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PROSPECTS FOR U.S. PRODUCTION, OFFTAKE AND PRICES

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Abstract

Oversupply conditions for the 2001/02 and 2002/03 have resulted in few opportunities for producers to realize more than few cents of equity from the market above the adjusted world price. The 2002 farm bill includes incentives for producers to plant the number of acres that will result in production equal to units protected by the farm program payments, i.e., 85 percent of the base times the yield; with normal abandonment and yields, this would result in a 2003 crop of approximately 17.4 million bales. Domestic mill use is likely to stabilize as the U.S. dollar weakens against foreign currencies and exports will remain strong as low world stocks generate demand for U.S. cotton. Low stock levels could also pressure prices to the upside if U.S. production falls significantly below 17.4 million bales.

Introduction

I have been asked to discuss prospects for U.S. production, offtake, and prices. I would like to discuss price prospects for the remainder of 2002 and then look forward to the 2003 crop. In looking at prices for the remainder of this year and for next, I think it would be instructive to look at what happened with prices on the 2001 crop and to try to understand why prices developed as they did. From that analysis we can decide if there are parallels between the 2002 and 2003 crop situations and use that as a guideline to an analysis of the key factors that will be influencing prices the rest of this year and next crop year.

Analysis

Figure I is a line chart of the spread between the futures market and the adjusted world price every day between September 1, 2001 and June 30, 2002, which covers essentially all of the marketing period for the 2001 crop. Of course it is this spread that generates equity for the producers above the CCC loan during a year in which the adjusted world price was below loan. We are presenting the data this way instead of trying to present it in terms of equity above loan because equity above loan differs so much between the four major growth areas because of basis differences. However in each growth area equity above loan is determined by this spread between AWP and futures. When the spread is widest, equity generated above loan is the greatest. When the spread narrows, equity goes down or disappears. For example, a rule of thumb in the Memphis Territory for the 2001 crop was to take 7¢ off this spread to get a good approximation of what equity was available above loan at the average warehouse location in the Mid-South or the Southeast with one month's storage charge. The marketing opportunities developed about as one would expect during a year of gross oversupply. The spread widened out during November and early December in order to fill the pipeline. Once the pipeline was full the spread narrowed in so essentially there was little if any equity available as the stocks were drawn down. Then the pipeline began to empty again during mid-March to mid-April, and the spread widened out to fill it again, narrowed in as the pipeline emptied again, and then widened out for the third and final time in late June in order to fill the pipeline for the final time. The futures market was doing its job of drawing cotton from the CCC loan into cash distribution channels. Importantly the best pricing opportunity was available the first time the spread widened in November of 2001.

Look at Table I, the Supply/Demand Table for the 2001 crop and then for the 2002 crop to understand why 2001 prices behaved as they did during the year. The data shown for 2001 and 2002 are USDA numbers. This is a standard presentation of a supply/demand table with two lines added: an estimate of the amount of cotton that would be necessary to supply U.S. domestic and foreign mill customers between August 1 and approximately mid-November, by which time new crop is readily available, and an estimate of how much of the July 31 carryover cotton would still be left unused as of mid-November, when new crop becomes readily available. As you see for 2001 crop almost 2 million bales of the U.S. supply was still not consumed by mid-November of 2002. If this cotton was to be sold at all it was to be sold in competition with the 17.4 million bales produced from the 2002 crop, and thus it derived its value from the December '02 contract. Since the '02 crop production year developed from planting until harvest with essentially no crop scare, the '02 supply/demand table continuously predicted that the carryover from the 2002 crop, as of July 31, 2003, would be enough to supply U.S. domestic and foreign mill customers through mid-November 2003, with approximately 1 million bales excess unsold which must be sold in competition with the 2003 crop based on the December 2003 contract. In a nutshell what the 2001 crop was faced with was gross oversupply, with the extra 2 million bales having to be sold in competition with the developing 2002 crop that also was going to be in oversupply. Thus the only job of the futures market was to keep the cash market sufficiently supplied. Therefore, the AWP/futures spread during the year developed where there were only three opportunities to develop more than a couple of

cents equity, these three opportunities each being of about 1 month duration, and the first opportunity being the best. I think it is beneficial to keep this in mind as we look forward to the 2002 crop.

