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# **The U.S. Dairy Situation and Outlook**

by

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# THE U.S. DAIRY SITUATION AND OUTLOOK<sup>1</sup>

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## Milk Supplies

For the first four months of 1988 milk production was 2% to 3% above the Dairy Termination Program (DTP) affected first third of 1987. The middle of 1988 brought the worst widespread drought since the 1930s and production growth slowed to less than 1% above year earlier levels. Drought relief came to much of the country by August or September and production rebounded to about a 2% growth. This is illustrated in Figure 1. In contrast to the mood last summer, in this rollercoaster year the ups ended ahead of the downs. Milk production for the year is estimated to exceed 1987 by almost 2% or 2.8 billion pounds, as shown in Table 1. If one adjusts for the fact that 1988 was a leap year, the estimated increase is reduced to 1.7%.

Nationally, milk production per cow in 1988 is about 3% or 400 pounds per cow higher than 1987. When this is adjusted for leap

year, the gain is actually more like 2.6%; quite a bit less than the 4% gain achieved in 1987. Cow numbers are down about 0.9% or 91,000 cows, much less than the buyout affected reduction in 1987.

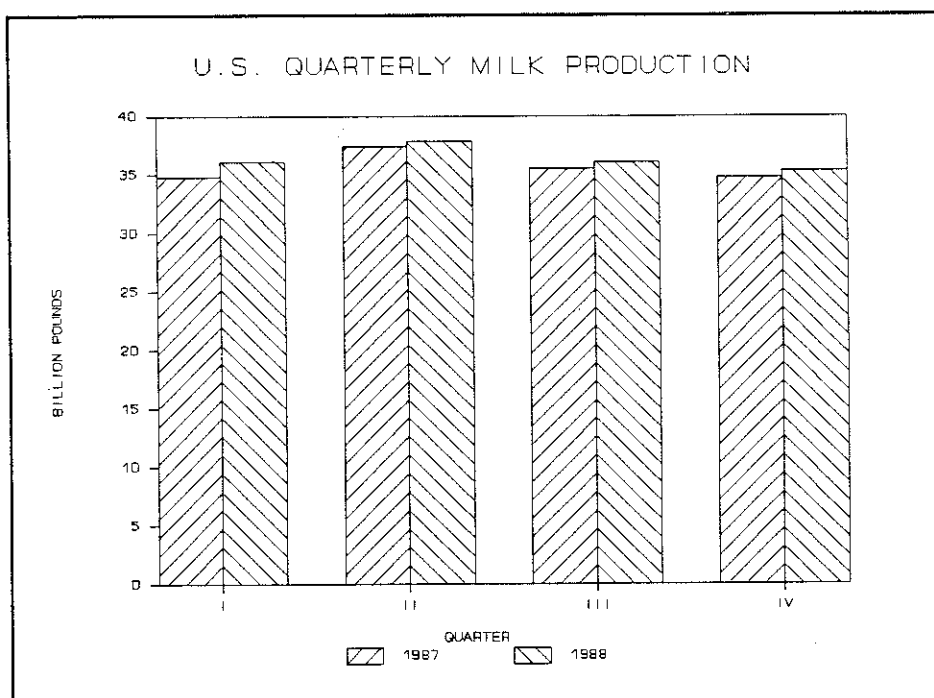


Figure 1

<sup>1</sup>Additional copies of this publication (A.E. Ext. 88-29) may be requested from the authors at the address indicated at the top of the paper. The authors are indebted to Walt Wasserman for contributions to the forecasts.

