

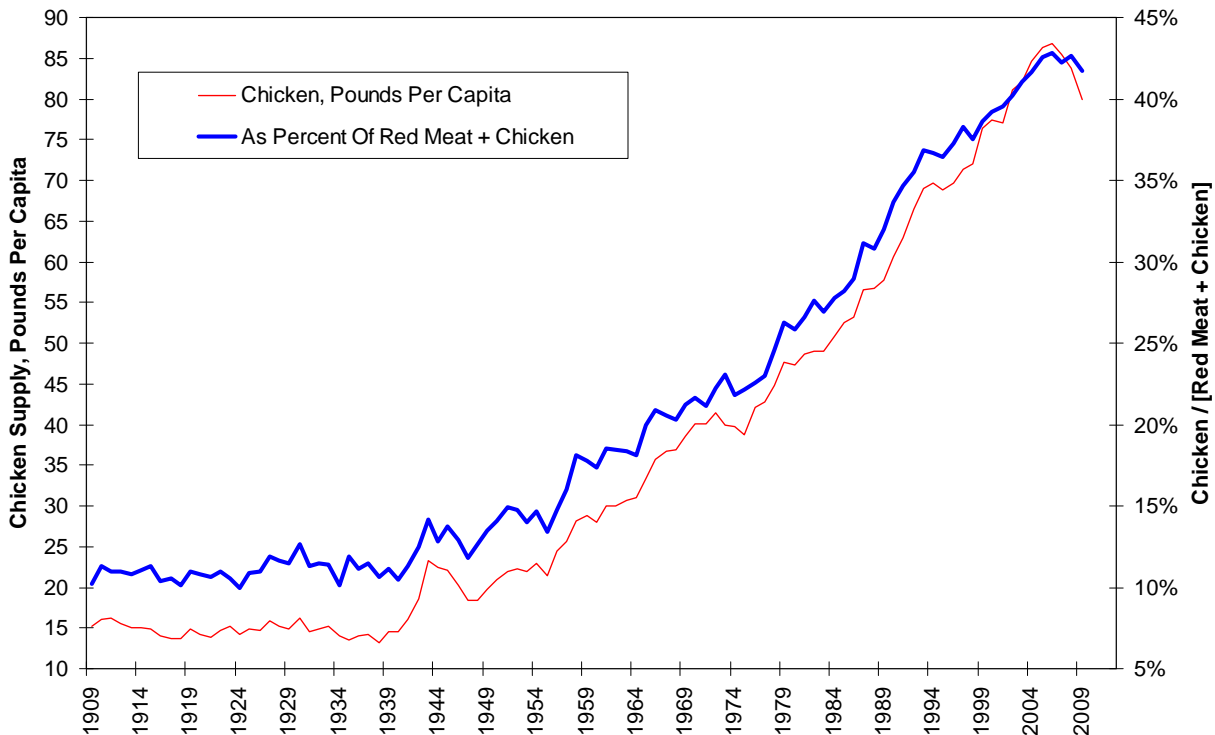
## Chickens Coming Home To Roost

We all have heard those little comparisons noting if automobiles' price and efficiency had increased at the rate of microprocessors' a car could travel to the moon and back on three cents of gasoline or something similar. All of this is amusing, but just as comparisons noting how strong ants are collapse when you apply the laws of scaling, moving metal and people about over highways and moving electrons about through semiconductors collapse when you account for the laws of mechanics, electronics and thermodynamics.

When we move the comparisons to physical commodity processes, the best comparison might be to the economics of poultry production. At this point, please accept any and all apologies in advance: Commodities are not pretty. Many of these productivity gains for poultry and smaller ones for hogs and the aquaculture of fish such as salmon, tilapia and catfish border on the nightmarish side of science fiction. The conversion of low-value plant-based foods into higher-value animal protein comes with costs most of us ignore. Upton Sinclair's *The Jungle* is still a part of modern life.