Figure 2 is the futures/AWP spread for the 2002 crop beginning August 1, 2002 and running through January 3. In looking at it look also at Table I Supply and Demand. As in 2001, Table I indicates that the 2002 crop should be in gross oversupply throughout the year. Therefore the Futures/AWP spread so far has developed exactly as it did in 2002. Futures widened out above the Adjusted World Price essentially during the month of November to generate enough equity in order to fill the pipeline. The narrowing of the spread since then indicates the pipeline has been filled and futures have fallen back so that the spread creates little or no equity. A look at the supply/demand table indicates why. USDA numbers for 2002 indicate a U.S. carryout on July 31, 2003 of 6 ½ million bales, of which approximately 5.34 million will be obligated to mill customers to supply their needs through mid-November. By which time the new 2003 crop should be readily available. This still would leave a little more than one million bales of the 6.5 unused, and if it is to be used at all it will be used in competition with the 2003 crop then entering distribution channels.

So what then are price prospects for the remainder of the 2002? Will this be a repeat of 2001, with an opportunity to get more than just a couple of cents equity sometime in the spring and a final opportunity in the early summer, or is there a possibility of higher equity values being generated later on? The answer lies with what happens with the 2003 crop. I would like to digress a little bit and look at some of the major trends that will be affecting consumption for the remainder of the 2002 year for the 2003 year and production for the 2003 year, and then fit them into a plausible supply/demand scenario for the 2003 crop.

On the production side, the obvious thing to look at is the signals that the new farm bill is sending to producers. Figure 3 demonstrates graphically how the bill works. As all of you know, there is a 72.4¢ a pound target price, a 6.67¢ a pound fixed payment, and a counter-cyclical payment which may vary between zero and 13.73¢ per pound. The size of the counter-cyclical payment is based on the average price received by farmers, which is a price reported by the National Agricultural Statistical Service under Memphis Rule 3 terms. That is, the point of sale is the bale stored in the warehouse shed, with the receiving and accrued storage costs up to the date of sale for the account of the seller, and the load-out and compression charges for the account of the buyer. This means that the 72.4¢ will not be a cash in the bank price received by the farmer, but the net cash price will be below this by the amount of receiving and accrued storage on the cotton.

We all know that the payments are decoupled. However, there are two provisions of the bill which create strong economic incentives for the producer to plant at least approximately 85% of his or her base, or the amount so that with average yields total production should be as much as the payment pounds. These are the fact that the counter-cyclical payment is based on the average price received by farmers, and, second, the fact that government LDP or POP payments are excluded from the price computation.

The target price is set at a price just below the average cost of production at average yields in most regions. This removes almost all of the downside risk from most producers on about 85% of their base if they can produce at least an average yield. Couple this in your analysis with the fact that the cotton base acres represent the land area across the United States for which cotton producers historically have decided cotton is the best suited crop in competition with other available crops. You put these two together and the farm bill has promised producers on approximately 85% of the land which is best suited for cotton that the government will guarantee the producer a price only slightly below his cost of production, as long as he produces an average yield and sells it at the level of the average price received by farmers. We think the producers reaction to this is going to be, at least for the 2003 crop at current crop price relationships between competing crops, to plant enough base acres so that the planted acres times his projected yield will equal the 85% of his base acres times payment yield on which he will receive the target price. The alternative to doing that is to take a cotton acre on which the government is promising 65.73¢ a pound and plant it to another crop on which one is promised to receive only whatever the cash market offers. The alternatives are either to plant that acre to cotton, or to plant it to another crop and purchase Call Options if the prospective price at decision making time is below 65.73¢ a pound, in order to protect the counter-cyclical payment. We think that when producers are through with their analysis almost all will choose to plant the crop instead of pursuing the alternative of not planting it and purchasing Call Options. Remember what the producer who purchases Call Options is trying to accomplish with his options. If the market goes up, he is trying to sell his calls when his profits on the options equals the amount by which the maximum possible counter-cyclical payment of 13.73¢ a pound has been reduced by the rising average price received by farmers. The only way to do this successfully is to be lucky, because the information is not available in a timely manner by which to make an intelligent decision. The average price received by farmers is reported monthly, but one month after the end of the month reported. Selling the calls correctly is going to be an exercise in good fortune.

