of sugar (after Brazil) – sugar mills are obliged to buy sugar cane at prices set by the government, the price of processed sugar is however not regulated. In a case closed in November 2011, the Competition Commission of India dismissed the allegation that the sugar mills did through their associations National Federation of Co-operative Sugar Factories and Indian Sugar Mills Association engage in a price fixing agreement concerning the prices of processed sugar. The Competition Commission concluded that sugar industry is highly controlled and regulated and that sugar prices are not a mere function of demand and supply but that there are complex forces at play which distort and in a way proscribe the market from working in a competitive and free manner. The competition commission therefore suggested that the government should propose a regulatory reform of the sugar sector, which could enhance its efficiency.

27 Competition Commission of India, In re Sugar Mills (Suo-Motu) Order of 30 November 2011, case 1/2010
96. As noted in Section 2 of this paper, farm production often needs to be processed, sometimes close to the site of production, before it can enter further levels of trade. Although agricultural commodities markets themselves may be very atomised and therefore difficult to cartelise without the involvement of the government, the links in the production chain for commodities immediately above and below the production of the commodities themselves are often characterised by significantly more concentrated markets and cartels engaged in by these other levels of production are more common.

97. The first type of cartel to consider are **buy-side cartels** where the prices for the purchase of agricultural products from growers are fixed by processors. For example, the Colombian competition authority’s contribution\(^28\) demonstrates that it has been very active in this area:

- **Rice (2005)** – Several companies were found to have entered a price agreement for the purchase of *paddy verde* type rice.
- **Sugar Cane (2010)** – Eleven sugar mills were found to have entered a price agreement in the purchase of raw sugar cane.
- **Cocoa (2009)** – Two companies were found to have entered an agreement on the price at which they would purchase cocoa from suppliers.

98. Sales cartels (as opposed to buy-side cartels) are more frequent in **upstream and downstream markets**. A typical example is the lysine cartel in 1992 - 1995,\(^29\) increasing the global prices of lysine, an amino acid added to animal feed. Five principal producers of lysine created a “trade association”, enabling them to organise 25 multiparty and dozens of supplementary bilateral meetings, where prices were set for 13 countries or regions. High market shares of the producers, homogeneity of the product, which itself is only one of many components, and significant barriers to entry, characteristic for this market, are features making a market susceptible to cartelisation. Indeed, other markets exhibiting similar characteristics have been cartelised, for example the methionine (another amino acid added to animal feed),\(^30\) animal feed phosphates\(^31\) or choline chloride (vitamin B4), a feed additive for poultry and pigs.\(^32\)

99. Similar cartels are also common on national levels, for example the fertilizers cartel in South Africa,\(^33\) where principal manufacturers of different sorts of fertilizers concluded a price fixing and market sharing agreement.

100. Cartels can readily be found downstream of agricultural and mining industries. Food processing markets are characterised by a lot of attributes suggesting cartelisation, and a number of cartels on national or regional level have indeed been reported, for example the collusion of Russian milling companies

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\(^{29}\) The 1992 – 1995 cartel among Archer Daniels Midland Co, Ajinomoto Co, Cheil, Kyowa Hakko and Sewon was prosecuted among others in Canada, EU, Mexico and the United States.

\(^{30}\) The European Commission declared in 2002 that there was a cartel among Aventis, Degussa and Nippon Soda from 1986 to 1999.

\(^{31}\) The European Commission declared in 2004 that there was a cartel among a number of companies including Yara Phosphates Oy, Timab Industries or Ereros Industrial, from 1969 to 2004.


\(^{33}\) The cartel was concluded among Sasol, Omnia Fertiliser and Yara South Africa; the case was referred to South Africa’s Competition Tribunal in 2006.
concerning wheat flower products,\textsuperscript{34} of South African processors of dairy products, co-ordinating prices of raw as well as processed milk,\textsuperscript{35} or of Italian\textsuperscript{36} and Spanish\textsuperscript{37} raw tobacco processors.

101. Further downstream, international trade in commodities is also susceptible to cartelization. In the EU, for example, cartels concerning import of bananas\textsuperscript{38} have been reported. In many instances, however, only state approved entities are allowed to export or import certain products, as has been demonstrated on the example of the Canadian Wheat Board; similarly, only state trading enterprises may import rice to a number of countries.\textsuperscript{39} Because of this, states themselves, not the undertakings, sometimes attempt to fix global prices; for example in coffee trade, where the quantity of exported coffee was limited under the International Coffee Agreements in order to keep the price until 1989.\textsuperscript{40} Establishment of Organisation of Rice Exporting Counties (OREC) is reportedly currently being negotiated among Cambodia, Laos, Myanmar, Thailand and Vietnam; the prospective members however claim that their aim is not to create a price fixing cartel.\textsuperscript{41}

102. Markets in minerals similarly exhibit more cartelisation upstream and downstream in the production process. Upstream markets, for example explosives or mining machinery, tend to be significantly specialised and thus concentrated as well. Downstream, the primary production is usually vertically integrated with processing. The actual mining is often limited to a few countries; for example, over 97\% of world production of rare earth elements came from China in 2011.\textsuperscript{42}

103. In South Africa, for example, there was a cartel concerning mining roof bolts, used to provide roof and wall support in underground mines to prevent cave-ins and to keep a mine accessible over extended periods of time,\textsuperscript{43} under the guise of industry association, the four undertakings divided markets

\begin{itemize}
\item \textsuperscript{34} Russia’s Federal Antimonopoly Service decided on a price fixing cartel among Tulakhleboproduct, Novomoskovsky Melnichny Kombinat and “ulsky Kombinat Khllebopruduktov in 2011. The price fixing took effect in July and August 2010, amidst panic growth of wheat prices.
\item \textsuperscript{35} The cartel concluded by Lancewood, Parmalat, Ladismith Cheese and Clover Industries, consisting in Exchange of price information, was referred to the Competition Tribunal in 2006.
\item \textsuperscript{36} The European Commission declared in 2005 that tobacco processors Deltafina, Transcatab, Mindo (Dimon) and Romana Tabacchi colluded on their overall purchasing strategy, agreeing between themselves and allocating on a preferential or exclusive basis their suppliers (both growers and so-called “third packers” i.e. intermediaries who only provide initial conditioning for tobacco) in Italy.
\item \textsuperscript{37} The European Commission declared in 2004 that tobacco processors Compañía Española de Tabaco en Rama (Cetarsa), Agroexpansión, World Wide Tobacco España (WWTE), Tabacos Españoles (Taes) and Deltafina colluded on the prices paid to, and the quantities bought from, the tobacco growers in Spain.
\item \textsuperscript{38} The European Commission declared in 2008 that Chiquita, Dole and Weichert participated in a cartel between 2000 and 2002, setting of their quotation prices for bananas. In a later proceedings finished in 2011, Chiquita and Pacific Fruit were found to have been operating a price fixing cartel in Southern Europe from 2004 to 2005.
\item \textsuperscript{39} FAO Rice Liberalization: Predicting Trade and Price Impacts.
\item \textsuperscript{40} FAO, Commodity Market Review 2007 – 2008.
\item \textsuperscript{41} Manila Bulletin Publishing Corporation, 28 October 2011. Vietnam opposes rice export “cartel”.
\item \textsuperscript{42} Humphries, M. Rare Earth Elements: The Global Supply Chain 2011.
\item \textsuperscript{43} The cartel concluded by Aveng (Africa), trading as Duraset, RSC Ekusasa Mining, Dywidag-Systems International and Videx Wire Products in the early 1990s was referred to South Africa’s Competition Tribunal in 2009.
\end{itemize}
and fixed prices. Similarly, in the United States, several market sharing and price fixing cartels concerning commercial explosives have been reported.44

4.2 Export cartels

104. A number of countries have explicit exemptions in their laws for export cartels either without the requirement to notify the competition agency45 or with a notification requirement46. Other legal systems provide for exemptions where transactions improve the balance of payments position of their country.47 Another common aspect of competition laws is that an element of a cartel prohibition is that the illegal conduct must result in domestic harm48. Indeed virtually all OECD countries fall into at least one of these three categories (and in some cases into more than one category).

105. It is important not to assume, however, that the effect of an export cartel exemption necessarily provides complete immunity for such cartels – quite to the contrary. In many cases export cartels may be exempt in the exporting country but are caught by the competition law of the importing country.49 An important practical consideration may be that the importing country’s enforcement agency may not have access to the key evidence that there has been an agreement between competitors if that evidence is located only in the exporting country. The evidentiary problem is particularly acute for market sharing cartels in which one or more cartelists agree not to have any activities at all in the importing country and therefore the local competition authority may have little or no leverage over those perpetrators to request and obtain the relevant evidence.

106. The export cartel exception provisions apply to any given market rather than specifically to commodities markets. An example of export cartels within the commodities markets are the cartels for potash in North America which have gained recent attention. These cartels, of course, concern both a mineral commodity (potash) used as an input into the production of agricultural commodities (when potash is applied as a fertilizer). It has been observed50, that the cartel results in a substantial transfer from the customer country to the producer country.

107. A key rationale for inserting the first ever exemption for export cartels in US legislation in 1918 was so that US exporters could compete effectively in an international trade context with cartelised

44 The investigation of regional and national conspiracies to fix prices for certain commercial explosives, such as dynamite, ammonium nitrate, and blasting agents, has resulted in guilty pleas by 14 corporations, including ICI Explosives USA, Dyno Nobel, Mine Equipment and Mill Supply, Explosives Technologies International, and 3 individuals in 1995 to 1997. The commercial explosives subject to these conspiracies were those used in coal and metal mining, quarry operations, construction, and oil and gas production and accounted for about $1 billion in sales annually.

45 For example, the *Competition Act* (Canada) subsections 45(5) and 90.1(8).


48 For example, the Treaty for the Functioning of the European Union’s Article 101 applies only to conduct that affects competition “within the internal market”; the *Competition Act* 2002 (Ireland), section 4.

49 For example, Article 2 of the Anti-monopoly Law of the People's Republic of China 2008 provides that: “This Law shall apply to the conduct outside the territory of the People's Republic of China if they eliminate or have restrictive effect on competition on the domestic market of the PRC.”

The same consideration to provide US exporters with equal bargaining power *vis-à-vis* foreign cartelists was a rationale for the further exemptions introduced in 1982 along with a similar consideration of ensuring that US exporters could compete effectively with large foreign state owned companies that were monopolies or dominant in their home jurisdiction.

Export cartels have two effects: an efficiency effect and a redistributive effect. Economic efficiency is the primary focus of competition policy. The argument at a global level against permitting export cartels is exactly the same as the argument at a national level against permitting domestic cartels: if cartels are permitted, they distort the optimal volume of output in the market affected by reducing the volume produced and consumed and a dead weight loss is incurred by society for the lost volume of trade. This efficiency effect is present whether or not the importing country prohibits or permits its own producers to enter into cartels.

A subsidiary argument is that has often been made (and which appears to apply in relation to Potash) is that the benefits of export cartels accrue disproportionately to developed countries and the costs are disproportionately borne by developing countries. This argument concerns the redistributive effects of export cartels.

For one reason or the other, there have been vigorous opponents to export cartel exemptions since the very beginning in the US in 1918 and these arguments have commonly resurfaced each time that a major review is conducted for competition law in each given country. At an international level, calls for reform in this area have been made at the OECD (1993), at the WTO’s Working Group on the Interaction Between Trade and Competition Policy and in bilateral negotiations such as calls by Mexico in the context of the NAFTA negotiations. It is remarkable, therefore, how very little real traction these arguments have gained with legislators and even less practical effect has been achieved. At the most, changes have involved repealing explicit export cartel exemptions while leaving implicit protection in the law for export cartels.52

One explanation may be that the proposed reforms have usually considered only the issue of explicit exemptions from competition laws for export cartels. However, a fully effective reform in this area may require53:

- A repeal of any explicit exemption for export cartels;
- A review and amendment for all implicit language found variously in substantive prohibitions and definition clauses of competition laws that limit the application of the law to domestic circumstances (e.g. language such as “within the internal market”, “within the State or part of the State”);
- A consideration of whether the coverage of the substantive law should follow that of the exporting country or the importing country or what is regarded as a universal norm;
- A consideration of the appropriate process and sanctions for export cartel conduct54;


53 These sorts of issues in the broader context of international cooperation will be a key focus of discussion by the OECD’s Competition Committee in the next few years.

54 For example, if US law was applied to export cartels without amendment, US business executives involved in an export cartel targeting Indian customers would face long jail sentences while Indian executives...
• A consideration of whether the public enforcement task should be undertaken in the exporting country, the importing country or either of them and whether ‘forum shopping’ for private actions should be possible;
• A consideration of whether there needs to be explicit protection against double-jeopardy (unless the above changes are accompanied by a repeal of the corresponding provisions in the importing country);
• Whether there should be provisions to empower or even require competition agencies in an exporting country to assist the authority of the importing country to collect evidence;
• Whether there should be any transfer of compensation between the countries for the costs of the investigation, litigation and potentially fiscal receipts;
• How competition authorities should prioritise enforcement action wholly for the benefit of foreign producers or consumers against matters of benefit to their own country; and
• What accountability mechanisms suitable to monitor the agency’s performance in relation to enforcing competition laws against export cartels could substitute for, or augment, the domestically focused mechanisms that currently exist.