Table 1  
U.S. Milk Supply and Utilization  
1981-1989

	1981	1982	1983	1984	1985 <sup>a</sup>	1986 <sup>a</sup>	1987 <sup>b</sup>	1988 <sup>c</sup>	1989 <sup>d</sup>
<u>Supply</u>									
Cow Numbers (thous.)	10898	11011	11098	10833	11016	10813	10334	10243	10135
Production/Cow (lbs.)	12183	12306	12585	12506	12994	13260	13786	14185	14430
	(billion pounds)								
Production	133.0	135.5	139.7	135.4	143.1	143.4	142.5	145.3	146.2
Farm Use	2.3	2.4	2.4	2.9	2.4	2.4	2.2	2.2	2.2
Marketings	130.7	133.1	137.3	132.5	140.7	141.0	140.3	143.1	144.0
Beginning Commercial Stocks	5.8	5.4	4.6	5.2	4.9	4.6	4.2	4.6	4.8
Imports	2.3	2.5	2.6	2.7	2.8	2.7	2.5	2.5	2.5
TOTAL SUPPLY	138.8	141.0	144.5	140.5	148.4	148.3	146.9	150.2	151.3
<u>Utilization</u>									
Commercial Disappearance	120.5	122.1	122.5	126.9	130.6	133.5	135.6	136.5	137.5
Ending Commercial Stocks	5.4	4.6	5.2	4.9	4.6	4.2	4.6	4.8	4.8
Net Government Removals	12.9	14.3	16.8	8.6	13.2	10.6	6.7	8.9	9.0
TOTAL USE	138.8	141.0	144.5	140.5	148.4	148.3	146.9	150.2	151.3

Source: Dairy Situation and Outlook, Milk Production, and Dairy Market News, U.S. Department of Agriculture.

<sup>a</sup> Revised.

<sup>b</sup> Preliminary.

<sup>c</sup> Based on preliminary USDA data and Cornell estimates.

<sup>d</sup> Projected by Andrew Novakovic.

Table 2

Milk Production, Top States and U.S.  
Year to Year Changes, 1988 vs. 1987

<u>State</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>
Wisconsin	6%	0%	1%
California	4%	5%	2%
New York	2%	-2%	-1%
Minnesota	3%	-2%	0%
Pennsylvania	1%	-1%	0%
Michigan	2%	-1%	-1%
Texas	13%	13%	13%
Ohio	1%	-1%	0%
Washington	6%	2%	5%
Iowa	0%	4%	8%
Vermont	1%	-4%	-3%
U.S.	4%	1%	2%

Most states followed the national up-down-up pattern of national production; however there were important regional differences, as shown in Table 2. Through October 1988, Texas production has increased 12%, hardly showing any slowing in its rapid growth. California grew 2% in the third quarter of 1988 compared to a 4% growth in the first quarter, but it is still up between 3% to 4% for the first 9 months of 1988. Wisconsin, the nation's largest milk producer, was sharply affected by the summer drought, but its production began increasing again in the Fall. For the first 9 months of 1988, Wisconsin production is up over 2%, about the national average. Other Midwestern states started out with slower growth than Wisconsin and tended to be more drought affected as well. Iowa, Missouri, and Illinois are curious exceptions. All three states are showing more growth in 1988 than they have for many years. The Northeast was less affected by the drought than the Midwest, yet production is down from Pennsylvania through New England. On a monthly basis, the only major milk producing states that are still below year earlier levels in October are New York, Michigan, and Vermont.

#### Milk Utilization

In a remarkable departure from the considerable increases experienced since 1983, commercial disappearance (or sales) of dairy products have been running below year earlier levels through the third quarter of 1988. This is in part because fourth quarter 1987 was a very poor quarter; most analysts are still

expecting 1988 to end up above 1987. Our estimate of an annual gain of 0.7% reduces to 0.4% when adjusted for leap year; this means per capita dairy product disappearance is down for only the second time during the 1980s. The annual total is shown in Table 1; quarterly differences between 1988 and 1987 are illustrated in Figure 2.