Regardless, the massive increases in chicken production productivity has changed the American diet profoundly over the past century in a odd confirmation of Say's Law that increased supply and lower prices creates demand. The quantities of chicken supplied and its consumption relative red meat in the American diet exploded from the mid-1950s onwards as the widespread addition of antibiotics to feed mixes led to both increased weight gains for the birds and lower death rates in the industrial coops.

### Land Of The Free, Home Of The Chicken



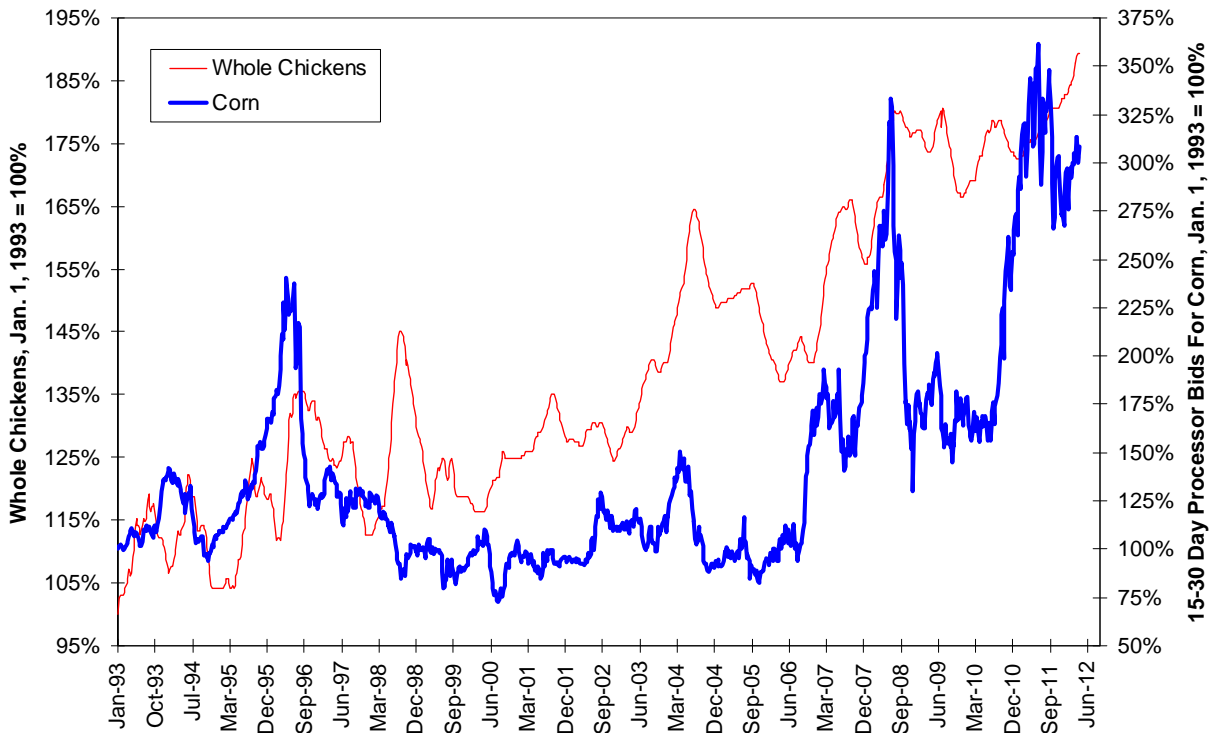
### Based On Corn

None of this would have been possible without a concomitant increase in the quantity of corn produced. While it is still unclear what the long-term fate of corn-derived ethanol will be, the nation's growing flock of chickens provided a ready market for the massive increases in corn production enabled by increased use of nitrogen fertilizers, improved hybrids and other inducements to production. A Purdue University study indicated corn yields per acre in Indiana increased at a fairly steady rate of 1.6 acres per bushel per year between 1930 and 2003; it is very likely these yield gains could accelerate if export markets for American grains dropped their aversion to genetically modified organisms (GMO). As an aside, this aversion has arrived late in human history; it has been said a cornfield is as much of a human invention as a jet engine or a computer.