112. In bringing about reform in this area, it may be necessary to consider the inherent contradiction that, while global economic welfare would be improved by eliminating export cartels, the benefits of the reform accrue to foreign parties and prohibiting export cartels is adverse to the immediate financial interests of the producers in the exporting country and, via the revenue collection system, also to the exporting country’s government(s). A convincing domestic policy reason for the reform therefore may need to be articulated.

113. It is not unusual for countries to have laws to protect victims located outside their own jurisdiction. For example, the UK Bribery Act prohibits businesses and business people with a substantial connection with the UK from bribing a foreign official. However, an important distinction between the export cartel exemption and the prohibitions on bribing a foreign official is that in the latter cases, protecting foreign victims does not come at any significant domestic cost. By contrast, assuming an export cartel is effective in raising prices and profits, fiscal revenue will flow to the exporting country.

114. It is not common for countries to agree to adopt policies that are contrary to their immediate financial interests for the greater good of the global economy. Nevertheless, where a way can be found for countries to mutually benefit from the improvements to the global outcome through treaty there has been considerably greater success. Depending on what the optimal arrangements are for what is regarded as illegal, who should investigate, who should make the infringement assessment and how orders are to be enforced, it may also be legally necessary to have a treaty to achieve the desired result.

4.3 **Vertical Conduct Issues**

115. For a range of reasons vertical integration is a significant factor in agricultural and mineral commodities markets and this is often linked closely with economic development.
116. The production of agricultural commodities, and the extraction of mineral commodities, often first occur in regional and remote areas where there is limited infrastructure. Farmers and graziers typically rely on local infrastructure for their produce to be stored or processed. For example:

- wheat and rice growers require local silos to receive and store grain before transport;
- beef graziers need local abattoirs so that the cattle are not bruised in transit to distant slaughter-houses;
- dairy farmers need local facilities for refrigeration, pasteurisation and production facilities for cheese or yoghurt;
- pineapple growers need to have access to high volume, local canning facilities to handle the sizable influx of excess fruit when it ripens at once; and
- even the need for local stores to supply basic supplies of fertilizer, seed, equipment, fencing, vaccinations and the inventory held in these stores can amount to a significant new investment in a small community.

117. Almost all agricultural communities rely on good quality roads or rail lines to cities and ports to avoid expensive margins that are otherwise charged by traders and middle-men. Similarly, mining companies rely on extensive rail, road and sometimes power networks to operate substantial mining operations.

118. The dependence on such local level infrastructure often creates two problems:

- a mutual investment ‘chicken and egg’ or hold-up problem – infrastructure owners may not invest until they know that there will be sufficient commodity volumes produced but large scale production cannot commence without the infrastructure in place; and
- once the infrastructure is in place, within a local area, it will often be a natural monopoly which could engage in exploitative practices.

119. Consequently it is very common to find vertical integration associated with commodities production, particularly as a particular area undergoes its early stages of development. For example:

- in grazing communities, agricultural co-operatives have commonly been set up to supply farm supplies and undertake the first level of collection, processing and joint marketing;
- in grain growing regions, it is common for grower owned companies to own and operate networks of silos, rail sidings and operate trains; and
- mining companies often own dedicated rail lines and sea-ports.
Box 1. Murray Goulburn (Australia)

In 1950, 14 dairy farms located in northern Victoria were concerned that they were not getting the proper return for their efforts from local proprietary dairy companies. These farmers were returned soldiers who were new to the industry.

They established the Murray Goulburn Co-Operative to collect and process their own dairy products and this business gradually grew to become the largest processor of milk in Australia and the country’s largest exporter of processed food. Supplier / shareholders hold shares the co-operative which entitles them to vote at general meetings, vote for director candidates and receive ordinary dividends from time to time.

Murray Goulburn has a fleet of 170 trucks and 8 processing plants in rural areas processing 3.3 billion litres of milk and manufacturing products which are sold on both domestic and export markets. The co-operative accounts for approximately 9% of world dairy trade.

The co-operative also operates 24 hardware and supplies stores in rural areas which supply all the requirements of the farming community with particular emphasis on dairy hygiene, animal health, pasture improvement, fodder, fertiliser and other specific farming needs.

120. Sometimes vertical integration between the producers and owning this infrastructure is a necessary way to overcome the hold-up investment problem (where contracts cannot achieve this function) and can be pro-competitive. To understand why such vertical integration might be pro-competitive, contrast what might happen with and without vertical integration for a small farming community who sits at the end of a long, hot, dusty road to a distant city.

121. The minimum efficient scale for an abattoir may be 100 head of cattle a day. If the facility produces significantly less than this, its average costs of production will rise (i.e. the per kilogram cost of operating the refrigerator and cleaning out the killing room) and the meat will not be competitive when sold in the city. There may not be enough livestock in the area to support two minimum efficient slaughterhouses and therefore there may be a single natural monopoly facility.

122. If the cheese factory is owned and operated by the graziers themselves, the incentive will be to keep a high volume to keep costs low and, for that reason and also to keep its grazier/shareholders happy, it will take the minimum margin between the price it receives for cheese sold in the city and the price it pays its farmer/shareholders for cows or lambs.

123. However, if the cheese factory is independently owned, its incentives may not be different. In poor seasons it may seek to maximise volume to minimise costs but in a good season, it may have an incentive to take the full normal city price for meat but drop the price it pays for livestock lower and lower. While its profits may increase, the farmers’ incomes may drop considerably.

124. The same considerations could arise in the context of a rail line in a remote area or a monopoly sea-port and a mining operation.
Box 2. Shenhua Group (China)

In the 1980’s China began to experience a significant increased demand for coal and a large number of small coal mines were established by regional governments. However, these small scale using old technology were inefficient and in 1995 the Shenhua Group was established.

A key element of this Group’s success in significantly improving efficiency and expanding production is to adopt a vertically integrated model that is common in many mining industries around the world.

The company took over the railway and port facilities of another company, Huaneng but invested in significant new infrastructure. It opened additional rail lines called the Shenshuo, Dazhun and Shuohuang rail operations. It also constructed its own port at Huanghua which is the second-largest port in terms of seaborne coal transportation in China along with other port assets.

125. A competition authority is unlikely to be asked to assess the initial investment in a grower-owned or producer-owned storage, transport or processing facility but it may be asked to deal with cases that arise after the initial investment is made including:

- Arguments between farmers who initially built-up, and continue to be shareholders of, co-operatives against new members about whether they can join and if so on what price and non-price terms.
- Arguments between a new small mining company who wants to disrupt an existing port’s operations to expand the facility or even arguments between a small new mining company who wishes to use a large existing mining company’s rail line.

126. Although these issues can be factually complicated, standard competition analyses can be used to address these issues. For example, the conduct of an agricultural co-operative itself in dealing with new farmers and the vertically integrated mining, rail and port operator can be analysed under the abuse of dominance standard either as a refusal to deal or as anticompetitive discrimination. Any agreements between the existing farmers who own an agricultural co-operative may also be analysed under the horizontal agreements framework.

127. In most cases, the incentive of such co-operatives is to grow the membership to gain scale. However, if a particular co-operative dominated the markets for farm supplies or the purchase of agricultural output in a local area and if it was not dealing fairly with new farmers, competition authorities could require (or at least advise) that such co-operatives adopt non-discriminatory access rules.

128. In some cases, governments have taken more specific action to facilitate the formation of such co-operatives. For example there are three important sugar growing co-operatives located in Odisha in India. The Government of Odisha has established a specific law under which these co-operatives can be established and there are specific mechanisms to assist in ensuring that the co-operative and its members do not engage in unfair exclusionary practices including the establishment of a specific Tribunal to hear such disputes.

129. In some cases, such vertical integration issues in the commodities sector have caused some of the most bitterly fought cases. For example in Australia’s sparsely populated North Western corner, two of the world’s biggest iron ore mining companies (BHP and Rio Tinto) have established dedicated rail lines and train operations serving their own mines. Their operations are surrounded by smaller competitors seeking to establish themselves.
130. When mining companies are small, start-up operations without proven commercial reserves, they are often called ‘junior’ mining companies. When they ‘prove up’ a mineral deposit as commercially viable by demonstrating that it is sufficiently rich in mineral content compared with the costs of extraction, they often go through a difficult transition towards the production stage in which their capital requirements increase enormously and their investors churn from speculative investors to mainstream capital providers. Often the answer is to sell out to an established mining company who already has the necessary infrastructure and further investment capital. However, if the junior miner wishes to pursue an independent strategy, one of the biggest challenges, and opportunities to successfully achieve this transformation, is to cost effectively gain access to existing infrastructure.

131. A long running dispute\(^55\) between these established miners and their junior competitors, concerned a refusal by the existing miners to permit the junior mining companies to use their rail infrastructure. The existing mining companies considered their investments to be an integral part of their own production process and that they needed to continue to exclusively control all aspects of the system from train scheduling to the quality of rolling stock and all the capacity on the line. The junior miners viewed this as a classic refusal to deal and the case proceeded through the competition law decision making and appeals process culminating in a complex series of decisions in which the different sides won aspects of the case.

132. History has shown that these vertically integrated businesses are as active in strategic initiatives and corporate transactions as are any other commercial companies. Often the co-operatives will expand geographically or merge with similar businesses in adjacent geographic areas, again giving competition authorities an important role to play. Such mergers can be analysed under the standard horizontal merger test and may often pose no competition issues where the downstream price is a competitive global price which the firm cannot influence and each upstream local farming or mining area is a separate local market, each with a small monopsony infrastructure owner. It may also be relevant in the merger analysis for the vertical integration to be treated as an additional pro-competitive factor that would limit the firm’s incentive to over-price or otherwise engage in anticompetitive conduct.

133. As a region becomes more developed, generational change occurs or production technologies improve, there are strong drivers for the vertical integration to be un-done through a sale of the infrastructure business. For example, when road or rail networks improve, several different cheese factories, abattoirs or grain silos may become accessible to growers and mining operators. Production technology at the farm or at the infrastructure level may drive greater specialisation or increased minimum efficient scale leading the co-operative infrastructure to no longer being competitive. Generational change in family operated farms and retirement may lead the owners of co-operative property to want to divest their interest in it.

\(^55\) Documents for the initial regulatory decision and each court appeal can be found from the National Competition Council’s website (nca.gov.au) by following the link “Third Party Access to Pilbara Railways”.

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Box 3. Golden Circle (Australia)

Golden Circle began as a grower co-operative in the 1940s initially producing around 40,000 tonnes of canned pineapple annually, in addition to some canned fruit salad, tropical fruit chutneys and fruit juice cordials. Today the Northgate cannery produces over around 180,000 tonnes per year of canned pineapple and beetroot, fruit juices and cordials, jams and sauces.

However, for a range of reasons the company underwent a series of important changes due to changed customer preferences, the need for new investment, improved infrastructure in pineapple growing regions providing greater choices for growers and changed investment preferences of the growers.

The company divested assets such as the canning factory that had previously been one of the most important reasons for the co-operative to be established and the company opened its shareholding registry so that growers could sell and investors could buy.

Ultimately the company was acquired in 2008 by Heinz who maintains the production operation and the brand within a much larger international organisation. A key reason for this transaction was to enable the product to reach more international markets.

134. Where transport and storage infrastructure has developed, the geographic market may have expanded substantially and these vertically integrated operations (co-operatives or privately held) may no longer operate natural monopoly infrastructure and in some cases they will come under direct competition from co-operatives or privately owned companies in adjacent regions. In this case, there is unlikely to be a competition problem whether or not the company decides to ‘de-mutualise’ (i.e. separate from the growers and either take on private shareholders or sell out to larger companies) or demerge.

135. However, this is not always the case. Sometimes companies who have (or may appear possibly to have) extensive local and regional monopolies or dominant positions elect to de-mutualise which can pose competition concerns. In these cases, the competition authority may be called upon to use its law enforcement or advocacy efforts to improve competitive access to the existing infrastructure in the short run and infrastructure investment in the long run.
Box 4. Mountains of grain (Australia)

For many years the Australian grain industry was dominated by a number of vertically integrated grain cooperatives. In many States the government assisted in establishing either grower owned co-operatives with statutory monopoly powers to purchase, store, transport and market particular types of grain or statutory boards that were technically government organisations but managed by growers. The biggest single grain type produced is wheat and the national government established a the Australian Wheat Board with the exclusive right to export wheat.

Over time, a whole series of reforms were undertaken in all these grain trading organisations which resulted in domestic and then export monopoly rights being removed and the ownership arrangements changed so that non-growers could become investors in the company. Although significant improvements in competition emerged between geographical regions, and between grain types in each region, each company typically maintained important areas of strength in particular geographic areas or grain types.

