

## *The Economy in Perspective*

*The Second Law of Thermodynamics...Energy tends to flow spontaneously from being concentrated in one place to becoming diffused or dispersed and spread out, unless it is hindered from doing so.*

The Second Law helps explain why hot frying pans cool off after they are removed from the heat source, and why ice cubes melt in a glass of tap water. Left to its own devices, tap water will not store up energy and transform itself into ice cubes.

Foreign exchange markets went to work and discharged some energy after the French public rejected the proposed European Union constitution on May 29, presaging Dutch voters' rejection a few days later. The constitutional referendum expressed the opinion held in some parts of the EU that its economic performance is not meeting expectations. Market participants reacted to this sentiment by lowering the euro's exchange value relative to the U.S. dollar. How member nations' political leaders will respond remains to be seen. Many economists believe that some European labor markets are less flexible than they must be to retain and attract businesses; however, labor market reforms run counter to contemporary European tradition and culture. Common market liberalizations, including the single-currency initiative, along with new EU entrants, have had the effect of pushing European nations in a uniform direction, but the latest developments have impeded that process, at least for the time being.

In another illustration of the Second Law of Thermodynamics, financial markets have been reacting in recent weeks to new assessments of some automotive companies' earnings potential. It has been apparent for quite a while that the cost and productivity structures of several domestic auto assembly companies have put them at a disadvantage compared to some foreign-owned competitors. Those competitors have been expanding production

capacity and market share, a strategy that has intensified pressure on domestic firms to take costs out of both overhead and unit production. But, as in the European Union, changes in tradition and culture take time and can be painful to entrenched interests.

The Second Law states that once an obstacle is removed, built-up tensions eventually dissipate. For the U.S. automotive industry, credit rating agencies' downgrades were what set the adjustments in motion, and the repercussions are being felt all along the supply chain as the industry prepares for various consolidations. Some firms are already leaving the industry, and others are working to reduce costs. In at least one significant instance, an investor is betting that a large domestic auto assembler eventually will transform its cost structure successfully enough to become a much healthier competitor.

Thermodynamic forces are also working to convert the potential energy bound up in the Chinese renminbi's peg to the U.S. dollar into kinetic energy. The question, of course, is in what direction and to what degree the currencies will depart from the present fixed exchange rate, when—and if—the Chinese government alters the peg. Some market observers are convinced that the renminbi is seriously undervalued and would appreciate rapidly in a free float, much like an inflated ball that has been held underwater and then released. Others think that focusing on the exchange rate misses the bigger picture: The thermodynamics of the economic relationship between China and the United States involve far more than the dollar/renminbi exchange rate. The United States is a mature economy and, although it constantly reinvents itself, its pace of change is nowhere near that of China today. The hot frying pan that is China will take a long time to cool, and those of us who want to stay in the kitchen must be careful not to get burned.