Financial market analysts commonly draw distinctions between secular and cyclical trends. Secular trends are viewed as permanent — or at least long-term — market forces that are expected to drive market dynamics in predictable patterns. Cyclical trends refer to short-term swings around this norm. They can also be considered a measurement of how well the business in question correlates to general economic and business conditions.

Traditionally, industrial companies and activities have been considered either one or the other. Once classified, they rarely transition from one category to the other; however, there are exceptions. Recently, the transportation of export grain has undergone a significant modal change. The traditional bulk transportation model has been challenged by containerized shipping. The question is whether this transition is cyclical or whether we are witnessing a secular change.

**Traditional Transportation**

Compared to cargo destined for domestic consumption, export grain in the United States (U.S.) must usually travel extensive distances, for which railroads and barges have served as the primary transportation modes. When railroad deregulation was enacted in 1980, railroads worked to balance supply and demand. They shed branch lines that did not generate sufficient density (supply reduction) and also signed long-term contracts with major customers (demand increase.) Heavier grain cars (286,000-pound gross weight limits — a 33,000 pound increase) requiring volume density and adequate track, hastened network concentration.

By the mid-1990s, U.S. railroads recognized that allocating railcars on a first-come, first-served basis resulted in railcar shortages and cyclical service demands. To control the spot market, railroads developed a rail freight guarantee program, whereby shippers purchased capacity well in advance.

More significantly, in an effort to improve operations, railroads developed the grain shuttle train. These are unit trains where the railcars and locomotives move as a dedicated train on a continuous basis and free the railroad from multiple handleings of individual cars. The shuttle customer, who must utilize high-capacity and high-speed grain elevators, guarantees a set period of loading and unloading to maintain high asset utilization. Today, it is estimated that two-thirds of all grain in the U.S. moves by shuttle train.

With fewer, larger elevators actually loading, most grain is trucked from its production site to the loading elevator. From there, grain moves by rail to the port of loading, where it is stored before being loaded onto a vessel for trans-oceanic shipping.

Numerous factors will determine whether moving grain in containers is a secular or cyclical trend

By Theodore Prince

In it for the long haul?

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movement. Upon arrival at the destination, the inland movement is essentially performed in reverse. The traditional ocean-borne method of transporting grain is by dry bulk carrier. Grain is usually shipped in vessels of 50,000 to 80,000 deadweight tonnes.

**CONTAINERIZED MOVEMENT**

Containerization represents one of the most significant transportation innovations of the 20th century. It has resulted in vast improvements in ocean linehaul, port handling and inland pickup and delivery. More than 90% of non-bulk cargo around the world moves by this method. Although the container may change transportation modes several times during a shipment, the lading is never touched. Container shipments are loaded at origin and moved intact through to destination.

In the U.S., container volumes reflect the nation’s trade imbalance. Imports outnumber exports by between 2-to-1 and 3-to-1 (remaining containers are returned empty for reloading). While dry containers are traditionally used for merchandise, they can also accommodate bulk cargo, which is either loaded in bags or blown into the container. According to the U.S. Department of Agriculture, containerized grain exports to Asia in the first five months of 2008 were up 64% over the same period in 2007.

Containerized movement of grain can be accomplished with much less handling of the grain product (see table, page 48). Whereas the traditional transportation method involves handling grain at least eight times (depending on destination delivery), grain is handled only twice in a containerized shipment.

**SECULAR VERSUS CYCLICAL**

You must consider a range of factors when evaluating and comparing the secular to the cyclical outcome of shipping grain by containers. Most of these factors, which are listed below, would reinforce the secular trend of containerization.