A breakthrough emerged when the international arm of the Australian Wheat Board (under its former management) disgraced itself in the international trading arena and the decision was taken to remove its monopoly. Because all grain companies were interested in the ability to participate in the export wheat, this provided an opportunity for the government to make access to export markets conditional on the companies giving access to the localised natural monopoly infrastructure that they owned.

The government permitted any company to apply for a license to export wheat but if that company owns significant domestic grain handling infrastructure (such as silos, rail sidings or port infrastructure), the licensee must first offer, and have approved, an infrastructure access undertaking acceptable to the competition authority. Through this mechanism, it is hoped that competition can become more vigorous even in areas where companies have inherited strong market positions from former farmer co-operatives.

4.4 Abuse of Dominance

136. A number of abuse of dominance matters have already been discussed in the context of the discussion of vertical integration. Again, consistent with the observations made throughout this paper that upstream and downstream markets are generally much more concentrated than the markets for the production of commodities themselves, abuses of dominance are usually perpetrated by suppliers of inputs to primary production or in the processing of primary products.

137. There are additional examples of other types of abuse of dominance matters. In a private litigation case\(^{56}\), a smaller sawmill (Ross-Simmons) filed suit alleging that a large vertically integrated international timber growing and sawmilling corporate group (Weyerhaeuser) drove it out of business by bidding up the price of sawlogs in a particular locality in North America to a level that prevented Ross-Simmons from being profitable but ultimately the plaintiff failed on appeal. Nevertheless, it is an interesting case because it explores in detail how standard predatory sales pricing tests can be applied to an alleged predatory buying price case by a processor of commodities raw materials.

138. Consistent with the discussion above in relation to horizontal conduct, significant abuse of dominance cases can occur downstream from the raw commodity. The Mauritius contribution discusses an abuse of monopoly case related to the market of block processed cheddar cheese by IBL Consumer Goods (now IBL BrandActiv), the exclusive domestic distributor. The company had abused its dominance by offering retroactive rebates on Kraft branded block processed cheddar cheese in exchange of premium

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\(^{56}\) Weyerhaeuser Company, Petitioner v. Ross-Simmons Hardwood Lumber Company
shelf space for its Kraft branded processed cheddar cheese as well as other Kraft branded products, including chocolates, biscuits and powdered juice.\textsuperscript{57}

139. A particular challenge may arise for authorities that have exploitative abuse / excessive pricing abuse powers during short periods in which commodity prices rise significantly, particularly if parts of the market are isolated from interregional or international trade. As discussed in the section on Exchange Traded Markets and Speculation above (and detailed in the Appendix to this paper), it is not generally appropriate to treat short run situations where prices shoot up compared with recent prices for the commodity as exploitative abuse cases. Rather, these are better addressed under specifically tailored price gouging prohibitions.

4.5 Mergers

140. The circumstances in which concerns about anticompetitive mergers emerge tend to mirror the circumstances outlined above with respect to horizontal and vertical arrangements. First, contentious merger cases arise more commonly in relation to the production of mineral commodities than the production of agricultural commodities. A prominent example concerning iron ore mining was the abandoned BHP Billiton and Rio Tinto proposal.

141. At the beginning of 2008, the acquisition of \textit{Rio Tinto} by \textit{BHP Billiton} was announced. Both merging parties were British-Australian dual-listed companies that mine and market a range of commodities such as iron ore, coal, uranium, aluminium, mineral sands, copper and diamonds, as well as various other base metals and industrial minerals. The proposed merger was notified to a number of jurisdictions, among others Australia, EU, Japan South Africa and the US. It was subjected to an in-depth analysis, in particular with respect to potential competition problems in the markets for iron ore; in South Africa, aluminium posed potential problem. Concerning the iron ore, Rio Tinto and BHP Billiton were number two and three producers; through the merger, they would have become number one, controlling with the previous top producer (Companhia Vale do Rio Doce of Brazil) most of the world market, with all other producers being significantly smaller. Though the acquisition was cleared without conditions in Australia and the US, remedies including divestiture were expected in the EU; before the European Commission’s decision was adopted, the merger was abandoned. It is noteworthy that the acquisition was announced in time of the commodity markets surge and abandoned at the end of 2008 when the downturn started.

142. In mid 2009, the joint venture of Rio Tinto and BHP Billiton concerning production of iron ore in West Australia was announced. It was, again, reviewed by a number of jurisdictions worldwide, including Australia, Germany, EU, Korea and Japan, all of them expressing preliminary competition concerns. The project was abandoned by the end of 2010, before any competition authority has decided; it was however expected that far reaching remedies would have been required. At the time the joint venture was abandoned, the prices of iron ore were still rising.

143. Second, for both agricultural and mineral commodities, it is more common to find cases upstream or downstream of the commodity production activity itself.

144. At the end of 2011, South Africa’s Competition Tribunal blocked the merger of \textit{Pioneer Hi-Bred} and \textit{Pannar Seed}, two companies active in breeding, production and distribution of seeds. Pioneer is a US based company and second largest maize seed producer and supplier in South Africa, Pannar, based in South Africa, the third largest. Hybrid maize seed was the primary area of concern; but for Pioneer and Pannar, there would by only one remaining company distributing these seeds, US based Monsanto.

\textsuperscript{57} DAF/COMP/GF/WD(2012)\textsuperscript{7}. An interesting post-enforcement evaluation is described in the contribution.

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145. Hybrid maize seeds are genetically modified. Differences in climate, soil type, pests etc. mean that hybrid seed is bred specifically for a given region, suggesting a geographic market which is national at best and potentially even more localised. More than 75% of South African maize is grown from hybrid seeds.

146. The main concern was a possible increase in prices after the merger. Pannar has gained a strong reputation thanks to its extensive experience with local conditions, and its vast and locally adapted germplasm (library of seed varieties) represents a key competitive advantage. Another concern was that the merger would have significantly increased barriers to entry; Pannar is the only local source of locally adapted germplasm and without it, potential entrants would have no access to local seed varieties.

147. The judgment was appealed to the Competition Appeal Court.

148. Similar concerns were raised a few years ago in a merger of two multinationals active in plant protection chemicals, i.e. protection products to control plant diseases, pests (insects etc.) and weeds in crops.

149. In 2002, Bayer’s acquisition of Aventis Crop Science (ACS) was reviewed in Canada, EU and the USA; all these jurisdictions identified competition concerns and cleared the concentration only with remedies, consisting in divestiture of part of the business concerned. In the EU, for example, apart from divestiture of a certain herbicide and providing a licence to a certain molluscicide, an “en-bloc” sale of ACS’s insecticides and fungicides business to a single purchaser was agreed.

150. The insecticides were of global concern, since Bayer and ACS were two out of three multinational corporations fabricating new generation of these products. There were also problems concerning more local markets. For example, Bayer and ACS were the only suppliers of cool weather cotton defoliants in the US; these defoliants are chemical harvest aids designed to remove leaves from cotton plants without drying them out, needed for the economical harvesting of premium grade cotton. The ACS’s defoliant business was therefore divested.

151. Similarly, the markets of agricultural and mining technologies are often world-wide, and merger therein may cause competition concerns. For example, in 1999 a merger between New Holland and Case, two leading companies creating a worldwide number one in the manufacture and distribution of agricultural machinery and construction equipment, was cleared by the European Commission, the US Department of Justice and many other competition authorities only on condition of divestitures of manufacturing plant and opening of formerly exclusive distribution channels in a number of countries.

152. The markets concerning processing of commodities are usually more localised, which makes any comparison more difficult. For example in the meat processing industry, the 1988 acquisition of Brotwick, a UK company, by Australian Australia Meat Holdings was challenged in Australia. The merger was concerned with abattoirs, facilities for large-scale processing of meat, most of which would be exported, in Australian Queensland province. The court hearing the case concluded that Northern Queensland constituted a separate relevant market because abattoirs from southern areas were not substitutes; the case was put that the lack of substitutability arose from transport costs, the loss in condition of fat cattle during transport, the bruising that occurred to fat cattle during transport, the producers' aim to fatten their cattle to prime condition and to have them slaughtered as quickly as possible thereafter and finally the producers' loyalty to local abattoirs. Divestiture of certain abattoirs was ordered in order to remedy the situation in North Queensland, which would have been dominated by the merged entity. Conversely, the Australian Competition Authority did not oppose further mergers on these markets, most recently in 2011 Teys Meat Group, Australia’s second biggest meat processor, and multi-national Cargill, especially due to limited geographic overlap of their activities.
153. Similarly, after a thorough analysis, the acquisition of **Better Beef** by **Cargill** in Canada in 2004, in the geographic market of Western Canada (and certain US northern states) and Eastern Canada (and certain US north-eastern states) was not opposed, despite the large market share of the merged entity and significant (though passable) barriers to entry, given by economies of scale and established customer relationships. The Canadian Competition Bureau concluded that the threat of entry and countervailing power on the part of retail grocery firms make it unlikely that the merger will result in a substantial prevention or lessening of competition.

154. In the downstream production chain, the 2004 merger of US **Weyerhaeuser** and Canadian **Domtar**, though creating the biggest North America’s fine paper company, was not challenged by the Canadian Competition Bureau and the US Department of Justice. Both undertakings were also active on a number of other markets, including forest management and production of lumber and other wood products.

155. Similar considerations are taken into account while assessing the vertical effects of mergers. Processing and distribution of dairy products may serve as an example.

156. In 2000, the Finnish competition authority approved the acquisition of two regional companies processing milk and producing dairy products, **Ousuksunta Maito-Pikka** and **Kainuu Osusmeijeri**, including their marketing company Aito Maito Fin, to **Valio**, the biggest milk processor in Finland. As a result of the merger, the share of Valio in the purchase of raw milk from producers would have risen up to 80%; one of the main concerns therefore was how to secure sufficient quantity of raw milk to Valio’s competitors. The remedies included, inter alia, the obligation of Valio to sell an annual maximum 150 million litres of raw milk to its competitors at a price equal to the average Vario’s purchase price.

157. Since the Vario’s position in several dairy products markets was very significant as well, e.g. over 70% in liquid dairy products (milk, sour milk, cream etc.) and over 60% in milk powders, Valio also undertook to offer its logistics services to competitors, as well as dairy processing and packaging services, and also, that any of its production plants under the threat of closure would be offered for sale to its competitors, without any restrictions for use.

158. Interestingly, similar sort of merger was reviewed in Portugal, with structural remedies being imposed.

159. In 2007, the Portuguese competition authority cleared a merger, which consisted in the acquisition of **International Dairies** by **Lactogal**. Lactogal was the main Portuguese company in the milk industry, processing raw milk and producing pasteurised milk, UHT milk, cheese, yoghurt, and other dairy products. International Dairies controlled Renoldy, a company distributing its dairy products also collecting and processing raw milk.

160. The merger would have strengthened the dominant position of Lactogal in a number of relevant markets. In particular, the acquisition of Renoldy and its collection of raw milk would have raised barriers to entry and expansion in the markets of dairy products, due to the difficulties of obtaining raw milk from producers. After the merger, Lactogal would have controlled over 70% of the raw milk; that would have reduced incentives to entry in the milk industry, reducing contestability in these markets, further strengthening the dominant position of Lactogal. As a solution to the competition concerns identified by the Portuguese competition authority, Lactogal proposed to divest Renoldy. This remedy allowed the merger to be cleared.

161. Vertical effects are often concerned with transportation. When the merger of **United Grain Growers** and **Agricore Co-operative**, grain growing and processing companies in Western Canada, was
approved in 2002 by the Canadian Competition Bureau, remedies were imposed, obliging the undertakings concerned to divest several country grain elevators and a port terminal in Vancouver.

162. Similar concerns were raised in a complex merger of mining companies in Brazil.

163. Companhia Vale do Rio Doce (CVRD) is the world largest producer and exporter of iron ore and iron ore pellets, an important producer of other minerals and at the same time the largest logistics player in Brazil, which holds operating concessions for a number of freight railway lines and harbour terminal facilities providing services both to its own mines and steel production facilities and to other customers. Some of the customers served by CVRD’s lines are competitors in mining or steel production, a circumstance that has led to a series of cases alleging discrimination by CVRD.

164. Brazilian competition authority jointly analysed seven merger operations involving CVRD, whereby it acquired control over iron mining companies and their associated rail lines. The merger was approved in 2005, on condition CVRD would either divest one of its subsidiaries, giving it control over a strategic railroad, or sell one of its mines.

4.6 Pro-competitive reforms

165. As noted above, it is quite common for countries to adopt policies that limit or eliminate competition in agricultural commodities markets. In some cases, but less often, governments also intervene to limit competition in mineral commodities markets (particularly in coal, gas and other energy markets).

166. Once a market is distorted by regulatory intervention, often additional problems are caused and pressure mounts for further and further intervention. For example, if prices are subsidised, it encourages over-production and then, to maintain prices, even more support is required. Similarly, if prices are regulated downwards, producers have a reduced incentive and ability to continue producing and investing in replacement equipment and further shortages often result, adding pressure for further intervention.