The second strong incentive in the farm bill to plant at least approximately 85% of the base is the fact that when the Adjusted World Price is under loan the amount of any POP or LDP payment is not included in the counter-cyclical price calculation. Look at Figure 3. In there we use an example in which the cash price Rule 3 on average in the United States is 56¢ a pound. In this example the cash price would be 56¢, the counter-cyclical payment would be 9.73¢, the fixed payment would be

6.67¢, and the total price received (basis Rule 3 terms) would be 72.4¢ a pound on the payment pounds. Now look at Figure 4. This is a plausible example in which the average cash price received in the United States is 48¢ a pound, and the average POP or LDP payment throughout the year is 8¢ a pound, creating an average equity above loan of 4¢. This average equity of 4¢ is the same money in the bank as the average cash price for lint of 56¢ shown in Figure 3. However, in the situation described in Figure 4, the government does not count four of those cents as part of the average price received by farmers, because they were generated by LDP or POP payment, and therefore the calculation for the counter-cyclical payment begins at the 52¢ loan value. In this example the total price received by the producer would be 52¢ plus a 13.73¢ POP, a 6.67¢ fixed payment, and a 4¢ equity above loan, for a total of 76.4¢ per payment pound (basis Rule 3). This creates an incentive to plant the crop because in years in which the producer believes there is a possibility that the cotton will be marketed with a LDP or POP payment, the only way to get to receive the LDP or POP payment and thus a price above 72.4¢ is to produce the physical bales of cotton. Thus prospects of low prices create an additional incentive under this farm bill for the producer to plant at least approximately 85% of his base.

Putting this together and analyzing historical plantings across the Belt, we think enough acres will be planted that with average yields and average abandonment 2003 production in the U.S. will be 17.4 million bales. In fact, we think this number of 17.4 million bales is very close to the minimum production we will have any year under this farm bill with average yields. 17.4 million bales of production with a carryin on July 31, 2003 of 6.5 million bales will give us a total supply of 23.9 million for the 2003-04 marketing year.

Now, what about the demand side? I think looking at three big trends would be helpful. Figure 5 shows the relationship between the exchange value of the U.S. dollar as measured by the Federal Reserve Dollar Index (not the dollar index traded in New York) and U.S. mill consumption. We did not use the dollar index traded in New York because it began to be traded for the first time in 1985, and we wanted to go back before then to show the mill use/ dollar relationship that existed before that date. Figure 5 is a graph of the average annual value of the dollar index versus U.S. domestic mill consumption for each year. During this time line from 1973 through 2001 there are three large trends in the value of the dollar. Between 1979 and 1985 for six years the dollar appreciated tremendously. From a high in 1985 the dollar depreciated for a ten year period to a low in 1995. From that point the dollar appreciated for 6 years to a high in 2001 about equal to where it was in 1976. Since the end of 2001 the dollar has fallen so far in 2002 by a little less than 10%. Before the crisis in U.S. mill consumption that developed beginning in the late 90's, the one prior crisis in the last thirty years was in the mid-80's. This crisis is what helped engender the advent of the marketing loan for cotton in the 1985 Farm Bill. Importantly, it coincided with the strongest dollar as measured by the Federal Reserve Dollar Index that we have experienced in the last thirty years. From that peak as the dollar deteriorated over ten years U.S. mill consumption grew inversely so that its peak in the 1996/97 season corresponded with the low of the U.S. dollar. Since then the U.S. dollar's six years of appreciation has been matched year for year by a six year decline in domestic consumption. We think because of current trends in monetary and fiscal policy in the United States and in several other of the world's major economies, we will see the decline in the dollar that began in January 2002 continue, probably for a multi-year period. We think for 2003 that will help the domestic industry maintain its consumption at 2002's level of 7.5 million bales, and probably we will be able to increase consumption from there in future years.

What about exports? Here two trends are enlightening. Figure 6 shows world carryover as a percentage of world consumption (based on USDA numbers). We began this with carryover from the 1994 crop because that 1994 ratio of world carryover equal to 35% of world consumption we think is an important benchmark. 1994 was the year when cotton prices went over $1.00 a pound. They went that high because consumption during the fall, winter, and spring of that season was so high that it left a real prospect of not enough cotton being available to run the mills of the world until new crop would become readily available during the late fall of 1995. The market always makes sure that enough cotton is available, and it did it in 1994 by going above $1.00 a pound to suppress demand. What that meant, however, from a carryover standpoint was that everyone that had a bale in inventory on July 31, 1995, by which time cotton prices were back under 80¢ a pound, had passed up the opportunity to sell that bale to someone else for over a dollar. What was in inventory then was an inventory of a dearly priced product. Our assumption is that the bales in inventory then on July 31, 1995 were the absolute minimum that the world's mills required in order to run until the new crop would be available. Thus we think that the 35% stocks to consumption ratio of that year is a good proxy of the minimum amount of cotton that the world requires each July 31. Look at USDA's projection for July 31, 2003 (the end of the 2002 crop marketing year). This projection of 40% is the lowest since the 1994 crop. This implies strong export demand for all the world's exporters including the United States.