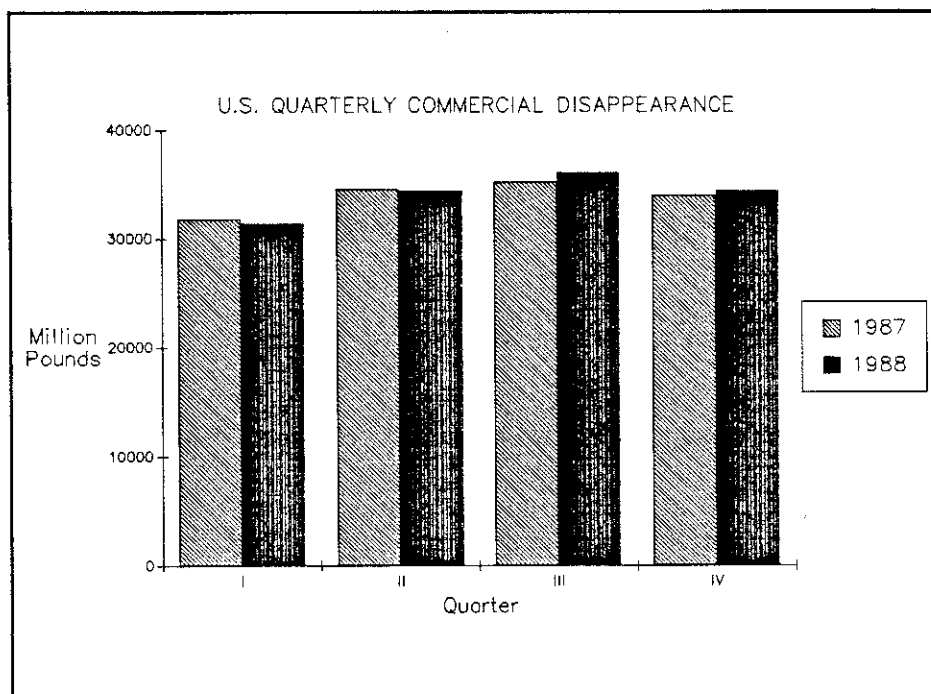


Figure 2

Growth in cheese consumption, particularly Italian cheeses, is still very good, but sales of butter have fallen dramatically. The most remarkable story this year is for nonfat dry milk. During most of the 1980s, as much as 75% of the nonfat dry milk produced in the U.S. was sold to the government. This year, lower world production, higher world prices, a cheaper dollar, lower U.S. prices, and some concerns over Chernobyl-tainted European powder have combined to make U.S. nonfat dry milk competitive on world markets.

These very different changes on a product by product basis are probably not reflected very well in the milk equivalent, total commercial disappearance figure. Total disappearance is calculated on a fats-basis; the decline in total is very much affected by the decline in butter, and nonfat dry milk has no impact whatsoever. No matter how it's sliced, after four years of incredibly good increases, this was a mediocre year for dairy sales in total.

#### Price Support Program

With production increasing faster than consumption, net removals under the price support program are estimated to be up by about one-third, ending the year close to 9 billion pounds (m.e.), (Table 1). This represents about 6% of the milk produced in the U.S., compared to 4% in 1987. Although still well below net removals during the rest of the 1980s, net removals at this level are still too high to take the budget and political pressure off of dairy programs.

It also appears that, if the Disaster Assistance Act of 1988 had not eliminated the possibility, the support price would surely have been reduced on January 1, 1989. As it is, the amended Food Security Act of 1985 now holds the support price for milk at \$10.60 through March, 1989. From April through May it will increase to \$11.10. In June it returns to \$10.60. On January 1, 1990, the support price will once again be subject to review and a possible 50¢ reduction, if net removals for 1990 are projected to exceed 5 billion pounds.

### Milk Prices

Figure 3 illustrates the relationship between the support price and the Minnesota-Wisconsin or M-W price (both are for manufacturing grade milk at 3.5% butterfat). The figure shows how the M-W fell below the support price in 1980 in response to a budding surplus and a CCC make-allocation that has not changed since 1979. The M-W stayed below support until tighter supplies caused by the Milk Diversion Program pulled the M-W up in Fall 1984. The Dairy Termination Program had a similar effect in Fall 1986 and 1987. Following the buyout, the M-W appeared to be headed below support again, but the drought began to pull the M-W above support in July 1988. Since June 1988 the M-W has risen \$1.89, from \$10.34 to \$12.23 in November 1988. This is the highest the M-W has reached since January 1985. Given the lower M-W price early in 1988, for the year the M-W will still average 20¢ below 1987.