167. Accompanying this background paper, expert panellist Mr. Scott Davenport has provided a paper which notes that58:

- In developing countries, there is often extensive regulation hindering competition in commodities markets and reforming regulations which unnecessarily restrict competition provides considerably greater potential for improving economic wealth than law enforcement.
- In fact, there is a danger in central policy agencies:
  - for the enthusiastic embracing of competition law, almost as a diversion from addressing significant and longstanding regulatory restrictions on competition; and
  - a strong focus on trade policy to obscure the need also to deal with ‘behind the border’ competition issues such as domestic market restrictions.

168. Davenport’s paper also explains that there is compelling evidence that market orientated agricultural policy reform leads to higher rural incomes, increased agricultural productivity and reduced rural poverty. The reason is that price signals are the ‘drivers’ of efficient public and private investment, and not just in agriculture, but in other important areas such as support industries, infrastructure development and research.

169. Ideally countries would take action to remove anticompetitive regulatory impediments before they become so costly that they are unsustainable. However, this is often politically very difficult to do and, as illustrated below, countries often take action only when the costs of the regulations are so great that they are forced to reform. Set out below are:

- two examples (from Australia and New Zealand) that focus on reforms that required a difficult adjustment process for the producers; and
- an example from Israel that focuses on reforms that pose particular adjustment difficulties for consumers.

170. By the mid-1980’s in Australia, anticompetitive government intervention had become widespread within its economy from agricultural industries to manufacturing industries to financial and other services. Government intervention in the market included high international trade barriers, monopoly marketing boards, extensive exemptions and gaps in the coverage of competition law and subsidies. On 14 May 1986 the country’s own chief finance minister, Treasurer Keating, shocked the nation by warning that the country would become a banana republic unless fundamental reforms were undertaken. By 2 December that year, Standard & Poors downgraded the national government’s credit rating from AAA to A+.

171. Although there was considerable dissent, the prevailing community response was to accept that fundamental change was required. Macroeconomic policies were immediately tightened but without market reforms, decline would have continued. Reforming markets is detailed work which takes time to complete and the task is significantly complicated by the federal structure in which power is shared. Australia’s approach to the problem was to enter into formal inter-governmental agreements with explicit competition principles, a comprehensive coverage, a timetable for a systematic process of inquiry and analysis in each industry and the financial arrangements to encourage reform.

172. When the dairy industry was scrutinised, very extensive market distortions were found to impose significant economic costs. In the immediate pre-reform period there was free trade in cheese, yoghurt and other processed dairy products but milk destined for human consumption was extensively regulated.

173. Like many other federal countries, the Australian constitution entrenches a prohibition against action by the Federal and State governments that distorts internal trade. Notwithstanding this, each State had established a monopoly Statutory Marketing Board that provided all dairy farmers within their State to ‘fair and equal access’ to the market, through a minimum wholesale prices of milk and limited quotas allocated to all dairy farmers to be able to sell a quantity of milk at the regulated price. The costs of the inflated wholesale price were financed through two types of levy (or taxes), one type borne by consumers to subsidise producers and the other type borne by all dairy production to subsidise milk. There was widespread recognition that these arrangements were unconstitutional but a tacit agreement amongst the relevant parties not to challenge the system.

174. All sorts of costs resulted from these policies:

- consumers paid inflated retail prices due to the prices set and the levy;
- some producers bore more cost in levies than they received;
- the production mix was distorted so that producers sought to produce less cheese, yoghurt and butter (much of which was exported);

59 Of several such agreements the Competition Principles Agreement is the most relevant in this context.
DAF/COMP/GF(2012)2/REV1

- the optimal herd structure was distorted away from high cream producing breeds of cow towards cows that produce higher volumes of less creamy milk;

- in some States land was devoted to dairy farming and expensive milking sheds and refrigeration equipment were installed in regions that were better suited to other forms of agricultural production, while in other states, prime dairy producing land was partly put to less rewarding uses; and

- a great deal of farmers’ energies at an individual and collective level were diverted to lobbying for subsidies, claiming and enforcing rights to quotas and secondary market re-trading of quotas.

175. In recognition of the substantial social dislocation that would result from reform, the national government offered A$1.7 billion (today’s exchange rate is approximately A$1:$US1) in assistance to dairy farmers who chose to exit the industry and retrain in another job or who decided to stay within the industry but restructure their production to adapt to the new market system. Legislative action by State governments was agreed to on condition that local farmers receiving national financial assistance. Although the cost of this assistance would amount to a very substantial 11c per litre during the restructuring period, it was still estimated to less than compensate farmers for the costs incurred:

Table 2. Estimate of the effect on farmers profits in Australia

<table>
<thead>
<tr>
<th>(A$’000 per financial year)</th>
<th>NSW</th>
<th>Victoria</th>
<th>Qld</th>
<th>SA</th>
<th>WA</th>
<th>Tas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profits (losses) 2000</td>
<td>19.6</td>
<td>1.3</td>
<td>10.8</td>
<td>15.7</td>
<td>50.7</td>
<td>20.3</td>
</tr>
<tr>
<td>Profits (losses) 2001</td>
<td>(30.5)</td>
<td>(2.1)</td>
<td>(31.9)</td>
<td>(15.8)</td>
<td>(31.3)</td>
<td>(1.1)</td>
</tr>
<tr>
<td>Adjustment payment</td>
<td>20.3</td>
<td>12.3</td>
<td>15.9</td>
<td>18.2</td>
<td>30.9</td>
<td>8.9</td>
</tr>
<tr>
<td>Profits (losses) after assistance</td>
<td>(10.2)</td>
<td>10.2</td>
<td>(16.0)</td>
<td>2.4</td>
<td>(0.4)</td>
<td>10.0</td>
</tr>
<tr>
<td>Net change in profits</td>
<td>(29.8)</td>
<td>11.5</td>
<td>(26.8)</td>
<td>(13.3)</td>
<td>(51.1)</td>
<td>(9.7)</td>
</tr>
</tbody>
</table>

Source: P Earl 2003, Australia’s Dairy Reforms, Lessons for Canada

176. An important implicit commitment was that the same principle was being applied to a wide range of other industries and, in time, dairy farmers would benefit from reforms in other industries and, indeed in time they did. As producers buying inputs, and as consumers spending their earnings, dairy farmers benefited from reforms undertaken in the energy industry, the financial services industry, air transportation, professional services, manufacturing industries and many others. Each industry typically received some financial assistance less than full compensation.

177. At the level of the national economy, market reforms combined with the removal of trade barriers and a sustained fiscal conservatism enabled the economy recover and prosper. One indication of this turnaround was that in 2003 the national government regained its AAA Standard & Poors rating.

178. In New Zealand, agricultural industries were also reformed during the same period. The New Zealand economy is less diversified than the Australian economy and its export revenues depend heavily on the sale of agricultural and food commodities such as dairy products, meat, wool, fruit and seafood.

179. By 1984, a wide range of government impediments had built up in many industries and these had become unsustainable for the nation in the long term. Government intervention included exchange controls, tariffs, subsidies to off-set the effects of tariffs and agricultural ‘single desk’ statutory marketing boards. To obtain acceptance from the New Zealand community for the necessary reforms, an economy

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wide reform programme was undertaken, the most crucial of which were the agricultural reforms. As the New Zealand contribution notes, the fiscal deficit was 9% of GDP, government debt was at 40% and the consumer price index was at almost 20%. The country could no longer afford to support inefficient sectors, including the agricultural sector.

180. Many of the subsidies had encouraged over-farming through the intensive use of fertiliser and had encouraged farming on insufficiently productive land. At about this time the fertilizer subsidy was removed, the abundant supply of cheap phosphate exported to New Zealand from Nauru for use as fertiliser was also exhausted resulting in a very substantial increase in key costs of production.

181. The removal of subsidies and statutory marketing boards in the sheep and beef industries exposed these industries to unbridled market forces. For a period of almost 10 years from 1984-1993 farm profitability declined significantly and drove a very wide range of different structural adjustments and a number of different solutions became apparent:

- some producers increased in size to obtain additional economies of scale and thus reduced costs;
- some producers decreased volume of production but significantly improved the quality of their products thereby increasing the revenue earned;
- some producers switched from producing sheep to instead producing wine or turned their land over to timber plantations both of which were products with rising demand;
- some producers diversified either between different agricultural products or by retaining their farms and themselves taking urban employment and others sold their farms (or part of them) to city workers and the properties became residences combined with hobby farms; and
- some producers diversified into the tourist industry to become working farms combined with holiday accommodation or suppliers of gourmet food using ingredients grown on the farm.

182. As can be seen from the above responses, many of these reforms assisted in establishing a more sustainable economic future as well as resulting in a more environmentally sustainable pattern of production.

183. In a discussion focused on competition, the dairy industry’s reforms are important to consider separately and in more detail. In most respects the above discussion applies equally to the dairy industry but, as discussed elsewhere in this paper, a very important part of dairy production is the processing which occurs close to the farm – either simple pasteurisation of drinking milk or the manufacturing of cheese, yoghurt and butter.

184. As in other industries there was a statutory marketing board, the Dairy Board, that had a monopoly over the export of key products. The Board was owned by four co-operatives, two very large ones and two very small ones and the industry was essentially characterised as a domestic duopoly integrated with an export monopoly. Apart from the removal of subsidies and trade barriers, the key question arose in the reform process as to how to re-organise this structure.

185. In 2001, with a view to enabling a company to be formed that can compete effectively on international markets, the two large co-operatives and the Dairy Board were merged together to form a farmer owned co-operative, Fonterra. The single desk status was removed so that there is the possibility to by-pass Fonterra in export markets but it retains an extremely high share of New Zealand milk purchases, dairy production and sales.
186. The initial plan for Fonterra was for it to engage in significant research and development and marketing expenditures whereby the company would be able to compete effectively with large international privately owned dairy companies like Nestle. However, to date the company (and New Zealand dairy farmers) continue to be mainly dependent on sales of commoditised products.

187. At an aggregate national level, by 2003, the reforms were seen as a very substantial success. Since then, the exposure to world markets has resulted in strong years and not-so-strong years. Nevertheless, the industry is now a major export revenue earner for the country, the industry appears to be sustainable and the level of support received is negligible. However, at an individual farm level, the picture is considerably less certain.

188. When the reform process first started, farm profitability fell before rising slowly until about 1998 from which time profitability significantly improved at about the time Fonterra was formed and then has oscillated since then. Behind these figures there are hundreds of thousands of individual family owned businesses that have undergone extreme pressures. One illustration of this is a “misery index” established by Pita Alexander using a survey of farm level financial cost and revenue data and it reflects his assessment of the minimum level of returns that a dairy farm typically needs to deliver a sustainable quality of life for a dairy farmer leaving a sufficient farm surplus to cover the family’s living expenses, education expenses, tax, equipment replacement and debt repayment. The level of misery defined this way has increased significantly and by 2005 it had reached 80%.

189. As noted above, Fonterra is a co-operative owned by dairy farmers. One apparent outcome of this ownership structure, combined with the evident pressure on family owned dairy farming businesses, is that farmers have chosen to extract significant value from Fonterra through fully valued milk pricing. This has raised the question as to whether the business is under-investing in research, development and marketing and the debate continues as to whether the there should be further reforms undertaken.

190. Overall, the New Zealand contribution sums up its reform programme as follows:

“The New Zealand experience with the removal of government support has demonstrated that farming in a de-regulated environment is feasible, and yields a portfolio of activities associated with better resource allocation; within the sector and among sectors. Exposing the sector to international competition has also meant that it has had to innovate and adapt in order to maintain its international competitiveness. Consequently the sector is better able to manage risk, including that associated with price volatility in commodity markets.”

191. In 2010 in Israel there has been an intense consumer focus on the costs of living. Initially concern was expressed over the price of cottage cheese that had increased by almost half following the removal of price regulation. Some members of the public responded by organising a consumer boycott of cottage cheese producers. From this initial starting point, direct consumer action then expanded rapidly, with concerns over a wide range of commodity prices including the prices of gasoline, flour, bread, sugar, cheese, chicken and dairy products and also into the costs of services such as housing and child minding.

192. The government established a Committee to address the issue of the cost of living (the “Trajtenberg Committee”) which developed a package of measures to address the problem including:

- for the traded goods sector, lowering import barriers and subsidies and expanding the capacity of key seaports to expose domestic producers to competition;

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62 Per J Donkers, Operating the Dairy Farm Business for Profit.
for the non-traded goods sector (from the construction industry to supermarkets to public transport), enhancing the powers of the competition authority in relation to information gathering and law enforcement and opening government procurement contracts to public tendering;

- reform of the taxation system to make it more progressive (i.e. imposing a higher tax burden on the wealthiest) which targets assistance to those in need and improves consumers ability to afford necessities without distorting markets through subsidising either the production or consumption of particular goods; and

- intervention to support certain services such as housing construction and child minding.

193. Notably absent from the recommendations was any suggestion to re-introduce price controls on cottage cheese or any other product.

194. Not surprisingly, many domestic producers in industries that are currently protected were vigorously opposed to the recommendations as were some other sections of the community, some concerned that the recommendations do not go far enough and others concerned they go too far. Nevertheless, government welcomed the report and, with certain modifications, the government has gradually been implementing the recommendations.