More specifically to the U.S., look at Figure 7. This shows total demand for U.S. cotton, both domestic and export, each year beginning with the 1986 marketing year. We started with 1986 because that was the first year under the marketing loan. Trend line demand for the 2002 crop is predicted to be 18.4 million bales. We think this supports USDA's export prediction of 10.8 million bales, creating predicted demand by USDA for the crop year of 18.3 million. Interestingly, if trend line demand is approximately met for the remainder of this farm bill, U.S. production will have to rise dramatically after the 2003 crop in order to supply demand. Fortunately higher yielding cotton varieties are promised to be just around the corner, and if true, will help to generate an adequate future supply. Thirdly, please look at Figure 8, a comparison of the size of the Step II Certificate for the 2001 marketing year and the 2002. Due to the low percentage of middling 1 3/32" cotton available in the

world from the 2002 crop as compared to the 2001, due to a shorter staple crop in Texas, the rains in the Mid-South and the Southeast, and the Australian drought, the size of the Step II Certificate has continued to increase in 2002 even as the AWP/futures spread collapsed. This larger subsidy will help to continue to move U.S. cotton in the export channels briskly, and will create an additional source of revenue for the U.S. textile industry.

Putting all this together, we feel that USDA's export prediction of 10.8 million bales, and its prediction of total demand for U.S. cotton of 18.3 million from the 2002 crop are entirely reasonable.

So what does this imply about prices for the 2003 crop, and thus their effect upon prices for the tail end of the 2002? Until such time as the adjusted world price exceeds 52¢/lb, producers are concerned with the spread between the AWP and futures. Consumers are concerned with futures prices. Table I shows that if supply/demand were to develop as predicted, U.S. carry-over would drop to 5.6 million bales on July 31, 2004, of which about 5.3 million bales would be required to supply our customers until the 2004 crop became readily available, leaving an unsold surplus of only about 300,000 bales. Thus this surplus would have been brought down from about 2 million bales from the 2001 crop to a little over 1 millions bales from the 2002 to about 300,000 from the 2003. From this we think the variable to watch for producer prices for the tail end of the 2002 crop is the development of the 2003 crop, beginning with planting decision time which is upon us in only a few weeks. If all these numbers end up being correct, and if the 2002 crop develops without any crop scare, then we should have just enough cotton to squeak by without exerting tremendous upside pressure on price. However, if at any time the market starts smelling that the 2003 crop could fall close to or under 17 million bales, then I think we will see a significant price response. If this happens before late summer of 2003, that price response in the December 2003 futures market contract would make the unsold one million plus bales from the 2002 crop more valuable which would make every unpriced bale from the 2002 crop more valuable. The key we think to prices from here on out for the 2002 crop is how the production prospects develop for 2003. Even so, net producer prices shouldn't be any higher. They'll just receive more from the cash market and less from the POP payment.

What about prices for 2003? Again look at one more big trend. Figure 8 is the relationship between the dollar index as computed by the Federal Reserve and cotton futures. Again the broad trends we talked about in Figure 5 between the price relationship of the Federal Reserve Dollar Index and U.S. domestic consumption are apparent. The inverse price relationship is also apparent. If you look at that period from 1995 through 2001, during which time the dollar index rallied, it corresponded perfectly with the six year bear market in cotton futures. If you like technicals draw a trend line from the low in '95 connecting the low in '98, and you will see that the down move in the dollar took that out in the fall of 2002. As we have said, we think the worm has turned and the dollar should now be in the early stages of a multi-year decline which should correspond with a multi-year increase in U.S. cotton prices. For those of you on the consuming side of the ledger, we think you will see these higher prices developing as the 2002 marketing year matures. We don't think producers necessarily will see them unless the 2003 crop gets into trouble, because their pricing is determined by the spread between the AWP and futures. We think however, those whose prices are affected only by the level of the futures market will see higher prices because the AWP most likely will be trending upward throughout the year.

For 2003, obviously all of us must watch the supply and the demand unfold. The supply will unfold first as planting decisions are made this winter and then the crop goes into the ground this spring. In summary, as long as the world economy holds up and demand for 2003 is at the increased levels that ICAC is currently predicting and that USDA hopefully will be predicting soon, we feel the pricing threshold in the U.S. will be determined by the prospects of the U.S. crop size – during the early part of the growing season - and then the world crop size as more information is developed during the growing season. If everything else in the world is as predicted, a U.S. crop prediction of around 17 million bales or below would be bullish for prices, and could be very bullish. If you look at the trends in the exchange rate of the U.S. dollar, and in world carry-over of cotton, then you must assume that it is most likely that the risk of error is that prices will be more bullish than most currently think.

