

## Implications and Discussion

Counter-cyclical payments were designed with a view toward supporting farm incomes in a low-price environment, and without distorting production incentives. Unlike marketing loans, counter-cyclical payments are tied to historical plantings and yields, not current production. But unlike fixed, direct payments, counter-cyclical payments are linked to current market prices. Counter-cyclical payments thus represent a kind of policy hybrid—one whose implications for producers are not yet fully understood.

This report has focused on risks associated with counter-cyclical payments. The risks are associated with forecasts of the marketing-year average price for a designated commodity, the advance payments offered by USDA, and the chance that these payments will have to be repaid by producers.

The U.S. Secretary of Agriculture has some discretion about the magnitude of advance payments (although maximum levels are specified in legislation). Methods presented in this report can be used to assess the risk that attaches to advance payments, given historical uncertainty about forecasts of marketing-year average prices. Program officials are also interested in the budget exposure associated with counter-cyclical payments. As shown in this report, ignoring the variability of marketing-year average price forecasts can introduce a high degree of bias into projections of program payments. Through simulation analysis with the option pricing model we developed as part of this analysis, payments can be projected without this bias.

During the 2003 and 2004 marketing years, producers faced large repayments for rice and soybeans, respectively. This stemmed from underestimates of marketing-year average price when advance payments were made. In other instances, such as for wheat in the 2005 marketing year, producers received small advance payments that they later repaid to USDA. Based on our analysis, the probability of full repayment is inversely related to the size of the advance payment. These probabilities should be taken into account when farmers decide how to use their advance payments. From a program perspective, it may not be cost effective for USDA to make small advance payments, especially in view of the significant chance of repayment by producers and associated administrative costs.

Counter-cyclical payments are intended to provide a form of price protection for producers of the designated commodity. However, not all recipients of counter-cyclical payments continue to grow the designated commodity. Others do grow the commodity but avail themselves of other forms of price protection (by using futures or options, for example). In these cases, producers are likely to regard counter-cyclical payments as a kind of financial asset, characterized by risk and return, rather than as an instrument of risk management for their current production. For recipients who view payments this way, the risk is that counter-cyclical payments will fall below expectations. Our analysis indicates that this risk can be reduced—but only moderately—by hedging the expected payments with call options. Given the low effectiveness of this hedging strategy, producers may be more inclined to simply hold their advance payments in conservative investments.