195. In summary, market reforms in commodities markets can significantly improve national economic performance. However, agricultural commodity industries tend to be constituted of a large number of small family businesses who can undergo significant adjustment difficulties. Nevertheless, unless the industry was fundamentally unviable from the outset, it should be possible to find a path for reform which will also ultimately result in a world competitive and profitable agricultural industry even in developed countries with comparatively high labour and input costs. Necessary ingredients for a successful reform appear to include:

- A broad understanding in the community of the economic fundamentals and the need for reform;
- An identification of core principles underpinning the reform and a sense of fairness between the different parts of the community;
- A careful analysis of the specifics of the market;
- A thoughtful sequence of reform steps; and
- Government policies that remove impediments, or actively assist, structural adjustment.

4.7 Governmental policies to limit impact of price volatility – “crisis management”

196. The volatility of commodity prices, in particular their unexpected increases, may be difficult or impossible for consumers to bare. Therefore, it is not only legitimate but perhaps even an important responsibility for governments to intervene to ensure that unreasonable burdens are not borne by those who cannot do so. The danger is that well intentioned policies can often cause significant collateral costs for the economy or the policies may even be self defeating in over the long term.
Many different short term and long term policies have been used including the following:

- Introducing export restrictions;
- Easing import restrictions;
- Accumulating and releasing ‘strategic’ stocks designed to move market prices;
- Accumulating smaller ‘emergency’ stocks designed to feed consumers in the very short term;
- Price regulation;
- Subsidies for customers;
- Market studies;
- Price monitoring;
- Increasing land availability;
- Promoting “self sufficiency”; and
- Even seeking to control population growth.

When considering and evaluating different policy options, it is useful to identify whether the problem identified is one that is caused by an impediment in the market which, if a long term solution can be found, will be a sufficient policy response; or the problem identified is such that even if the market was functioning market well, it would not be considered to deliver an unacceptable policy outcome.

For example, the problem may be that the poor cannot afford basic foodstuffs. Does that problem arise because the retail price of food is inflated by restrictions or distortions in the market or because the poor cannot afford to buy sufficient food unless there is a redistribution of income or wealth from other parts of society? It may be that there are two problems – inefficient markets and a need for a redistribution of income or wealth.

If the problem can solely be attributed to a dysfunctional market, then any policy response should map out a sequence of initiatives to address the immediate need in a way that provides exit strategies that will remove the market impediments and put the supply chain onto its own sustainable and self correcting.

However, if there is an ongoing need for there to be a redistribution of income or wealth, the task is to identify the most efficient (and therefore least distortionary) way to achieve that transfer. For each potential government policy, there are likely to be explicit money outlays borne by the government, producers or other parties and implicit costs such as preventing a producer from selling its production to the domestic or foreign buyers willing to pay the highest price. Two questions are helpful in evaluating these policies:

- Is the most appropriate part of society baring the costs of the transfer to consumers? For example, it may not improve outcomes for society if poor farmers bear the costs of transfers to poor consumers, leaving the farmers in need of income assistance.
- Is the cost of the transfer minimised? For example, a policy (like an export ban) that makes grain cheaply available for everyone within a country may result in benefits being received by rich and poor consumers alike and it may tend to encourage some grain to be wasted. A programme targeted more specifically for poor consumers that still provides accurate signals to those consumers that grain is in short supply, is likely to pose a lower aggregate burden on society and, with careful thought about which policy instruments to use, this lower aggregate burden can ideally be directed to the part of society best able to bear that burden.
202. The theoretical best option may not always be initially available – for example, transfer payments may be difficult to design and deliver if a country has a large population of people who are not registered with the government and who do not have a bank account. In the short run, a second or third best policy may be all that is available but the government should also consider whether the impediments to adopting a superior policy can be removed.

4.8 Experience with Government Policies Seeking to Address Price Volatility

203. During the last years of intensive price volatility, a lot of countries have resorted to trade related measures of two very different kinds:

- Countries that are wholly or partly dependant on imports have reduced import barriers. According to the 2009 FAO study, 43 out of 81 developing countries (53%) reduced import taxes. The contributions of the Philippines and Morocco, for example, provide details of such policies.
- Many net producers countries have introduced export restrictions and the same FAO study has identified 25 (i.e. 30%) of developing countries who restricted exports either through a ban, export quotas or export taxes.

204. Reducing import tariffs assists markets to solve a range of problems. Such policies assist in the immediate affordability of commodities for consumers and also impose competitive pressures on domestic producers. Of course removing a tariff will have a negative impact on the government’s budget in the immediate term but it should be possible to replace this revenue through a more efficient means of revenue collection.

205. For example, in the Philippines case, import tariffs on wheat were completely abolished in December 2008, initially for 6 months. A study subsequently commissioned to evaluate the effects of the removal of import tariffs supported an extension of the suspension of import tariffs but revealed that in some periods, the price of flour was rising even though the prices of wheat decreased, and similarly, price of bread rose irrespective of the price of flour. Import restrictions were reduced on both wheat and flour.

206. Although the countries who have adopted these policies have found them to be useful, it is disappointing to note that there are many instances in which the full benefit of the import tariff reduction was not fully transmitted through the economy to end consumers. Although there is not sufficient information to identify the causes of this, two possibilities would be worth exploring:

- First, the import tariff reductions were temporary reductions, in the Philippines case lasting initially for six months and then extended for a further six months. It is possible that this arrangement did not provide a sufficiently certain or enduring opportunity for new competitors to choose to enter the industry and if the import restriction were permanently removed, a more fulsome transmission may be observed.
- Second, it may be that there are anticompetitive market structures or practices that exist between the national border and the dining table. For example, some of the benefits in the reductions in import tariffs may have been appropriated by the transport, distribution, baking or retailing

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sectors. In this respect, there may be an important complimentary role for a competition authority to investigate whether such problems exist.66

207. **Imposing new limits or impediments on commodities trade by exporting countries** is sometimes used to attempt to stabilize the domestic prices, thus sustaining supply at national level. The ability of export barriers to prevent the domestic prices from rising appears to be limited and the policies create a number of other problems for the economy. Firstly, such measures are generally adopted in times when the markets expect further price surges, and those who hold the commodity often defer the sales, expecting higher revenues in future; the prices thus continue to rise. Secondly, the prices of products bought by final consumers do not copy the prices of primary products, as we have already observed with respect to import tariffs. And thirdly, such measures have destabilizing effects on international trade, often amplifying the upward worldwide price movement.

208. In **Argentina** there is a system of export quotas for wheat. The purpose of the wheat quotas is to ensure that local consumers have access to affordable stocks but producers often express anger that they are not able to access lucrative international sales markets and, indeed, preventing them from selling products at the highest price reduces the potential tax base and therefore the ability of the government to take other measures. During the 2011 election campaign, the President announced that after a technical analysis of increased production and the effects of exports on local prices, the export limit would be increased by 450,000 tons in addition to the previously permitted 9 million tons but many farmers remained angry.

209. In **2010, Russia** experienced highest temperatures in 130 years, accompanied by catastrophic drought. The overall harvest of grain was approximately one-third less than in the previous year. As a consequence, the price of grain and staples such as bread surged. In August 2010 the government instituted an export ban, lasting till the summer harvest in 2011. Immediately afterwards, the national grain prices stopped rising, whereas the world prices increased significantly. From September on, however, the national prices began to rise again, generally following the pattern of world prices (though admittedly staying lower, as before the export ban).67

210. **International trade may serve as a buffer for local fluctuations originating in domestic markets.** Trade policies designed to insulate domestic prices from world markets are costly for countries employing them, and – especially in the case of larger countries – they increase world price volatility by limiting supply when world prices are high and decreasing demand when prices are low. Frequently, they do not succeed in stopping the price increase, while at the same time, they contribute to the price volatility at global level.

211. The main problem is that an export control prevents producers from gaining the full potential value for their crops which generally results in them under-investing in future production which makes the problem of scarcity worse in the future. Equally consumers do not experience the full effects of scarcity and, at least the wealthiest consumers, will not economise on consumption. It is always theoretically the case that society can gain from permitting the exports to occur, taxing the profits and directing income assistance payments to consumers in need.

212. **Governments may also attempt to influence the commodity prices by themselves holding, and trading, ‘strategic’ stocks of key commodities.** The experience however shows that in order to be

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66 The Philippines currently has competition provisions in its laws but the formation of a competition authority and laws to provide such an authority with investigatory and enforcement powers is currently being debated.

significantly large, such stocks are very costly to operate. A 2009 World Bank study also suggests that releases are frequently made too late to influence the commodity prices and overall,\(^{68}\) that these systems are not very effective. For example, before instituting the export ban discussed above, Russian government released 3 million tonnes of grain of its grain reserve into the market; the price nonetheless continued to surge.

213. On the other hand, relatively smaller food security emergency reserves can be used more effectively and at lower cost to assist the most vulnerable. For example on Mauritius, a programme of selling “ration rice”, a basic grade of rice substantially cheaper than basmati rice, was introduced by the government.

214. Since the indirect measures to stabilize prices through import or export barriers or market interventions are only rarely successful, the governments may also attempt to set the prices directly. In Kenya, after the price of maize and meals based on it increased by over 50 % in 2008, there was a proposal to control the prices of some essential commodities, including maize. The proposal was heavily opposed by the Competition Agency, arguing that such a measure is likely to cause emergence of a parallel black market and that farmers would not be able to recoup their production costs. Price regulation for maize was not introduced.

215. In Fiji, the competition authority (the Commerce Commission) sets separate wholesale prices in urban and rural areas on different islands for:

- 26 different packaged rice products;
- 7 different packaged blue pea products and 7 different split pea products;
- salt and garlic;
- 37 packaged milk products;
- 22 packaged tuna products, 11 sardine products and 50 other tinned fish products and 12 tinned meat products;
- 11 packaged tea products; and
- approximately 100 different edible oil products.

216. Experience of countries where price regulation has not been positive. For example in Ukraine, both wholesale and retail prices of a number of food products (flour, bread, macaroni, grits, sugar, beef, pork, poultry, boiled sausages, milk, cheese, sour cream, chicken eggs, oil) were regulated; any price increase was conditional upon governmental approval, granted when the increase was economically justifiable. It was observed that the prices had nonetheless continued to increase and that the regulation stimulated increased expenses and usage of intermediaries, providing the economic “rationale” for final prices to be increased.

217. In Egypt, the government did not directly regulate prices of steel, but ordered producers to include maximum resale price provisions into the agreements with their distributors, despite the Competition Authority’s opposition to such a measure. Contrary to the government’s argument, the prices continued to grow and a parallel black market was created.

218. All the measures discussed above are aimed at decreasing the prices of commodities during price surges. Wherever producers receive these artificially depressed prices a significant problem is likely to emerge. As noted in the introduction to this paper, commodities prices are volatile. Producers are faced not only with periods of high prices (and profits), but also with times of low prices (and losses); the periods of high prices thus enable the producers to compensate the losses sustained previously. They may do this through saving during the good years or through delaying or timing new investments (for example the purchase of a new tractor or building up their herds from comparatively lean years to comparatively good years. This phenomenon may be demonstrated in Figure 10 below. If government intervention was to remove the peaks in pricing, it would be difficult to recoup the losses in low revenue years or reinvest. The producers will be less inclined to invest and expand their production capacities and, indeed, this may make the problem of scarcity considerably worse in the long run. It has already been observed in Colombia that the decrease in international prices of yellow corn reflected into significant decrease of production.

![Figure 10. Impact of price volatility on profits and losses](image)

Source: OECD

219. Another policy that has been adopted is for governments to directly support these vulnerable groups by subsidizing prices or consumption of (some) basic commodities for (some) consumers. Indeed, according to FAO, 45 developing countries (55 %) have adopted similar measures.

220. Even such targeted measures may be very costly. In Tunisia, for example, more than 540 mil EUR was spent on such subsidies in 2008 and almost 650 mil EUR in 2011. They are however generally well suited to enable to fulfil the governmental goals without contributing to world price volatility.

221. In Morocco, the government decided to subsidize soft wheat flour, domestically manufactured from imported wheat. The aid was earmarked exclusively for poor rural areas and it amounted to more than 360 mil EUR per year. Similar approach was taken to sugar. Significant subsidies were granted also to oil between 2004 and 2010. The compensation expenditures in individual years constituted from 6.2 % to 16.1 % of the overall governmental budget. According to a study commissioned by the Moroccan government, without the subsidies the inflation would have reached 4.5 % instead of the actual 0.9 % in 2010.

222. Governmental have also tried voluntary collaborations with private producers or less intrusive initiatives to seek to make markets work more effectively. In the Philippines, for example, the government initiated an agreement between bakeries and retailers to sell a certain kind of bread at
affordable prices. Consumers may also be helped by simply being aware of prices charged by different retailers; in Mauritius a Price Observatory was established, monitoring the prices of key consumption items and publicly releasing store-by-store comparison of prices. A similar system operates in Lithuania.