- **Shipment quality:** Shipping grain by container allows for a higher quality shipment. Containers reduce the amount of loading and unloading — and concurrent damage to grain. When waiting for railcars, grain can often sit for a month or more on the ground, exposed to adverse elements. Immediately loading containers eliminates such exposure.
- **Farmer economics:** Using containers can improve the economics for farmers. Containers can be staged in the fields during harvest and loaded directly and immediately. This eliminates the need for the farmer to maintain storage infrastructure. It also allows annual matching of storage requirements with expected crop yield. Moreover, it is less expensive to truck a container to and from a distant farm site than it is to move bulk grain.
- **Shipment identification:** Shipping in containers allows small batches of grain to be uniquely identified and closely monitored. It is easy for all involved in the supply chain to know the source of the product and shipment details (i.e., where, when and who handled). While this feature may affect generic, bulk grain only slightly, such capability is essential for identity-preserved grain, where a specific product is being shipped.
- **Elimination of intermediaries:** Theoretically, the ease of shipping containers would enable farmers to contract directly with end users, thereby eliminating the need for middlemen and increasing the farmer’s yield.
- **Speed to market:** Containers move to destination much faster than bulk. This speed to market could enable farmers to take advantage of favorable but short-lived market conditions (i.e., cash prices rise relatively to the futures price).

Despite all the secular trends, there are several overwhelming cyclical realities.

- **Bulk vessel capacity:** The shipping industry is highly cyclical, with extreme profit volatility. Vessel values and charter rates often fluctuate wildly. Supply of shipping capacity is mainly a function of the delivery of new ves-
sels and the number of older vessels scrapped. The industry tends to move in lockstep. Periods of high profits (capacity shortage) are inevitably followed by newbuildings coming online (capacity glut) and pricing collapse. Lately, there has been a shortage of bulk capacity. Although there has been a downturn, attributed mainly to China’s Olympic industrial shutdown, the Baltic Index, a trade index created by the London-based Baltic Exchange that measures changes in the cost to transport raw materials, has been at historical highs. Still, many observers feel that this upturn will be obviated by new capacity due to enter the trades in the next several years.

- Container capacity: When utilizing containers, shippers need to ensure sufficient capacity in both vessel space and containers. It is rare for import containers — once unloaded — to be immediately reloaded with export cargo. And the cost to reposition an empty for reloading can often be as high as the cost to reposition an empty back to the west coast. If an export move is not considered as sufficiently profitable, it is often better for a line to return the box to Asia for another import load. There may also be a repositioning cost at destination. Because export loads are much heavier than import loads, container vessels cannot accommodate a like number of loads. Depending on the vessel, exports are limited to between 60% and 80% of the import loads. The rest of the vessel must be made up of empty containers.

- Pricing: Ultimately, grain shipment decisions will come down to pricing. Traditional grain transportation straddles both trends. The ocean-borne portion is cyclical. Rates are high today, but they may become much lower in the future as larger and more efficient vessels are delivered. The rail portion is most likely secular. Rail capacity is somewhat fungible, and railroads will allocate capacity where it can maximize returns. This allocation takes place between commodities (e.g., grain, chemicals, coal, and merchandise) and amongst them (e.g., exports grain versus domestic grain and ethanol.)

The containerized outlook is a little more complicated. There is certainly a sub-segment of the export grain market which is attracted to containers, but it is
very difficult for the lines to price differentially, so the whole market gets priced alike. Naturally, higher price levels would eliminate low-value shippers. However, the lines have a natural tendency to cannibalize export business amongst themselves.

The impact of the dollar will have varying effects. A weaker dollar may allow exporters to pay slightly more for transportation while still allowing them to compete on the delivered price. However, a stronger dollar will place even more emphasis on reducing the cost of transportation.

Excluding the high-value segment, which might be experiencing a secular shift, there are a variety of factors which would reinforce the cyclical nature for the remaining — and majority of the — export market. If, and more than likely when, bulk rates return to lower levels, it is expected that export grain will resume its historical reliance on bulk movement.

A single, 55,000-tonne load is cheaper, not to mention much simpler administratively, than 2,400-container shipments for the same lot.

Ultimately, the result will be driven by several markets factors: export grain bulk shipping; rail; container shipping; and the dollar. Predicting one market accurately is impressive. Picking all five is hard to imagine.

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