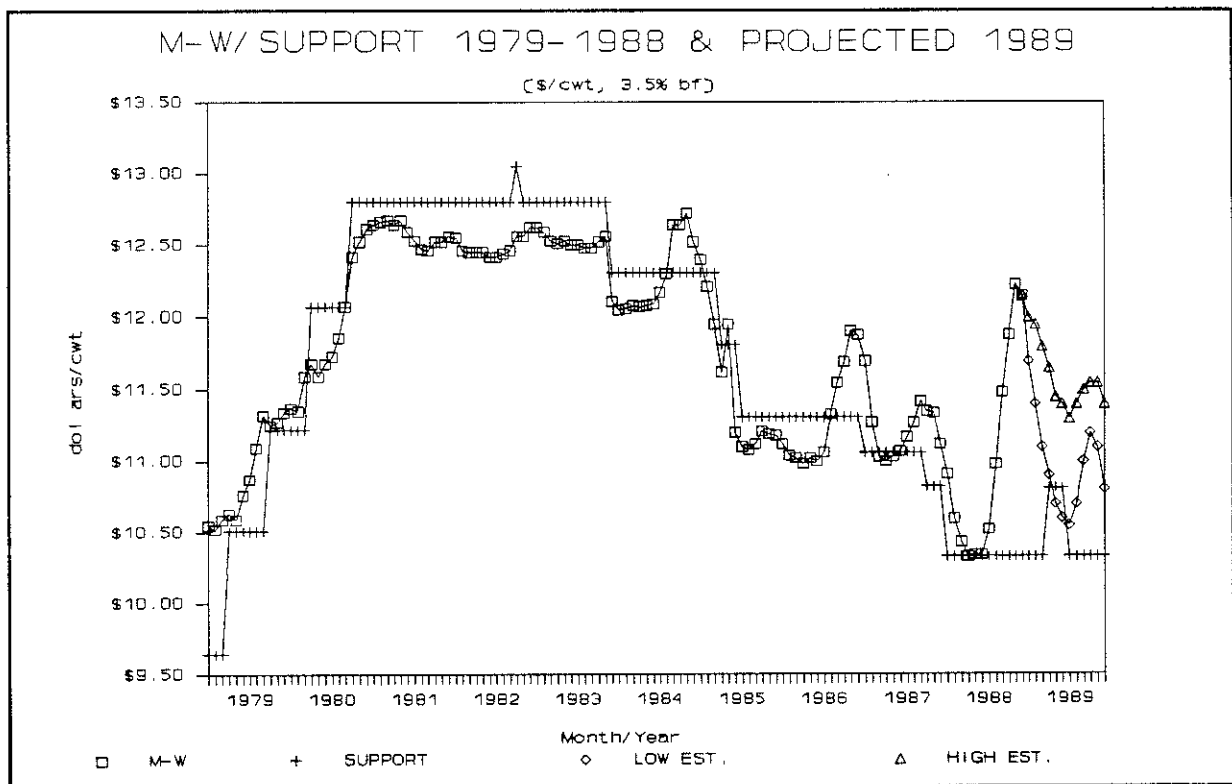


Figure 3

As shown in Table 3, national average farm milk prices in 1988 are estimated to be almost 40¢ below last year. If assessments are included, the effective average price of all milk in 1988 is actually down 25¢/cwt.



Table 3

**Farm Prices for Milk; CCC Purchase, Wholesale, and Retail Prices  
for Cheese, Butter, and Nonfat Dry Milk; and Selected Retail Price Indices  
1981-1988**

	1981	1982	1983	1984	1985	1986	1987 <sup>a</sup>	1988 <sup>b</sup>
<b>Farm Milk (\$/cwt., ave. fat):</b>								
All Milk	13.77	13.61	13.58	13.46	12.75	12.50	12.54	12.15
Grade A	13.95	13.80	13.75	13.61	12.90	12.62	12.68	12.25
Grade B	12.72	12.60	12.61	12.49	11.72	11.46	11.37	11.05
Milk/16% Feed Ratio	1.43	1.54	1.45	1.41	1.52	1.57	1.63	1.34
Assessment	.00	.00	.48	.50	.125	.365	.188	.025
<b>Cheese (\$/lb.):</b>								
CCC Purchase, Natural Cheddar, Grade A or higher, blocks	1.400	1.400	1.391	1.348	1.279	1.250	1.219	1.1525
Wholesale, Cheddar (40 pound blocks), National Cheese Exchange	1.358	1.358	1.352	1.341	1.248	1.260	1.213	1.21
Retail, Cheddar Cheese	N.A.	N.A.	N.A.	3.065	3.093	3.049	3.056	3.17
<b>Butter (\$/lb.):</b>								
CCC Purchase, Grade A or higher, Chicago	1.490	1.490	1.485	1.433	1.415	1.398	1.373	1.320
Wholesale, Grade A, Chicago (1 lb.)	1.480	1.477	1.473	1.488	1.411	1.445	1.402	1.32
Retail, Grade AA, sticks (1 lb.)	1.993	2.046	2.066	2.107	2.121	2.151	2.170	2.17
<b>Nonfat Dry Milk (\$/lb.):</b>								
CCC Purchase, Spray Process, Extra Grade, Unfortified	.940	.940	.937	.910	.843	.808	.783	.7275
Wholesale (1 lb.)	.940	.940	.932	.909	.841	.806	.791	.79
<b>Retail Price Indices (1982-84=100.0):</b>								
Fluid Whole Milk	98.1	99.4	100.1	100.5	99.6	99.4	101.0	106.0
All Dairy Products	97.4	98.8	100.0	101.3	103.2	103.3	105.9	108.0
All Food	93.6	97.4	99.4	103.2	105.6	109.0	113.5	118.0
All Consumer Prices	90.9	96.5	99.6	103.9	107.6	109.6	113.6	119.0