Table 1. Supply and Demand.

	2001	2002	2003
Carry-In	6.00	7.43	6.50
Production	20.30	17.38	17.40
Supply	26.32	24.84	23.90
Domestic Use	7.72	7.50	7.50
Exports	11.00	10.80	10.80
Demand	18.72	18.30	18.30
Carry-Out	7.43	6.50	5.60
Aug.1-Nov.15 Use	5.46	5.34	5.31
Surplus (Deficit)	1.97	1.16	0.29

2001 and **2002** are from the USDA

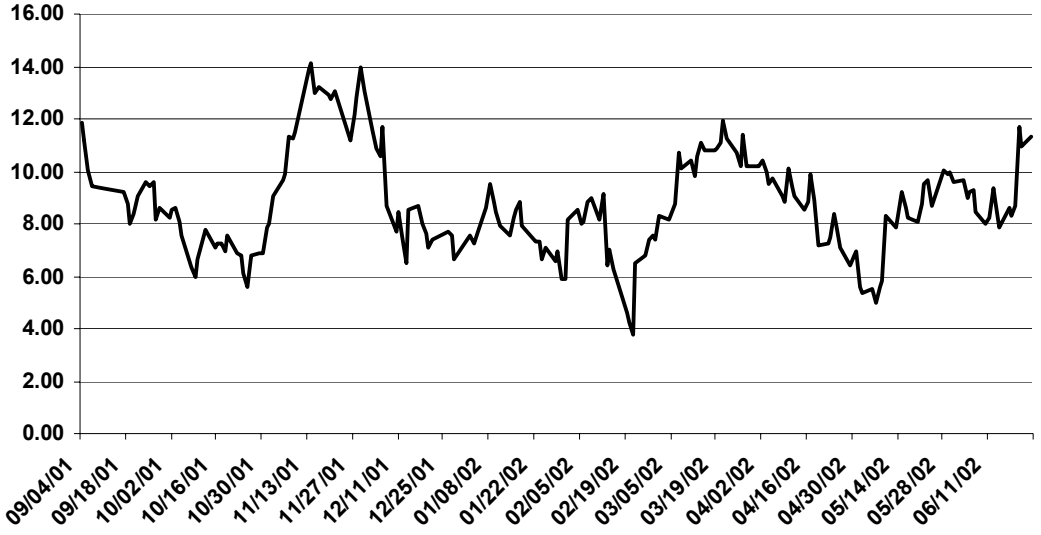

Figure 1. Futures – AWP Spread: 2001 Crop.

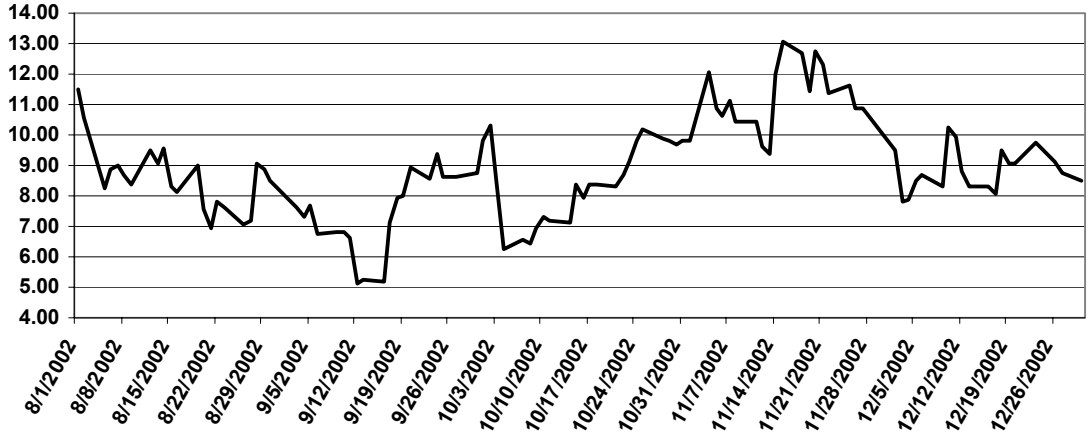

Figure 2. Futures – AWP Spread: 2002 Crop.