Yet for all of the fundamental logic behind treating chickens as corn-processors, the two markets trade as if they are unlinked. This is true not only for whole chickens at the Georgia dock versus 15-30 processor bids for corn, it is true for the stocks of major poultry processors as well, as addressed below.

You might think there would be an identifiable lead/lag cycle between corn and chickens or between corn and poultry processors, but that does not seem to be the case. Such a cycle would operate by higher corn prices leading to the culling of flocks, leading to lower and then higher chicken prices; this is not visible in the data and is most likely a tribute to the ability of poultry processors to lock in their feed costs.

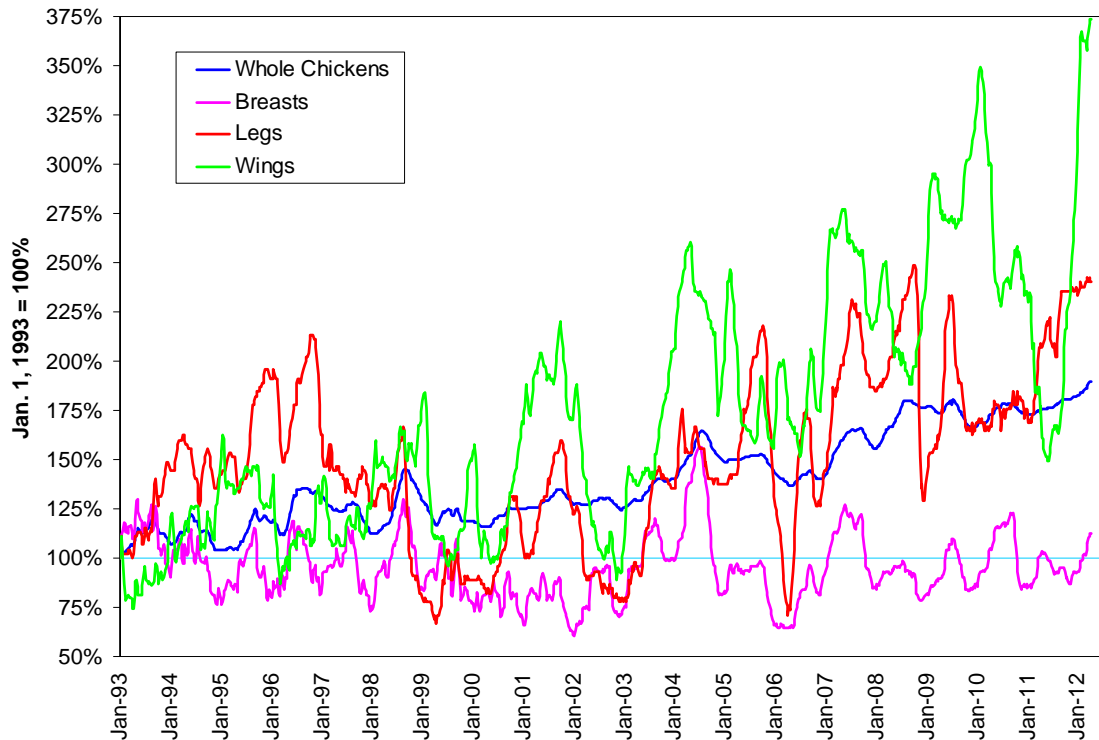
### Corn And Chickens



### Parts Are Greater Than The Whole

A second factor enters into the value-added proposition for poultry processors and that is chickens, much like Caesar's Gaul, can be divided into three parts, none of which require a working knowledge of Latin to consume. The birds can be sold whole as what the USDA terms "ready-to-cook" or they can be sold as legs, wings and breasts. In a role reversal between people and poultry, the breasts are the least volatile part, followed by legs and then wings. It is a tribute either to American ingenuity or cultural barbarity that we have elevated the chicken wing to a high-margin product in low-brow restaurants.