223. Competition authorities are often consulted before governments adopt some measures aimed at fighting effects of price volatility. Frequently, they are called upon to perform market studies of certain sectors of economy where the problems are perceived as particularly dire. Egypt, for example, has reported having recently performed eight market studies, including cement, steel, edible oil, raw milk, corn products and nitrogenous fertilizers. Such studies may benefit the competition authorities in two ways. Firstly, they may identify infringements of competition law and start enforcement actions. In Egypt, cartel proceedings were initiated in the cement and raw milk sectors. And secondly, they may detect regulatory problems that can be overcome using advocacy. In Egypt, lack of competition was observed in the steel sector; the Competition Authority persuaded the responsible ministry to issue licences enabling vertical integration (up to then, there had only been one relevant vertically integrated plant) and to lift import barriers on steel rebar; as a consequence, prices went down more than 60 % (admittedly, the world prices also declined significantly during that period).

224. The experience also seems to suggest that governmental interventions increase the probability of anticompetitive practices; thus, discussions about raw milk prices in Egypt among farmers, packed drinking milk producers and relevant ministries turned into a price cartel.

225. The rigidity of final prices is often thought to be associated with practices of large retailer chains. On the one hand, their buyer power may enable them to exploit their position vis-à-vis their suppliers, on the other, selling power in the retail market may allow them to set prices. In 2009 in Latvia, due to worsening relations between the biggest supermarket chains and suppliers of milk products, which could have lead to higher consumer prices, the government was even considering reducing the market power of the supermarket chains by setting there maximal market shares. These policies, too, pose problems because they may encourage the retailer to stop competing and to raise prices to ensure that its share does not breach the maximum share threshold.

226. Since the primary reason behind governmental intervention would often be to protect the most vulnerable fractions of population, the experience suggests that successful arrangements be specifically targeted at such final consumers.

227. The measures discussed above aim at remedying acute problems of high prices and food shortages. Governments may however decide to employ long-term policies, designed to reduce the price volatility. Prominent among these would be governmental activities stimulating production. For example in Kenya, the government has increased funding for initiatives aimed at sustaining and increasing supply of maize. These include increasing acreage under irrigation, increasing budgetary allocation for provision of fertilizers and seed and also for uptake and storage of the maize; the government is also investing in roads and transport infrastructure. In other countries, governmental measures include investments in specific research (e. g. seeds adapted to local conditions). If these initiatives involve removing impediments to the most efficient use of land and investments, then they hold good prospects for a long term solution. However, if the policies involve government subsidies that push farmers and processors into engaging in inefficient activities, they can be very costly and damaging in the long term. For example, it is interesting to note that, as discussed in the previous section, some of the problems that contributed to New Zealand’s dire situation in the 1980s were subsidies for the use of fertilizer and policies that encouraged farmers to attempt to farm land that was not properly suited to production.
228. Unfortunately no government intervention appears to be costless. As discussed both in this section and the previous section, policies that seek to directly increase the output (for example by opening up marginally arable land or encouraging the use of large quantities of fertilizer) can stress the land and cause its productive capacity to deplete in the long term.

<table>
<thead>
<tr>
<th>Governmental measures</th>
<th>Pros and cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easing import restrictions</td>
<td>Countries have found these policies to contribute to an amelioration of the problems but if they are undertaken only temporarily, they may not be effective. Also experience suggests that there may be an important complimentary role for competition authorities in ensuring that the benefits are transmitted to consumers.</td>
</tr>
<tr>
<td>Introducing export restrictions</td>
<td>These policies have been only successful to a limited extent in lowering domestic prices. They have significant negative consequences for domestic producers, via the taxation system, the government and have significantly perturbed international markets to the detriment of other countries.</td>
</tr>
<tr>
<td>Strategic stocks</td>
<td>The experience with the government investing in strategic stocks is that it is an expensive use of resources that is rarely effective in significantly ameliorating volatility.</td>
</tr>
<tr>
<td>Emergency stocks</td>
<td>Emergency stocks appear to be more useful but only in the very short terms.</td>
</tr>
<tr>
<td>Price regulation</td>
<td>Price regulation poses the risk of creating black market or of discouraging producers from making investments that would improve the fundamentals of the market. Additionally there are the costs of calculating and setting the prices, compliance costs and enforcement costs.</td>
</tr>
<tr>
<td>Subsidies for customers</td>
<td>This approach avoids the problem of many other initiatives that producers may be discouraged from producing an adequate quantity of the product. However, subsidies tend to encourage over-consumption of the particular products and the costs can very quickly result in a heavy budgetary burden.</td>
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</tr>
<tr>
<td>Market studies</td>
<td>These hole the possibility to identify anticompetitive practices and regulatory problems. However, it is not necessarily the case that short term (or any) competition improvements will be found.</td>
</tr>
<tr>
<td>Price monitoring</td>
<td>These activities are unlikely to be damaging to the market but are not always very effective.</td>
</tr>
<tr>
<td>Increasing land availability</td>
<td>If there have been impediments to the efficient use of land, these policies can be helpful. However, if the policies encourage unsuitable land to be cultivated, the policies can be costly for society and environmentally damaging.</td>
</tr>
<tr>
<td>Promoting “self sufficiency”</td>
<td>Although these policies may increase long-term supply, they are potentially very costly because these policies unavoidably put burdens on society and ultimately hamper the economy from making the most it can from its most productive industries.</td>
</tr>
</tbody>
</table>

Source: OECD
5. Conclusion

229. A key purpose of the Roundtable discussion at the Global Forum on Competition will be to identify some suggestions for competition authorities seeking to contribute to addressing the problems of price volatility. This paper is one input into that process and the following tentative propositions are offered for discussion during the roundtable:

- **Suggestion 1:** Competition authorities can usefully undertake some anticipatory monitoring work in the commodities that are the most crucial to their respective countries’ small producer and consumer populations.

- **Suggestion 2:** Particular attention should be given to removing impediments through law enforcement or advocacy in the markets for key inputs (such as fertiliser for agricultural production and explosives for mining production) and the markets for processing and distributing commodities such as grain reception facilities, ports, rail, meat abattoirs, dairy processing facilities etc. However, this does not imply that government should directly undertake or subsidise the provision of inputs or storage and transport facilities because to do so is counter-productive by crowding out private initiatives and wasting limited public resources.

- **Suggestion 3:** Pro-competitive reforms such as price deregulation and the removal of trade barriers should be undertaken before the levels of assistance become unsupportable. The more broadly based and principled the reforms, the more likely that they will be viewed as fair and that the burden of restructuring may be partly offset through benefits arising from reforms going on in other parts of the economy.

- **Suggestion 4:** When short run crisis measures are required:
  - the nature of the problem should be properly identified (either being a problem that the market is failing to deliver products at an efficient price or that a transfer of income or wealth is required for consumers to be able to afford basic necessities);
  - for each potential initiative, the costs that would be borne by each part of society (producers, consumers and governments) should be identified and compared by size and the ability of the relevant part of society to bear that cost. In general, the most efficient solution is the one that is applied as close to the problem as possible and enables all the parties the maximum flexibility to respond to the problem efficiently (for example if the problem is that consumers have insufficient income to pay for basic necessities, a targeted support payment to the people most in need would be the least distortionary);
  - any market distortions to optimal market behaviour should be identified such as any encouragement to over-consume or under-produce;
  - consider whether there are complimentary initiatives that should be taken (for example reductions of import duties combined with a focus on competition law enforcement to ensure flow through of the benefits); and
  - a long run and predictable path to move from short term measures to long term solutions should be identified and publicised to ensure that market players can make efficient investment decisions.

- **Suggestion 5:** Conduct post-crisis evaluations of the measures introduced to quantify the costs and benefits. Identify any long run benefits that could be sought (for example if the suspension or reduction of import tariffs had positive effects, perhaps they could be extended) or alternative longer term solutions.
APPENDIX: EXCHANGES, FINANCIAL MARKETS, SPECULATION AND HOARDING

1. Introduction

1. Speculation in the context of commodities markets consists of trading in a ‘physical’ quantity of a commodity or trading in commodity derivatives on the hypothesis (and exposed to the risk) that:

   - the price will move significantly in the future; and
   - a profit can be made from selling what has been purchased or re-purchasing what has been pre-sold.

2. Any trader can engage in speculation, and in reality it is often difficult to separate speculative from hedging activities. However, in the ideal sense of the term “speculators” are traders who neither trade as producers with a net physical position to dispose of, nor as a party seeking to be supplied with a net quantity of a product. Instead a speculator is someone whose core business is to profit through trading and who ultimately seeks to have off-setting physical trades at a profit.

3. There is often a high degree of resentment or fear directed towards speculation and speculators. Before analysing whether the effects of speculation upon commodity markets are positive or negative, it is worth understanding why this resentment and fear might commonly arise.

4. In the normal course of events, speculation is profitable\(^1\) if the trader purchases a commodity when the price is low and sells the commodity when the price is high. In other words, speculation is profitable when there are significant price movements and can be most profitable when price volatility is present and a commodity can be re-traded at a profit multiple times in a short period on each change in the direction or the price.

5. As noted in the introduction to this paper, severe commodity price volatility can cause significant hardship for both the supply and demand side of the market. When there is a significant level of speculation and profits or prices are high this may also be the time when a significant proportion of the available supply of any given commodity is held by ‘speculators’. It is not surprising that there can be a very visceral objection to speculators (i.e. instinctive objection that may not be rational).

6. There is a very long history of a wide range of different members of society taking vigorous objection to speculations when high prices cause hardship and passions are running high. This can range from populist mob riots\(^2\) at one end of the spectrum, to, at the other end of the spectrum, a situation in

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\(^1\) Profitable in the accounting sense where the revenues exceed the expenses whether or not the amount gained is an efficient or ‘fair’ return.

\(^2\) For example the Southern bread riots that occurred during the American civil war which in part targeted speculators or perceived speculators.
which normally moderately spoken CEOs of stock market listed multinational companies\textsuperscript{3} or national political leaders\textsuperscript{4} make public criticisms of market traders.

7. The defence of the role of speculation and speculators in markets rarely gains as much mass media attention as do attacks on speculation but there is a strong case put in defence of the role of speculation and speculators. The principal contribution that is attributed to speculation is that by arbitrage in time and geography, the activity assists in making markets “deeper” and removing or smoothing market volatility. Secondly, by accepting a degree of market risk, they enable the counterparties (say a grower or a flour mill operator) to avoid that risk.

8. Undertaking a careful, balanced analysis of speculation can be particularly difficult when derivatives trading is involved because even the financially and economically literate people can find it difficult to understand the nature of an individual derivatives contract let alone how the market for trading multiple derivatives contracts as a whole works and how derivatives trading interacts with physical markets.

9. Professors Scott Irwin and Dwight Sanders prepared a preliminary study for the OECD which clarifies the role of index and swap funds in agricultural and energy commodity futures markets.\textsuperscript{5}

10. This appendix covers the following:

- What are the characteristics of physical commodities markets, derivatives, derivatives markets and how do they all interact?
- What is the usual business model for speculators and what are the effects of that business model? As we will see, as a general proposition speculation should in fact be beneficial for markets.
- When might exceptional circumstances arise in which speculation could be of concern?

2. Exchange Traded Commodities Markets

11. Trading in many trade practices markets is undertaken on a bilateral negotiated basis. In other words, a buyer contacts a seller and the two discuss the merits of the transaction and agree the terms between each other. This may work well when the buyers and sellers can contact each other and it is worthwhile to discuss the terms of the transaction such as the merits of the product, delivery location and time, warranty, support services, price and payment terms.

12. On the other hand, that kind of trading model does not make sense in many (but not all) commodities markets. Commodities are by definition homogeneous or standardised products which are equally attractive to buyers regardless of who produces them and where the producer is located. In these cases, it is usually more efficient to have highly standardised terms of trade (e.g. concerning the description of the grade of quality, place and time of physical delivery and payment terms) and then to provide a

\textsuperscript{3} For example, on 11 May 2011, the Telegraph newspaper quoted the President of Starbucks, Howard Schultz, as having “attacked speculators for pushing up the price of coffee to a 34-year high”.

\textsuperscript{4} For example in June 2011 President Sarkozy of France expressed a number of concerns about speculators on agricultural markets and later in the month he was joined by Chancellor Merkel of Germany and Prime Minister Papandreou in expressing concerns about speculators on financial markets.

\textsuperscript{5} Irwin, S. H. and D. R. Sanders (2010), “The Impact of Index and Swap Funds on Commodity Futures Markets: Preliminary Results”, \textit{OECD Food, Agriculture and Fisheries Working Papers}, No. 27, OECD Publishing. doi: 10.1787/5kmd40w1t15f-en
mechanism where all buyers and sellers from anywhere in the world can trade with each other. This is commonly achieved through establishing centrally located exchanges in which professional brokers or traders accept and execute trades from buyers and sellers located anywhere around the world.