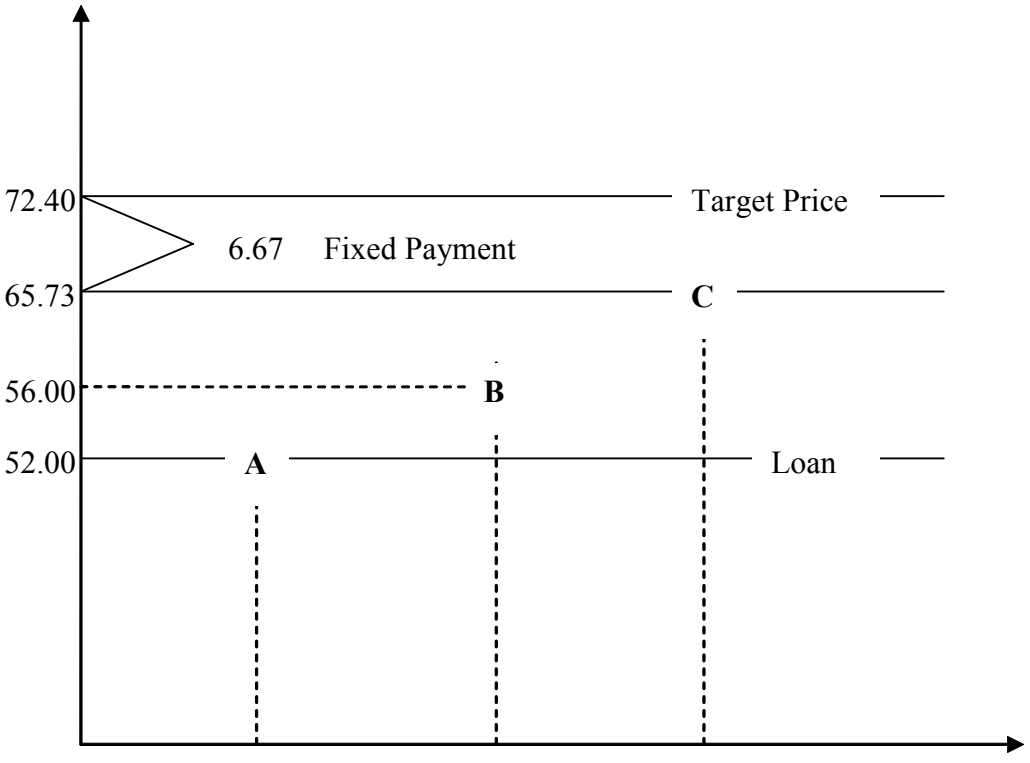

Figure 3. Counter-Cyclical Payment Scenario.