Source: Dairy Situation and Outlook, Dairy Market News, and Federal Milk Order Market Summaries, U.S. Department of Agriculture.

<sup>a</sup> Revised.

<sup>b</sup> Estimated.

Wholesale prices for butter followed the CCC purchase price down. But wholesale prices for cheddar cheese and nonfat dry milk were held to year earlier levels despite drops in CCC purchase prices. As indicated earlier, butter sales were very poor this year, but good domestic markets for cheese and very good export markets for nonfat dry milk held wholesale prices above purchase prices.

Although the differences are closer than in previous years, retail prices of dairy products are estimated to have increased less than the general rate of inflation for consumer products. All dairy product prices are estimated to average about 2% over 1987. Fluid whole milk, like all food prices, are estimated to be up about 5% in 1988, which is less than a half percent below the expected increase in the general Consumer Price Index.

### The 1989 Outlook - Policy

Barring new legislation, there will be almost no changes in dairy programs in 1989. The current support price of \$10.60 (3.67% fat) will be increased 50¢ for the three months of April, May, and June, 1989. It is likely to be dropped to \$10.10 on January 1, 1990. The real question is what will come out of the many policy discussions that are taking place and which touch every major dairy program.

The Food Security Act of 1985 is scheduled to expire at the end of 1990. Apparently what seemed like a good idea to Congress in 1985 does not look like such a good idea now. With 1990 Congressional elections affecting several key agriculture committee positions in the Senate and everybody in the House, the prevailing sentiment today is to not wait for 1990 before changing agricultural policy, including dairy. The possibilities range from a simple extension of current provisions through 1991 to having a full scale debate and new policy in 1989. One might guess that unless legislative leaders tightly hold discussion to a simple extension, the Pandora's Box of policy options will once again burst open. As before, discussions will range from triggered price support cuts to mandatory production quotas and many points in between.

In addition to dairy price support policy, federal milk marketing orders and dairy import quotas are also part of the policy uncertainty.

Long festering concerns related to differences in federal order prices across regions, even greater disparities introduced in the Food Security Act, and counter-reactions to suggestions that the price support program be "regionalized" have resulted in calls by Midwestern critics for changes in federal orders. Recent reports by the U.S. Government Accounting Office and the U.S. Department of Agriculture have generally added some fuel to the fires. Proposed changes are spoken of in terms of reconstituted milk, order mergers, and class I differentials, but when it is all boiled down the issue is why should farmers in the North Central area have lower blend prices than farmers in other parts of the country, most notably the South and Northeast? Of particular concern to the Midwest is the combination of high prices, large farms, and rapid production growth in Texas and other parts of the South.

Dairy import quotas are also the subject of discussion because the U.S. is in the middle of the so-called Uruguay Round of multilateral trade negotiations under the General Agreement on Tariffs and Trade. As with earlier rounds, dairy quotas stand out as an exception to the philosophy and rules of the GATT. There is much pressure from other countries and within the U.S. to sacrifice dairy

import quotas in order to gain concessions that would be to the advantage of other milk producing countries or other U.S. industries. Dairy import quotas will be staunchly defended by the U.S. dairy industry, which has successfully blunted forces for change in the past. Even the most ardent U.S. free-traders will not give up dairy product quotas without exacting major changes from other countries. Changes being discussed in the Uruguay Round focus on extensive changes in domestic support policies as well as trade policies. Such changes will not come easily and may not be made at all; yet there is a strong desire on the part of all GATT participants to do something.

