## WHAT DOES NOT KILL ME, MAKES ME STRONGER\*,1

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As firms were slashing inventory, furloughing employees, idling factories and cutting orders to their suppliers, the intensity of the recession reverberated upstream in the supply chain with full force in almost perfect accordance with what the bullwhip effect would have predicted. But as the bullwhip phenomenon would have indicated, many firms upstream in the supply chain overcorrected and cut too far due to the usual supply chain phenomena: lack of communications, order batching, demand forecast updating, etc. In addition, there was one more factor in the current recession that caused overcorrection: inventory ties up cash and in an environment of harsh credit "cash is king" and companies cut inventories even further to generate cash. The result was a very lean supply chain.

The first wave of recovery has already taken place even before any stimulus money found its way into the economy — many observers credit the spectacular rise of stock markets around the world in the second quarter of 2009 to the rebuilding of inventories needed to serve even modest consumer demand. It is likely, however, that some upstream suppliers will "overshoot" their demand forecasts and will not be able to survive the "new normal" of demand. Of course, many of these suppliers are obscure Chinese companies which do not make the headlines in the Western media. What one may expect is another wave of company failures in China and elsewhere in the coming quarters, as the "new normal" demand takes hold and the effects of over-investments sink companies who tried to respond too quickly to the inventory rebuilding.

As retailers start rebuilding inventories, many suppliers, who cut too deep, may not be able to respond. To manage the demand they are likely to put their customers on allocation. The result is likely to be "phantom demand" as retailers inflate their orders in order to get a

bigger fraction of the allocation. This seems to have happened to some automotive companies in the summer of 2009 as the "cash for clunkers" program increased demand for Ford Focus and other vehicles; desperate dealers may have inflated their orders, causing Ford to give rosy forecasts to its suppliers and even inflate them in order to get these strapped suppliers, many of whom were bankrupt, to give Ford priority over other OEMs, reigniting the bullwhip . . .

Of course, as some companies falter, their competitors may grow stronger and come out of the recession more competitive than ever. It is likely to be the companies that were able to (i) adjust to the erratic order pattern of their scared customers (ii) take into account the bullwhip effect and not overreact and (iii) coordinate with other customers and suppliers to lessen the bullwhip effect.

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<sup>\*</sup>Invited Comment

<sup>&</sup>lt;sup>1</sup>Friedrich Nietzsche, Twilight of the Idols, 1888.

<sup>&</sup>lt;sup>2</sup>Reliable business statistics are somewhat difficult to get in China but Bloomberg.com reported on January 20, 2009 that "China's official urban unemployment rate jumped for the first time since 2003 and may climb to an almost 30-year high," a sign of closed factories and laid-off workers.