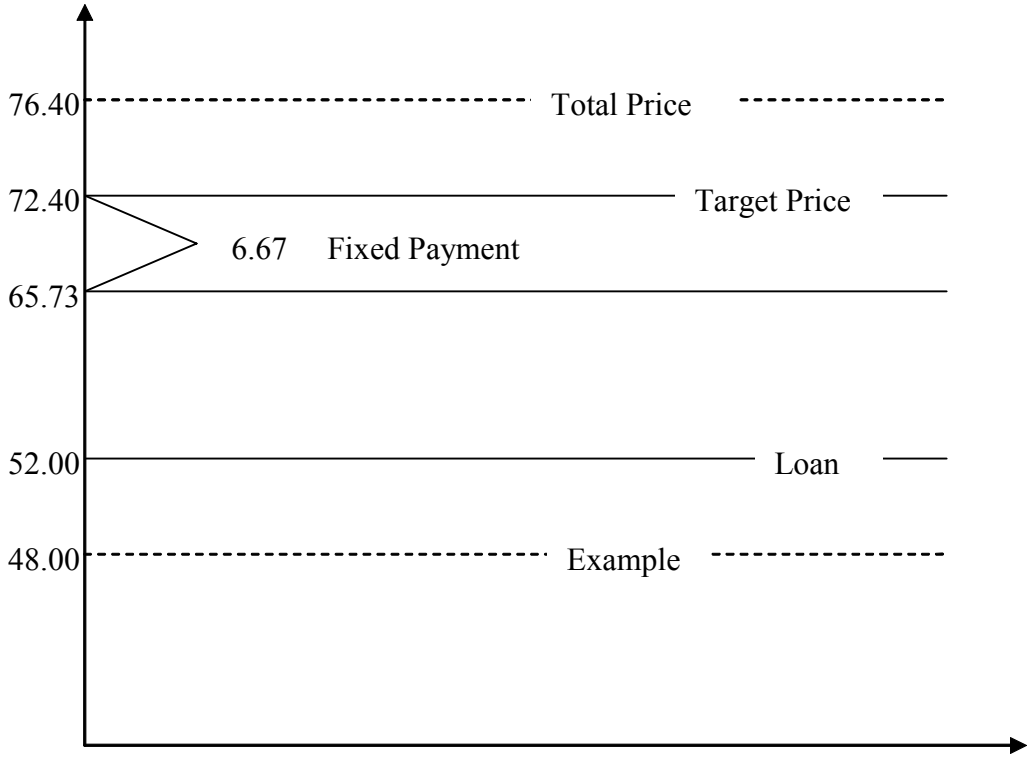

Figure 4. Counter-Cyclical Payment and LDP Scenario.

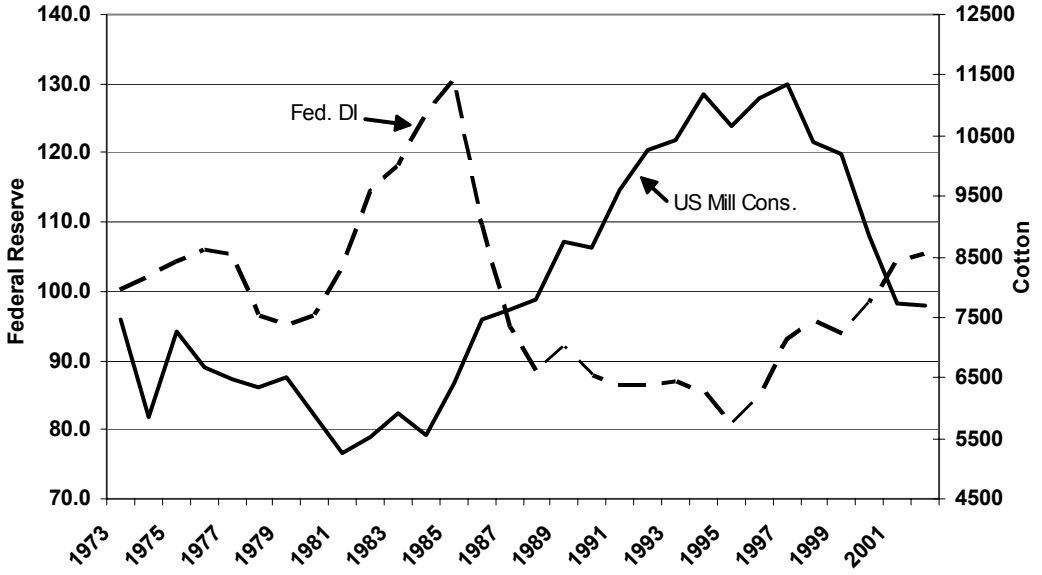

Figure 5. Federal Reserve Dollar Index and Mill Consumption.

Figure 6. World Carryover as a Percentage of World Consumption.

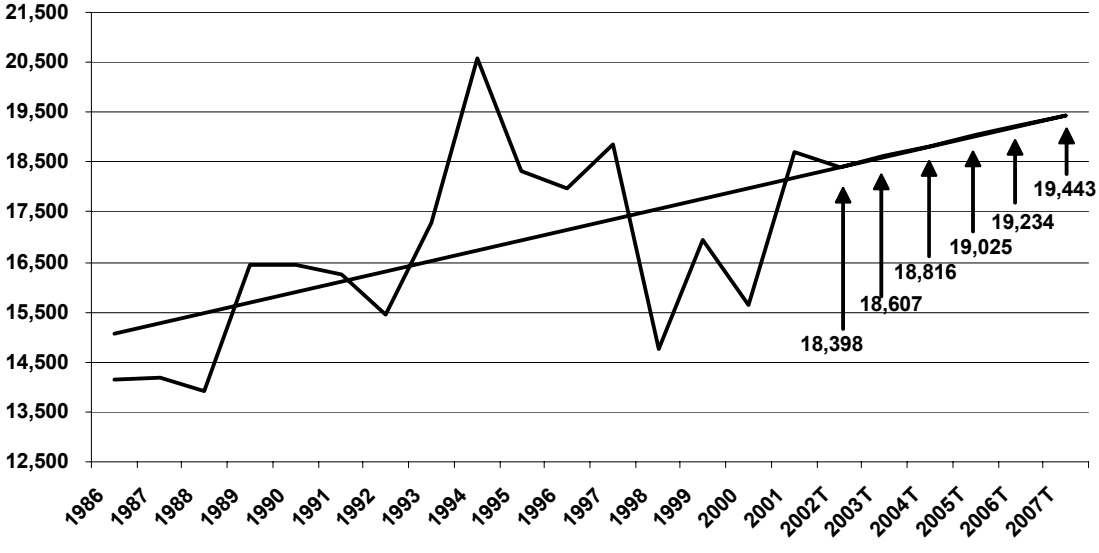

Figure 7. US Cotton Offtake (1986-2001) and Trend (2002-2007).