13. There are many commodities exchanges around the world who compete with each other or who operate in specialist niches. Prominent exchanges at the international level include the Chicago Board of Trade (which trades in both agricultural commodities and metals and is part of the CME Group that owns and operates large derivatives and futures exchanges in Chicago and New York City as well as online trading platforms), the London Metal Exchange and the Singapore Mercantile Exchange (which trades agricultural and mineral commodities but is particularly well known for trading in oil). However, there are also commodities exchanges located in many emerging countries including several in China, India and even smaller countries such as the Agricultural Futures Exchange of Thailand, the African Mercantile Exchange in Kenya.

14. On these exchanges, trading is undertaken on a real time basis throughout the opening hours for the exchange with anonymous offers to ‘buy’ and offers to ‘sell’ and a transaction occurring each time a trader receives an ‘buy’ order that can matches the most attractive ‘sell’ order quoted or vice versa.

15. Trading in the physical commodity is intuitive and easy to understand in that it usually means that the seller must deliver the product at a fixed time in the near future to a standardised location at a standardised time (or pay a logistics company to do so) from where the buyer takes possession.

16. However, if all buyers and sellers had to wait until the ‘last minute’ to buy or sell, it would expose them to substantial risks that the price might rise or fall and this can make it very difficult to run a farming, mining, food distribution or manufacturing business. This is even more important if the buyer or seller is relying heavily on borrowed finance and the financier requires the borrower to have a predictable revenue and cost position. In these circumstances, managing price risk is a significant benefit to both buyers and sellers. This is the role of a derivatives contract.

17. The simplest derivative contract is a ‘futures contract’ in which a buyer and seller agree a price today for the delivery of a product in, for example, one year’s time. For example, a barley farmer may be concerned that the price of barley next year may fall below the average expected barley price and that this would put the farmer in a difficult financial position. The farmer may wish to sell part or all of their next season’s crop at a price that is guaranteed today before any weather or other disruptions start moving the price away from the average expected price.

18. In comparatively wealthy developed countries it is common for farmers themselves to be given the trading instructions for futures contracts using internet brokers. However, there are also co-operatives and other companies which undertake the exchange trading and which offer to purchase locally or which run ‘trading pools’ with reasonably stable pricing.

19. Equally, a large beer brewing company may wish to agree now what price it will pay for the barley it will use over the next year to produce beer. In this case, the grower (or the co-operative or trading company) and the beer producer are natural counterparties and they can mutually obtain substantial benefits from entering into futures contracts.

20. The New Zealand contribution reports that in 2010 the NZ Stock Exchange launched a dairy futures and options market for the trade in financial products designed to manage risk and smooth out volatility, creating price certainty, transparency and a forward view of market sentiment. It is anticipated that by trading on the futures and options market, dairy participants create price certainty.
Although the initiative is very recent the contribution reports that the early signs point towards the market being a success in this respect.

21. The same occurs in minerals markets where mining companies seek to lock in prices in advance so that they can make long and medium term investment decisions and shorter term decisions on purchasing shipping services or decisions to employ personnel. Similarly, there are a range of parties who seek to lock in their buying prices well in advance – for example a power company may wish to purchase coal now to cover an obligation that they have to sell electricity to consumers over the winter or a copper cable manufacturer or even a cable purchaser who has won a substantial contract to supply cable or build a network.

22. Futures contracts exist in many varieties, as for every type of grain there are a suite of futures contracts by grade of quality and time of delivery. At any given time, there may be trading going on for contracts in all grades of wheat whose delivery or maturity date is one month, three months, six months or twelve months ahead.

23. Although the futures contract is the simplest derivative product, there are many other derivatives products. For example, there are contracts in which the agreement is not to sell a particular quantity at a particular time but an option (or entitlement without an obligation) for a party to buy a particular quantity of a good at a particular time. This form of contract removes only part of the risk – for example such an option in relation to wheat would protect flour millers from the risk that wheat prices unexpectedly rise because they can exercise the option.

24. A swap contract is the simplest of these contracts. How this works is that the parties agree a ‘strike price’ of, say, US$40 per tonne of coal for in six months time. When the contract comes due, if the price is higher (say at $45) then the seller pays the buyer $5. This enables the buyer to trade the commodity in the physical market at the going price (say at $45) and receive $5 ‘compensation’ from the seller to bring the effective cost for the buyer back to the agreed $40 strike price. The effective selling price is also $40 because although the seller earns $45 through the physical sale of the commodity, the seller has had to pay to the seller $5 in compensation (i.e. $45 - $5 = $40). Of course if the price in the physical market moved in the opposite direction (i.e. down to $35) then the $5 compensation payment would travel in the reverse direction from the buyer to the seller and still the effective price paid and received would be $40 (i.e. $35 + $5 = $40).

25. A final important point to understand about exchange traded commodity products and futures is that they are important not only for the trading that actually occurs on the market but also for the information that an exchange traded market provides to the wider market as a whole. As noted above, not all commodity types are exchange traded and even for those commodities that are exchange traded, a minority of the volume of the product is typically traded ‘on market’. In fact the majority of the volume is usually traded off-market but, importantly, the buyers and the sellers decide what they are willing to pay based on the price that they observe being quoted on the exchange traded market. In most cases a buyer and a seller conducting a private negotiation are able to choose to trade on the exchange if they do not receive the price they want bilaterally and therefore the bilaterally traded price is likely to be close to the exchange traded price. In many cases a bilateral contract may in fact not specify a specific price but instead the parties will enter a contract for the regular delivery of volumes of a commodity over an extended period at prices equal to the prices quoted on the exchange on the day of agreed delivery (plus or minus a fixed margin reflecting delivery or other deal specific costs).

26. Unlike exchange traded deals, bilaterally negotiated off-market contracts for the real time physical delivery of a commodity, futures contracts and contracts for difference can be enormously varied and constantly undergoing innovation (and the ability for the contract to be clearly expressed). For
example two parties might enter into a ‘collar’ contract (i.e. one in which they agree to sell a quantity of product at the going exchange quoted price subject to a particular maximum price or down to a particular minimum price). That collar contract may also be contingent on a particular event or events. For example the buyer and the seller’s businesses may be affected by the weather. In barley, for example, warm weather may both increase crop yields for the grower and increase beer sales for the purchaser of barley and therefore it may make sense to make the contractual provisions only come to life if the temperature is higher than, say, 25 degrees for more than 35 days throughout the summer. If the temperature does not reach this threshold then the deal is effectively automatically cancelled. However, if the temperature is higher than 25 degrees the contract will apply and this is useful to both parties who will be growing and purchasing larger quantities as a result.

3. The Usual Business Model of Speculators

27. Explained above is the role of parties who produce commodities or purchase them for use in their businesses. These are referred to as “natural counter-parties”.

28. However, exchange traded markets are likely to be very ‘clunky’ and not work well if the only participants in these markets are parties who buy or sell only by reference to the immediate physical needs of their own business. It may be that farmers do not wish to sell at the times and in the quantities that food processors wish to buy. If sellers enter the market in greater volumes at particular times than buyers, prices will fall significantly and vice versa.

29. To some degree producers and purchasers may be able to delay or bring forward their trades to provide a better match between sales and purchases. However, substantial time differences may expose these parties to significant risks that are not part of their core businesses and which they do not wish to bear.

30. Consequently, there is an important role for pure traders or speculators to ‘fill in the gaps’ or enable the original physical sellers and ultimate physical buyers who may enter exchange markets at different times to ‘find’ each other. Traders and speculators do this by:

- buying whenever spot or futures contract prices are ‘low’ (relative to the price the trader; expects to re-sell for);
- selling whenever they are ‘high’; and
- the difference is the trader’s reward.

31. In this case ‘low’ and ‘high’ simply means that the trader is buying at a price that is lower than the price the trader expects to be able to sell the product for. If prices have already been high and the trader expects them to remain so, then the trader may buy whenever there is even a small easing in the price.

32. There are labour costs and overheads for engaging in trading and there are costs of holding assets and guaranteeing short sold exposures. Trading usually involves taking risk because price movements are unpredictable. Therefore, speculation is only an attractive business activity if high gains on some trades expunge inevitable losses and costs on other trades. Therefore the existence of accounting profits does not necessarily indicate that traders earn excess or economic profits in net terms over time.

33. In that narrow sense, the financial markets may be considered to have brought about volatility earlier than might otherwise have been the case. However, by doing so, the price rise (or fall) provides
much early signals to buyers and sellers to adjust their consumption patterns in a way that should ameliorate the shortage (or glut) and, as a result, in the longer term the price path should be smoother.

34. There are labour costs and overheads for engaging in trading and there are costs of holding assets and guaranteeing short sold exposures. Trading usually involves taking a controlled degree of risk because price movements are unpredictable. Therefore, speculation is only an attractive business activity if high gains on some trades expunge inevitable losses and costs on other trades. Therefore the existence of accounting profits does not necessarily indicate that traders earn excess or economic profits.

35. In return for the profits they earn, speculators provide value to the market as a whole and buyers and sellers in particular. They commonly:

- adopt risks that others do not wish to take;
- analyse information and by their ensuing bids or trades quickly convey efficient pricing signals to the market; and
- absorb capital and other holding costs on long positions and fund the cost of prudential arrangements on short exposures.

36. In summary, therefore, the basic business model of speculators is to:

- buy when buyers are absent and growers are exposed to weak prices (and therefore dampen price decreases and ameliorate the situation for growers); and
- sell when prices are high and food processors are exposed to high prices (and therefore dampen price increases and ameliorate the situation for buyers).

37. In both cases, the trader or speculator has assisted the market to cope with an over-supply situation or a shortage situation. Therefore, even if sellers resent having to make sales to speculators when prices are low and buyers resent having to make purchases from speculators when prices are high, at least the growers and producers have someone to trade with. It may seem that speculators are making profits ‘off the back of others’ or profiting when others are suffering but speculators earn a reward for the risks they are taking on and for the market smoothing service they provide.

38. A question naturally arises, however, as to whether traders can expect to extract greater profits than the value they bring to society. In 1900 this question and the necessary anterior question of whether market movements could be predicted by speculators occurred to the French mathematician, Louis Bachelier. His paper “The Theory of Speculation” provided a detailed algebraic explanation of how it was not possible to predict future price movements and, from this, that speculators could profit (or not) by chance but they could not systematically extract excess returns. No further substantial work was done on this question until the 1960’s when his paper resurfaced and triggered a vigorous debate about what might be the exceptions to Bachelier’s conclusions (discussed in the next section).

4. Exceptional Circumstances in Which Speculation Could be of Concern

39. The previous section explains how trading by speculators in ordinary circumstances is socially or economically useful (even if it is not always popularly understood as such). Nevertheless there are some exceptional circumstances in which trading and speculation may be able to extract value from the market without producing a corresponding social value.
40. The first example arises in a short run context where immediate, partially thought-out reactions by traders to the release of time sensitive information results in prices departing from the fundamentals of a fully and fairly rationalised valuation. Within the very short term markets can often have a ‘herd’ mentality that can rise from ‘group think’ where people influence the way each other understand and interpret information particularly where detailed information cannot be fully digested before trading takes place. There are two observed examples – either under-reaction in the face of information that should substantially shift the market but instead the market appears to be in self-denial (e.g. asset bubbles); or the reverse – the market appears to over-react to the headline message (e.g. the effect on airline manufacturing stocks after terrorist attacks on air travel or the effect on oil prices of the declaration of war in an oil producing country). This is often what is being referred to as market sentiment.

41. Some writers consider this and related phenomena to be significant but other researchers who have attempted to measure whether the phenomenon is significant report that the effect is so minor that it is less than the usual spread between the prevailing bid and ask prices. In other cases, these sorts of anomalous market movements do appear to enable profitable speculation for a limited time before analysts and specialist financial press identify them and once they become widely known and then they quickly dissipate.

42. The second example (‘market manipulation’ construed narrowly) arises because, as discussed in the previous section, ‘on-market’ exchange trading usually accounts for only a minority of the trade in a particular commodity. The majority of commodities trading occurs bilaterally with the price paid to be the price quoted on the exchange (plus or minus a fixed margin for deal specific costs). In other words, the ‘on-market’ trade is like the tip of an iceberg with a much vaster quantity of trade affected at the price determined by the trade of a comparatively very small quantity of the commodity concerned.

43. The same parties are often bi-lateral traders and on-market traders. They may have entered into very large bilateral agreements and also be a participant on the exchange. In these circumstances, situations can arise in which it is in a party’s interest to make an unprofitable or irrational on-market trade very close to the end of the trading period in order to change the amount paid on bilateral contracts. For example, if a party has agreed bilaterally to sell 3 million tonnes of coal or of wheat at the price quoted by the exchange at the close of trade, it may provide an incentive to drive the price up by buying ½ million tonnes of the same commodity on market in the minutes running up to the closing bell to push the price up by, say, $2.00 per tonne. The effect for the trader is that they may have to pay $2.00 more than the fair price for ½ million tonnes traded on-market (i.e. they suffer an inflated cost of $1 million) but under their bilateral contract they will receive an extra $2.00 for all the 3 million tonnes to be supplied (i.e. they will inflate their bilateral sales revenue by $6 million).

