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THE PRICE OF GASOLINE:
HOW HIGH FOR HOW LONG?
(REVISITED)

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Gasoline prices are the most widely covered petroleum product price in the media. We often see stories in the media that ask the question, “Who is to blame for high prices at the pump?” The anger expressed on the local news by the gasoline station patron who is upset about the price of gasoline as he fills up his large, low-efficiency sport utility vehicle is almost comical, but his anger is not entirely misguided. The fact is that no single party is to blame for high prices, and understanding why prices are so high is not simple. Thus, it is important to ask, “What can be done to reduce gasoline prices?”

Higher prices lead to public outcry, much of which ends up directed at gasoline suppliers in the form of formal investigations and congressional hearings. This reaction can be a good thing because it can lead to a more informed public and reinforce to suppliers that they should not attempt to manipulate the market, which can be done more easily when the supply-demand balance is tight. But, it is imperative that policy be designed to produce sustainable long-term solutions, regardless of what is politically popular.

Understanding what to do about high gasoline prices requires an understanding of why prices are high in the first place. The mechanics of retail gasoline prices are fairly straightforward and can be expressed as a sum of crude oil prices, refining costs, state and federal taxes, distribution and marketing costs, and station premiums related to the cost of operation (property lease rates, labor costs, etc.). In fact, research indicates that there is a stable, long-run relationship between crude oil and gasoline prices, meaning that the price of crude oil is the single most important determinant of the pump price of gasoline. Of course, crude oil only sets the baseline for gasoline price and does not explain short-term changes in gasoline price. Higher seasonal demand, low inventories, competition for imports and reduced operational refining capacity can all lead to short-term increases in gasoline prices.

In the past five years, we have seen the price of crude oil increase almost fourfold, which is the primary reason gasoline prices recently reached levels almost three times higher than just five years ago. Much of this can be attributed to strong growth in global crude oil demand, driven largely by demand growth for transportation fuels, such as gasoline, over the past 15 years. In the U.S. in particular, an ancillary impact of strong gasoline demand growth has been that seasonal swings in gasoline prices have become more pronounced. This is because as gasoline demand

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has grown, neither domestic refinery capacity nor gasoline inventories have appreciably increased. Although domestic refinery capacity has increased by roughly 10 percent in the past 15 years due to expansions at existing refineries, this is not enough to keep up with seasonal demand changes. As a result, we have had to rely increasingly on imports to meet seasonal increases in demand.

Prior to Memorial Day 2007, gasoline prices rose substantially, which prompted a public outcry. The price increase was influenced by the fact that the amount of gasoline available for import was reduced due to international refinery problems. In fact, year-on-year imports were down by up to 10 percent in the first half of 2007 despite the fact that gasoline prices were substantially higher. In sum, strong demand growth along with insufficient domestic refinery capacity and inventories resulted in the U.S. gasoline market becoming tighter, with imports playing a more important role in the U.S. supply-demand balance. This, in turn, increased our exposure to factors affecting international refinery capacity and demand. Gasoline demand in 2008 is sharply down as high prices have had an impact on consumers. This has served to mask some of the factors that contributed to a tight gasoline market in 2007.

Unfortunately, there is no single best approach to lowering gasoline prices. Building more refineries could help lower domestic gasoline price *volatility*, but it will not lower the baseline level of gasoline prices, which is determined in the global crude oil market. Moreover, gasoline is a fungible commodity, so its price is a function of global refining capacity, not just U.S. refining capacity. In order to achieve lower prices in the longer term, it is imperative that demand growth in the United States be curbed long term. This would reduce the need for additional refining capacity and serve to reduce seasonal price volatility. Lower demand would also contribute to a lower price level. Many have pointed to growing demand in Asia as the culprit for recent high prices, but the United States consumes 33 percent of the world's road transportation fuel. Thus, American demand has a strong influence on the world price of oil.

The most powerful tool we have for lowering both the level and volatility of gasoline prices is conservation. Research indicates that the price of gasoline during 2008 has, in fact, been lower than it would otherwise have been due to reduced demand. This is evident from the lack of profitability in the U.S. refining business (due to low refining margins), which was so lucrative

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just a year ago. To emphasize the power of conservation, if the average American could reduce his or her automobile travel by 35 miles per week, or five miles per day, U.S. gasoline consumption would be reduced by 12 percent, or about 1.3 million barrels per day of oil. This would have a staggering effect on gasoline prices and, ultimately, the price of oil. Such a reduction could be facilitated through options such as car pooling, increased use of public transportation or telecommuting.

A gasoline tax and/or higher mandates for fuel efficiency are means of achieving lower demand in the longer term. The price inelasticity of gasoline demand means that the size of the tax necessary to induce a particular reduction in demand is uncertain. In addition, there is concern that a tax could be regressive in the short term, especially for low-income households that have no viable public transportation option. Nevertheless, permanently altering price via a tax would encourage people to increase fuel efficiency and seek alternative transportation options. In regard to higher fuel efficiency mandates via CAFE standards, the effects of higher-efficiency regulations will take time to fully influence consumption because new standards only apply to new vehicles. Nevertheless, they will ultimately serve to lower demand growth and ease the supply-demand balance. In addition, it is important that provisions in the CAFE standards do not allow vehicles to receive higher fuel efficiency ratings than they actually achieve (which has been the case with alternative vehicle credits) in order for the regulations to have full impact.

Supply-side options aimed at lowering price, such as opening the Alaskan National Wildlife Refuge (ANWR) and/or the Outer Continental Shelf (OCS) for drilling and adopting alternative fuels such as ethanol and/or coal-to-liquids are potentially viable solutions, but they do nothing to stem the tide of demand. Thus, future generations will have to solve the same problems we are talking about today because eventually demand will outgrow even those supply options. This is not to say we should not pursue supply-side solutions as part of a portfolio of options; rather, the intelligent approach would be to consider them as part of a broader approach. But, we must recognize that they alone will not solve the problems we are facing.

So what should we take from all of this? Efforts to reduce demand through both conservation and efficiency should be engaged fully. This, combined with alternative fuels and greater domestic production capacity, would lower prices in a sustainable manner. Thus, a familiar lesson from

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investment 101 unfolds: The portfolio approach is best. That should be the direction of policy. If not, we should be prepared for gasoline prices to remain high and increasingly volatile for quite some time.