## Wings Flap About

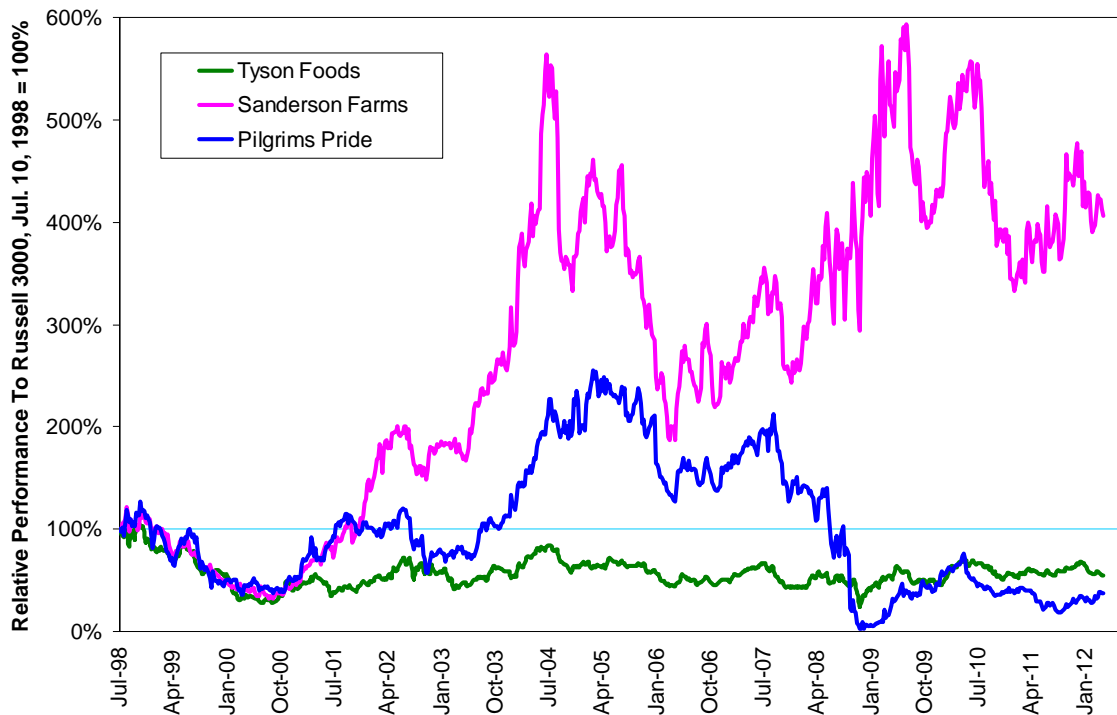


These separate parts markets act as something of a risk management product for poultry processors as the margins on wings being sold to restaurant chains can be adjusted to compensate for either higher feed costs or excess production. The higher-value breasts have to compete with other meats for center-role on the dinner plate and therefore cannot jump about as much in price.

### Relative Stock Market Performance

You might think an industry capable of such production expansion and value-added tricks would be filled with outperforming stocks. You would be wrong in two of the three major poultry processors shown below. While Sanderson Farms has outperformed the Russell 300 handily since July 1998, both Tyson Foods and Pilgrims Pride have underperformed, with Tyson underperforming rather consistently. Moreover, this has been true regardless of whether we are in a bull or a bear cycle in the stock market.

## Sanderson Farms Rules The Roost



Statistics aficionados, if no one else, might be amused to note each of these stocks' relative performance has an entirely different lead/lag cycle vis-à-vis corn. We should expect the stocks to start underperforming the broad market in anticipation of higher corn prices and therefore have a negative correlation about six months in advance of corn. This is true for Tyson Foods. However, Sanderson Farms rises in advance of corn prices moving higher and Pilgrims Pride has a very short-dated negative lead time. Restated, we can take the nice little theory about commodity consumers moving contra-cyclically in advance of commodity prices and discard it unceremoniously. If you were looking for one more reason why commodity-linked equities should not be traded against the underlying commodities, you have found it.