percent. Also, some of the added costs would be offset by reductions in product pilferage. Since FDA does not know the relative magnitude of these potentially offsetting factors, the agency has retained the \$14 million figure as its best preliminary estimate of the labor costs that would be imposed by the self-service ban.

In total, FDA projects that the retail sector would incur one-time costs of about \$11 million and annual costs of about \$52 million. As shown above in Table 2, the sum of the one-time costs imposed on the manufacturing and retail sectors for the initial provisions would range from about \$26 to \$39 million, whereas the total annual costs would be about \$227 million. For these provisions, the sum of these annualized one-time costs (15 years at 3 percent discount rate) and annual operating costs yield about \$230 million per year (also about \$230 million at 7 percent discount rate).

4. Costs to Consumers

a. Advertising restrictions.

Advertising restrictions may impose costs on society if they disrupt the dissemination of relevant information to consumers. According to the Bureau of Economics of the FTC, the benefits of advertising derive from:

* * * its role in increasing the flow and reducing the cost of information to consumers * * * First, advertising provides information about product characteristics that enables consumers to make better choices among available goods * Second, theoretical arguments and empirical studies indicate that advertising increases new entry and price competition and hence reduces market power and prices in at least some industries * * * Third, advertising facilitates the development of brand reputations. A reputation, in turn, gives a firm an incentive to provide products that are of consistently high quality, that live up to claims that are made for them, and that satisfy consumers.49

FDA has considered each of these issues in turn. While agreeing that certain forms of advertising offer substantial benefits to consumers, the agency nevertheless believes that the proposed tobacco product advertising restrictions would impose few significant societal costs. As discussed in the preamble above, the proposed regulation does not prohibit factual, written advertising. Thus, the proposed rule would not impede the dissemination of important information to consumers. While imagery and promotional activities may be important determinants of consumer perceptions and sales, they typically provide little meaningful information on essential distinctions among competing tobacco

products. The implications of FTC's second point, which addresses the effect of advertising restrictions on market power and prices, is less obvious, as various empirical studies have reached conflicting conclusions. Nevertheless, from FDA's perspective, even if advertising restrictions led to higher prices, this result would discourage tobacco consumption and thereby enhance the public health. Finally, FTC's third point, which emphasizes the positive aspects of advertising in supporting brand reputations, is more relevant for long-lived items, such as consumer durables, where purchases are infrequent or personal experience is inadequate. Advertising is less likely to play a key role in assuring high quality levels for tobacco products, where consumer search costs are low and a brand's reputation for quality is tested by consumers every day. For these products, high quality would remain a prerequisite of commercial success irrespective of advertising strategies.

Other analysts suggest still other potential attributes of product advertising. For example, according to F.M. Scherer, author of a widely read text on industrial organization:

Advertising is art, and some of it is good art, with cultural or entertainment value in its own right. In addition, it can be argued that consumers derive pleasure from the image advertising imparts to products, above and beyond the satisfaction flowing in some organic sense from the physical attributes of the products. There is no simple case in logic for distinguishing between the utility people obtain from what they think they are getting and what they actually receive. As Galbraith observed, "The New York housewife who was forced to do without Macy's advertising would have a sense of loss second only to that from doing without Macy's." ⁵⁰

Similarly, Becker and Murphy have argued that advertisements should be considered "goods" if people are willing to pay for them and as "bads" if people must be paid to accept them.51 They explain that, in general, the more easily the advertisements can be ignored, the more likely it is that the ads themselves provide utility to consumers. Newspaper and magazine advertisements, for example, must provide positive consumer utility or they would be ignored by readers. The proposed rule would allow such advertisements to continue, some in their current form, others in a text-only format. (In fact, industry outlays for newspaper and magazine advertisements have dropped dramatically over the years, currently constituting only about 5 percent of the industry's total advertising and promotion budget.) Conversely, the

extraordinary growth in industry advertising and promotion has been in areas that are typically bundled with other products, or placed in prominent public settings that are difficult to ignore. Thus, there is considerable question about the contribution of these programs to consumer utility.

b. Consumer surplus. Consumer surplus is a concept that represents the amount by which the utility or enjoyment associated with a product exceeds the price charged for the product. Since it reflects the difference between the price the consumer would be willing to pay and the actual market price, it is used by economists to measure welfare losses imposed by consumer product bans. However, FDA's proposed rule imposes no access restrictions on adults, who would be free to consume tobacco products if they so desired. Thus, FDA has not included any value for lost consumer surplus in its estimate of societal costs.

c. Inconvenience. Some adult consumers would be inconvenienced by the unavailability of cigarette vending machines. FDA believes that over time, most smokers would adjust their purchasing patterns to reflect this circumstance. However, the agency has not attempted to quantify the degree of this disutility and asks public comment on its potential cost.

E. Distribution and Transitional Effects

The proposed regulation would impose a variety of sector-specific distributive effects. Those sectors affiliated with tobacco and tobacco products would lose sales revenues and these losses would grow over time. On the other hand, nontobacco related industries would gain sales, because dollars not spent on tobacco would be spent on other commodities.

1. Tobacco Industry

For its calculation of regulatory benefits, FDA estimated that implementation of the proposed regulation would reduce the cigarette consumption of underage smokers by one-half. As discussed above, based on data presented in Cummings et al., FDA estimates that teenage smokers under the age of 18 consumed about 318 million packs of cigarettes in 1991. If the proposed regulation cuts these sales by one-half, the resulting annual drop in industry revenue would be \$143 million (assuming manufacturer share of 50 percent of retail price, or 90 cents per pack.) Moreover, FDA has assumed that at least one-half of those 500,000 teenagers who would be deterred from starting to smoke each year would refrain from smoking as adults,