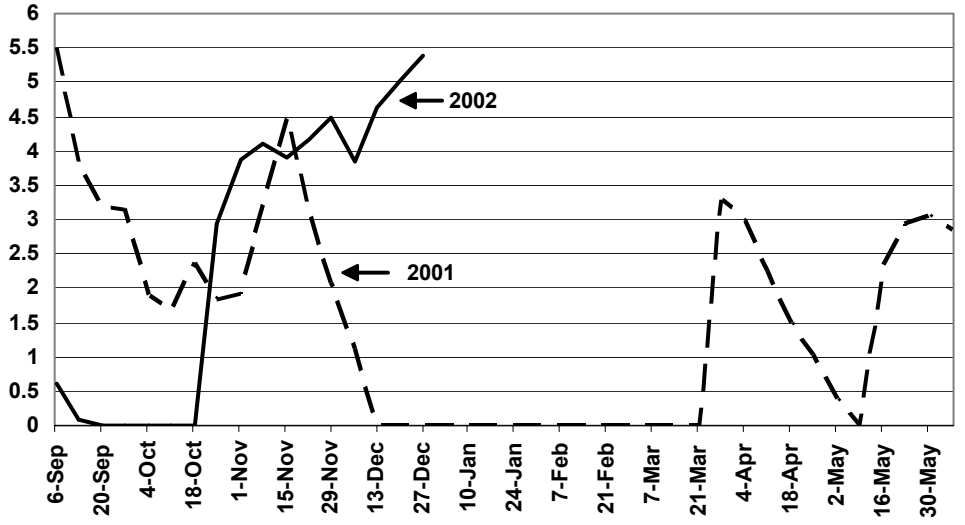

Figure 8. Step 2 for 2001 and 2002 Crop.

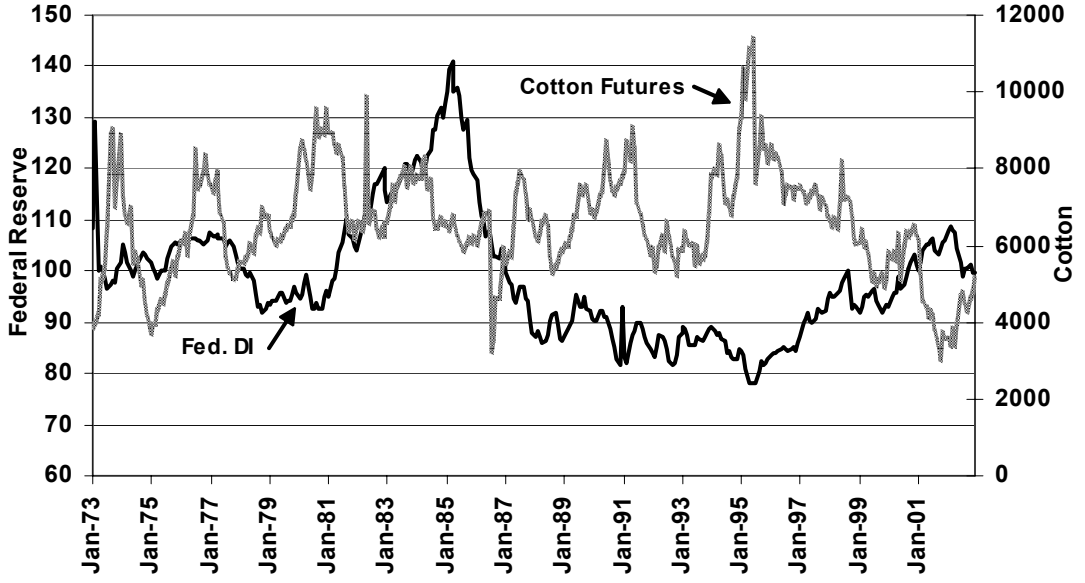

Figure 9. Federal Reserve Dollar Index and Cotton Futures.