

The Coffee Value Chain

Almost all of the coffee consumed in the United States is imported from abroad (a very small amount of premium Kona coffee is grown in Hawaii). U.S. coffee manufacturers mostly purchase green coffee beans from Brazil, Colombia, Mexico, and Guatemala. In the United States, two main types of coffee are traded on the New York Board of Trade (NYBOT), Arabica and Robusta. Arabica is more expensive, but is generally preferred in terms of taste. Most U.S. supermarket coffees are a blend of Arabica and Robusta beans.

Coffee manufacturers grind and roast the green beans and sell the packaged product to supermarkets and grocery wholesalers. While most green coffee beans are purchased by roasters under long-term contracts, large coffee roasters also buy and sell on commodity markets. The prices observed on these commodity markets are thus an approximate measure of coffee roasters' marginal coffee bean costs.

The major players in the U.S. ground-coffee market include well-known manufacturers of consumer packaged goods. Procter & Gamble (P&G) produces Folgers, Kraft produces Maxwell House and Yuban, and Sara Lee produces Hills Bros., Chock Full O' Nuts, MJB, and Chase & Sanborn. P&G is the largest maker of household products in the United States, and Kraft Foods is the largest maker of food products in the United States.

Sales of ground coffee are highly concentrated among those companies. From 2000 to 2004, Folgers had a market share of 38 percent by volume, Maxwell House had a market share of 33 percent, and the Sara Lee brands had a market share of 10 percent. Private-label brands had a market share of about 8 percent, by volume, in ground coffee. Folgers' market share increased from 37 percent in 2000 to 42 percent in 2004, while the Sara Lee brands fell from 11 percent to 7 percent (Hoover's Incorporated, 2006).¹

The location of coffee-grinding production is highly centralized, based on easy access to seaports. P&G produces most of its consumer-market coffee in its New Orleans plant, and a smaller amount in its Kansas City, KS, plant. Kraft produces coffee at plants in Houston, TX, Jacksonville, FL, and San Leandro, CA. The Jacksonville plant is the largest among those. Starbucks has three roasting plants—in Seattle and Kent, WA, and in York, PA. Louisiana, Texas, and California were the States with the largest shipments of roasted coffee in 1992 and 1997 (U.S. Census Bureau, Survey of Manufacturers, 1997).

Packaged ground coffee is sold by manufacturers to retailers and grocery wholesalers. Of 20 large U.S. retailers, 11 used grocery wholesalers and the rest purchased directly from the manufacturer (Brazil Information Center, 2002). Most supermarkets that did not use grocery wholesalers still had a geographically decentralized purchasing system. Packaged coffee is typically delivered directly to the warehouses of supermarkets and grocery wholesalers, and the transportation cost is included in the price. Since inventory is expensive for grocery wholesalers, the wholesaler's goal is to carry as little inventory as possible while avoiding stock-outs.

¹Hoover's Incorporated is a business information service with in-depth coverage of 42,000 of the world's top business enterprises.

The last link in the coffee value chain is the retailer. Recent developments have changed market dynamics at this level. Ground-coffee purchases at retail stores covered in our data have grown much more slowly than the 1-percent rate of U.S. population growth over the past 5 years. Purchases rose from 5.29 billion ounces to 5.39 billion ounces between the beginning of 2000 and the end of 2004. Coffee purchases at supermarkets peaked in 2001 at 5.51 billion ounces, just after retail and manufacturer prices fell. Purchases of regular (nondecaffeinated) ground coffee actually fell from 4.69 billion ounces to 4.66 billion ounces between 2000 and 2004. Some of this fall may be explained by increased sales of decaffeinated coffee. Regular coffee has become less popular relative to decaffeinated coffee over this period.

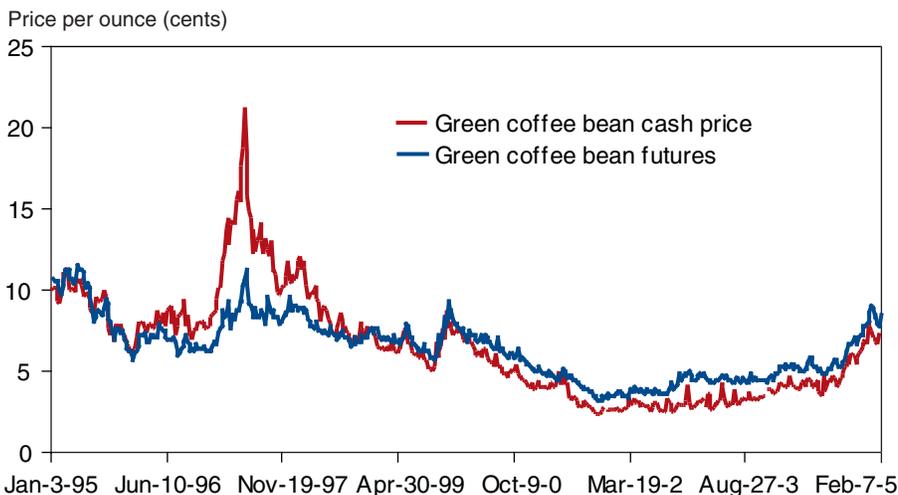
The downward trend in supermarket coffee sales has been offset by increases in coffee consumption away from home. Total U.S. retail sales at coffeehouses increased from \$3.5 billion in 1998 to \$6.9 billion in 2003 (Mintel International, 2004).² Total per capita coffee consumption showed no clear trend between 2000 and 2004, falling slightly from 1.66 cups per person per day in 2000 to 1.64 cups per person per day in 2004 (International Coffee Federation, 2005).

Coffee price and coffee-price terminology change along the market chain. The price that a consumer faces at a supermarket or other food retailer is termed the “retail price,” the price charged by coffee manufacturers to retailers and wholesalers is the “manufacturer price,” and the price of green coffee beans on commodity exchanges is the “commodity price” or “commodity cost.” Given that retailers increasingly self-distribute, this analysis focuses on manufacturer and retail coffee prices.

Commodity prices are established in world markets and are highly volatile. Figure 1 presents a graph of coffee commodity prices over the past 20 years. Over the past 10 years, green-coffee-bean prices have ranged from less than

²Mintel International is a global supplier of consumer, media, and market research.

Figure 1
Green coffee bean cash and future price



Source: Author's analysis of New York Board of Trade data.

3 cents an ounce to over 20 cents an ounce. Coffee commodity prices fluctuate with supply, driven by the weather in coffee-producing countries, as well as the entry of new producers, such as Vietnam, into the international market (Lewin et al., 2004). The large decline in coffee prices during the late 1990s and the early 2000s is usually attributed to the expanded production capacities of Brazil and Vietnam. Figure 1 also shows the behavior of coffee futures prices over the last 10 years from the NYBOT. Coffee futures indicate the expectations of market participants. The futures prices in figure 1 are for prices 13 months in advance.

Retail coffee prices reflect some of the dynamics in coffee demand. Retail coffee sales are highly seasonal. Coffee sales (by volume), on average, are 10-15 percent higher in November and December than in January, and about 10 percent lower from May to September. The summertime drop in sales may be a consequence of high temperatures. The November-December increase in sales is consistent with the “seasonal cycle” in aggregate output documented by Barsky and Miron (1989).

Retail prices also have a small seasonal cycle as prices are lower by almost 1 cent per ounce in November and December than in January (Barsky and Miron, 1989). The low prices are associated mostly with sales. Regular (nonsale) prices during this period are only a few tenths of a cent lower than in January. While some of the purchases in November and December may be associated with the Christmas season alone, sales and promotions also contribute to the end-of-year purchasing boom.