Where all these many and varied discussions will eventually lead and when one change or another will be made is anybody's guess right now. In any case, it seems rather unlikely that any changes would be enacted before late 1989 at the earliest.

### The 1989 Outlook - The Market

As shown in Table 1, production per cow is expected to push milk production up less than 1% or about 1 billion pounds, despite a projected decline in cow numbers. Higher feed prices and somewhat shorter supplies of corn and hay, may hold down production per cow increases somewhat, but expectations would still point to improvements in production per cow only a little off the recent trend. Changes in total cow numbers will depend in part on the number of dairy farmers going out of business relative to new entrants, but they may be more affected by heavier culling and/or fewer additions to herds in the first half of the year, while feed is still tight. Lower numbers of replacement heifers are part of the limit on new additions to dairy herds.

Perhaps it is too easy to just extend the most recent annual trend, but it is hard to see why commercial disappearance in 1989 should be much different from what it is in 1988. The projection of a 0.7% increase next year is closer to a 1% increase if one allows for the fact that 1988 is a leap year.

Factors that may be contributing to the current demand situation and future slower growth include the following points. Although retail dairy product prices continue to increase at a slower rate than other food prices or consumer prices in general, retail prices may be less favorable next year than they have been. This should be a relatively short lived factor because farm prices are expected to decline from current peak levels.

General business economists have been predicting a recession for several months. Although the economy has remained remarkably strong, a downturn in the economic cycle seems inevitable. A recession would hold back dairy sales somewhat and is thus another short term dark cloud on the horizon.

Another factor important to prior increases, dairy product promotion, may simply be playing out. Large amounts of new farmer funding began flowing to existing and new promotion programs in 1984 and 1985. The same annual funding cannot be expected to fuel major increases in sales forever. Now, increases in total funds depend on increases in farm milk marketings, which means slow growth in funding. Future promotion-induced sales growth will have to come from better programs and better use of the available dollars; it is unlikely that it will come from a big increase in total dollars.

Dietary and health issues relative to dairy cholesterol and saturated fats have been dogging the dairy industry for years now. The current decline in the usage of cream and butterfat at the wholesale level may be reflecting a resurgent consumer shift to lower fat dairy foods and non-dairy substitutes. The recent development and marketing of fat reduced cheeses may be an important contributing factor now, and more so in the future. Shifting to lower fat dairy foods, as opposed to substitutes, can mean profitable markets and healthy sales increases; however it leaves the industry with the vexing problem of what to do with surplus cream. Given that national market statistics are done on a fat based milk equivalent, national trends in commercial disappearance over the next few years may look worse than the underlying product data would indicate.

In addition, strong sales of nonfat dry milk, lower fat cheeses, and the like will help hold up wholesale and farm prices more than the gross commercial disappearance figures would suggest. Possible changes in the M-W for 1989 are indicated in Figure 3. Dairy market analysts generally agree that current high prices will weaken through Spring 1989 and should be lower in Fall 1989 than in 1988. Beyond that there are considerable differences in monthly forecasts. The range shown in Figure 3 reflects possible high and low forecasts.

With these projected changes in production and commercial disappearance, net removals of dairy products under the price support program would be near 9 billion pounds, about the same as 1988. Obviously, net removals could be lower, but it seems unlikely that they will fall below 5 billion pounds, the current magic number for the maximum desired level of net removals.

In a nutshell, the annual averages and totals for 1989 are projected to look very similar to 1988. One important difference may be changes within the year. For dairy farmers, 1988 ends on an up-tick -- consumption is picking up, markets are led by demand, price support sales to the government are trivial, the drought is over, feed prices are a little lower than their peak, and basic milk prices are the highest they've been in two years. The end of 1989 may reverse much of this. Assuming a more normal crop year, feed prices may moderate some late next year, but milk prices will likely be pointing down again. Net removals won't add up much differently but the impression is likely to be that they are building rather than decreasing. Another year of flat sales gains will sound a lot worse than it does now.