44. In extreme cases, the same party may enter a thinly traded exchange traded market both as a buyer and a seller through two different brokers, or even the same broker, placing orders to buy and to sell at the same inflated or depressed price which means that there is no real sale yet the quoted price quoted at the end of the day is higher or lower than it would otherwise have been.

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7 “The Efficient Market Hypothesis and Its Critics” Burton (2003); “Many can be explained away. When transactions costs are taken into account, the fact that stock prices tend to over-react to news, falling back the day after good news and bouncing up the day after bad news, proves unexploitable: price reversals are always well within the bid-ask spread. Others, such as the small-firm effect, work for a few years and then fail for a few years. Others prove to be merely proxies for the reward for risk taking.” Frontiers of Finance Survey, Economist 10 September 1993

8 Similar conduct has been observed in the past for example by Enron trading in natural gas.
45. The greater the level of competition amongst traders, the more difficult it is for such manipulation to work. However, it will not be possible for competition to be sufficiently enhanced in time and many countries have specific forms of regulation and regulatory agencies responsible for policing exchange market manipulation.

46. The third example arises when a government wishes to maintain, or move, a market price to a different level than the market would otherwise settle at. For example, it has often been the case that governments 'peg' their currency (or less often a commodity product such as the trading by the Australian Wool Board in the 1980’s) to a particular price for broader social policy reasons. Such broader policy reasons might include a desire to prevent or delay the need for socially painful adjustment to take place within a country as a whole or a specific industry. The government may, for example, wish to first put in place social security measures or stimulate alternative industries for workers who will lose their jobs when markets move.

47. In these circumstances, speculators (correctly or otherwise) may predict that the government will only be able to hold the price level for a limited period before its resources or tolerance for spending money to hold a market price is exhausted and at the point the government ceases to support the market price it will move. In this case it will be attractive for traders to trade large volumes of the currency or commodity today on the basis that the government will eventually fail to hold the peg. If they do not have any physical quantities of the currency or commodity to sell, they may even enter into substantial futures contracts to sell quantities of the currency or product that they have not yet purchased (i.e. short selling).

48. For example, if a government is trying to keep the value of a currency or product above the level at which the market would settle, then speculators will have an incentive to heavily sell the product, thus requiring the government to put even more resources into buying the currency or product. In this situation a ‘breaking point’ may be reached sooner than otherwise – or it may even be the case that a ‘breaking point’ is reached when it would not be reached otherwise.

49. In this case, the traders will usually have made the markets reach an efficient level more quickly (and in that sense their actions can be viewed as socially desirable) but government resources will be wasted and the broader social policy aims sought to be achieved will fail.

50. For completeness, a fourth series of related situation in which speculation can be socially damaging is relevant to mention but it relates specifically to stocks rather than non-commodities. Speculative trading can occur in industries such as banking and insurance (and in some cases non-finance industries) where a company’s prospects are partly dependent upon its stock price rather than the usual causal relationship in which the company’s business performance drives the stock price. Banking and insurance stocks (which inherently have a high degree of equity leverage), and some other companies who adopt capital structures in which significant debt financing is dependent on the stock price, dependent on company specific or market-wide stock market confidence. It is also notable that the number of shares on issue for a normal company is finite and therefore susceptible to being affected by large trading positions. It is possible in these circumstances, particularly during times where there is a systematic low in market confidence, for selling side speculation to shatter confidence in particular stocks and trigger an inability for an otherwise viable company to sustain its solvency position. In these situations, short selling combined with creating a ‘run’ on the firm can bring about a self fulfilling, and potentially profitable, prophesy of doom.

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9 In the case of currency interventions, the resources are normally limited by a country’s central bank’s foreign reserves (including gold); there is an array of academic literature that has studied ‘speculative attacks’ in such context.
51. None of the above cases directly concern competition authorities. However, there are two cases (sometimes associated with elements of the cases above) in which competition issues do arise. In a market in which physical trading quantities are small relative to the size of the trading positions of producers and/or speculators, it may be the case that an extremely large trader, or an oligopoly or cartel of a few traders, could ‘corner’ the market through speculation.

52. Consider a market in which there are few sellers – such as a concentrated market for a particular mineral or a market for a crop (say onions) where a drought has caused a crop to fail. It may be that one very large trader or a small number of traders who have a significant proportion of the available supply may have an incentive to purchase even more of the product in the short term from the few available sources to accumulate a sufficient volume of the good that the trader or traders thereby gain market power.

53. Having purchased the only significant competing stocks, the trader may then constrain the volume resold to drive the price higher. This may be achieved by stock-piling a proportion of the commodity even though the price is already high or even destroying some product (so that it does not leak back onto the market) or using disposing of it in a sub-optimal use (for example using food grade grain for animal consumption).

54. Of course if ‘market cornering’ is achieved through traders entering into agreements with each other to withdraw a product from the market or sell it only at an inflated price, the competition authority may be able to take an anti-cartel enforcement case. It may be that a similar result is achieved through contracts between traders and the producers of the product (for example, an agreement by a significant producer to exclusively sell an entire crop to a particular trader who already has a significant holding of the product). The latter kind of agreement is harder to detect because traders can be customers or competitors of parties who are producers of, or customers for, a commodity.

55. Although such cases are certainly theoretically possible, in practice such cases are very difficult to find because the necessary conditions for market cornering are most unlikely to arise. Most commodity markets are not concentrated and any attempt to monopolise in this way would be defeated though the trading activities of a large number of competing parties. In this case competitors include, of course, actual or threatened trans-shipments into the market from another location or imports from other countries, if they are possible. Competitive responses by customers (such as switching to a different foodstuff) are also relevant.

56. In most cases it takes very substantial resources to ‘corner’ the market relative to the gains that could be made and there is usually a significant risk that the strategy will fail. In particular, if the initial sellers of a product become aware that a trader or traders are employing a market cornering strategy, they have an incentive not to sell early and instead wait to sell their product at a higher price after the market has been cornered. In other words, if the market cornering strategy is apparent (or suspected) it will usually defeat itself.

57. So in larger national or internationally traded markets where it may be difficult to detect who is buying up a commodity, ‘cornering’ will usually be impossible due to the low levels of concentration and the very substantial resources required to corner a market. Indeed increased international trade and globalisation make such strategies less likely (but potentially more rewarding).

58. In smaller isolated markets, where the strategy might initially seem more plausible, it will often be apparent that someone or some people are trying to corner the market and the strategy will be self defeating. Further, in cases where market-cornering profits would cause real hardship, traders often say that they have foregone a profit maximising strategy (at least in its purest form) and to make products more
readily available. As a safeguard, many countries have a reserve framework of ‘price gouging’ rules where locally isolated markets supply essential products.

59. Prohibiting ‘price gouging’ can be thought of as a complement to, but distinct from, competition laws. A necessary element of an abuse of dominance or an agreement that substantially lessens competition is usually that any excessive price (i.e. one that is significantly above cost) will be enduring and that given a reasonable time the market will not self-correct. It is important that competition law only intervenes when there is an enduring market effect because otherwise the authorities would be in a state of almost constant intervention in many markets. In other words, in normal circumstances it is not possible for a corner ice cream store to monopolise the market for ice-cream permanently, but, if at all, only temporarily, perhaps on a particularly hot Sunday afternoon.

60. By contrast, price gouging laws are usually only breached when re-trading is observed over a short run period and this has lead to a significant short run price increase over the ‘normal’ price – which is usually defined as an average price over time or a price that was observable immediately prior to the supply disruption. In other words, the ‘normal price’ benchmark is not the same as a cost recovery price in an abuse of dominance case.

61. European and US price gouging laws are discussed in Excessive Prices (2010, OECD). In the context of the OECD’s 2012 Global Forum on Competition, several other jurisdictions have also indicated that they have similar laws. For example, the Philippines has used similar powers in relation to flour in 2010:

“DTI filed separate Complaint-Affidavits against the 11 flour millers before the DTI-National Capital Region for violating Section 5(2) of the Republic Act 7581 or the Price Act defining and prohibiting profiteering as one of the illegal acts of price manipulation. Profiteering is defined as the sale or offering for sale of any basic necessity or prime commodity at a price grossly in excess of its true worth.

Preliminary Orders were sent to eleven flour millers ordering them to suspend the distribution and refrain from selling flour at the ex-mill price ranging from P770.00/bag to P790.00/bag and to reduce it to P630.00-P680.00. DTI also conducted ocular inspections at the plants of flour millers.”

62. There have been a limited number of competition law investigations. There is competition between firms that operate exchange markets themselves such as the London Metal Exchange and its competitors; as well as competition amongst parties actually trading physical and financial products. The former (the operation of exchanges) exhibits network effects because the ‘deeper’ the volume and diversity of buy and sell orders placed on any one market, the more efficient the market and therefore attractive it is to participate in that market. Therefore, there have frequently been competition complaints or investigations. For example, there have been concerns expressed about the provision of access to some aspects of systems operated by exchanges although those investigations have not, on the whole, led to findings of contravention.

63. Another common competition concern is in relation to what could be called ‘reverse information cartels’ or an abusive refusal by a dominant firm to supply information. Usually competition authorities are concerned if price and volume information is shared too readily between competitors and this facilitates

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10 Documentary : Le Tunnel - le secret du siège de Sarajevo (aired 23 November 2009).
11 See, for example, the UK Office of Fair Trading’s investigation into the London Metal Exchange.
cartel conduct. However, the reverse concern can arise in exchange traded markets and even privately traded markets. There is a long history of competition concerns where parties that operate exchanges, or bilateral trading partners, withhold information from other traders about the prices and quantities of their trade in commodities, stocks or derivatives.

64. The issue is that if certain large traders who are personally involved in a significant portion of the market’s trading can ‘monopolise’ information, and put themselves in a position to profit relative to smaller investors who may not be able to accurately detect market movements in real time.

In 2011 the Commission commenced an investigation focusing on the financial information necessary for trading CDS. The inquiry targeted 16 banks that act as dealers in the credit default swap market who give pricing, index and other essential daily data only to Markit, the leading financial information company in the market concerned. The Commission indicated that this may be the consequence of collusion between them or an abuse of a possible collective dominance and may have the effect of foreclosing the access to the valuable raw data by other information service providers.

In October 2011, the European Commission confirmed publicly that the previous day it had commenced undertaking unannounced inspections (i.e. ‘dawn raids’) at the premises of companies trading financial derivative products linked to the Euro Interbank Offered Rate (EURIBOR) in a range of European countries. The Commission stated that it had concerns that the companies concerned may have violated the provisions that prohibit cartels and restrictive business practices and at the time of writing, the investigation is ongoing.

65. One approach to the potential concern with reverse information cartels is to mandate the public provision of a minimum level of data. However, that approach is controversial both because it is the reverse of the usual concern that too much information may be being shared between competitors and because exchanges need to recover their costs and earn a return for the ‘market makers’ services they provide. As a matter of public policy, it is not clear whether the most efficient approach to the need for exchanges to recover costs and earn a fair return is for them to raise revenue from:

- transaction fees with the free dissemination of information;
- the sale of information without any transaction fees;
- tying the provision of information to the purchase of trading services to prevent free riding; or
- a combination of these charging mechanisms.

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12 Information Exchanges Between Competitors Under Competition Law

This can arise as an abuse of dominance concern for example where a prominent national stock exchange limit access to the information about trading on its exchange – see for example Pont Data Australia v ASX Operations (1990) 21 FCR 285, or cartels of traders who agree not to share information with others – see the example of the European Commission investigation in the box below.

13 Indeed the European Commission is consulting on proposed regulations that would require the provision of such data; although this is conceived of as a much broader policy initiative than simply one concerned with competition. The other considerations are to bring safety and transparency to derivatives trading.
66. In all cases a question arises as to how to distinguish between the appropriate level of fees and restrictions to enable the recovery of efficient costs and a fair return and what would constitute an inflated price or excess restriction.

5. Conclusion

67. As a general proposition, speculation and speculators in markets tend to assist in stabilising prices by providing liquidity and speeding up price discovery, even though they may at times exacerbate price volatility in the short run. There have also long been repeated concerns expressed that speculation is most profitable (reaping potentially excessive profits) when prices have undergone substantial price swings; however, these swings would have often been even greater if speculation had not dampened them.

68. Despite this, there have long been repeated concerns expressed about speculation probably because speculation is most profitable when prices have undergone substantial price swings when other market participants are under most pressure. The thesis of this Appendix is that these concerns are largely unfounded because in most cases there would have been even greater price movements if speculation had not been present to ameliorate the magnitude of the movements.

69. There are only a small number of circumstances in which speculation may be damaging to societal welfare. One notable case is in respect of price gouging practices in relation to basic food items and other necessities during abnormal trading conditions where small parts of the market become isolated during emergencies. Specific profiteering or price gouging laws can be framed to address this issue but the conceptual underpinning and elements of proof should be distinguished from those that apply in a competition law case.

70. When it comes to conventional competition law cartel or abuse of dominance cases in relation to exchange traded markets or speculation, these are rare indeed and often concern horizontal agreements or alleged abuses of dominance to limit the availability of information about the prices and quantities traded so that particular parties can appropriate the value of this information to the exclusion of their competitors.
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