By DANIEL GROSS

WITH oil prices hovering above $40 a barrel, experts have calmed frayed nerves by noting that today's services-driven American economy is much less addicted to the black stuff than yesterday's industrial economy. From 1973 to 2003, after all, the amount of oil and gas needed to create a dollar of gross domestic product fell by half. Structural changes in the economy have let the nation absorb the recent shock of rising crude.

That's the good news. The bad news is that other recent structural changes in the economy - the federal government's shift from surpluses to huge deficits, the national predilection for consumption over saving and housing prices that climb faster than incomes - have increased the country's reliance on another kind of fuel -- **credit.**

As a result, the American economic ship, which has weathered the recent run-up in crude oil prices, may be more vulnerable to sudden surges in the price of money. If the rate on 30-year fixed mortgages were to rise from 5.4 percent today to 7.5 percent next February, homeowners could get walloped.

"Rather go to bed supperless than rise in debt," Benjamin Franklin wrote in Poor Richard's Almanac. Well, in recent years, American consumers, businesses and governments have been hitting the sack with their stomachs bloated and their charge cards maxed out. From 1988 to 2000, the ratio of nonfinancial debt to gross domestic product held steady at about 1.8 to 1. But recently, consumer, business and government credit has bulged like the belly of a contestant at a hot-dog eating contest at Coney Island.

From the beginning of 2001 to the end of 2003, the economy added $1.317 trillion in gross domestic product and $4.2 trillion in debt.
That means that each new dollar of economic output was accompanied by $3.19 in new debt. So now, for the first time, the debt-to-G.D.P. ratio stands at more than two to one.

Throw in financial credit - the debt that investment banks and others use to finance trading activities and the like - and total debt has more than doubled since 1994. The mere existence of huge debt needn't be a source of panic. You and I may view debt as an economic input - we borrow so we can spend and invest, and hence, as politicians like to say, "grow the economy." Academic economists view it more as a byproduct. Debt is created when people, governments and companies spend money, trade and produce.
VIEWED that way, the sharp rise in credit in recent years isn't surprising or even, in and of itself, alarming. "When interest rates are low, you'd expect people to pile on more debt per G.D.P. because it's cheap," said J. Bradford DeLong, an economist at the University of California at Berkeley.

What's more, as anyone who has ever used a mortgage calculator knows, lower debt-service costs can make higher levels of debt seem eminently manageable. Here is a gigantic example:

In 1997, when the total national debt stood at $5.4 trillion, Washington paid $356 billion in interest. In 2003, when the national debt grew to $6.8 trillion, Uncle Sam's interest bill fell to $318 billion. The environment of ultralow interest rates engineered by Alan Greenspan, the Federal Reserve chairman, thus sharply muted the impact of Washington's fiscal recklessness.

But the economy's apparent reliance on credit to fuel everything from home buying to the military budget is troublesome. If incomes and revenues fail to rise, stressed consumers may have a tough time keeping up with payments. "It's been much more a matter of households borrowing than businesses," said Benjamin M. Friedman, a Harvard economist. "You have to hope that people are going to be able to service the obligations they've taken on."

An economy hooked on debt also is vulnerable to the seemingly inevitable rise in interest rates. And in a period when prudence would seem to dictate locking in rates, Americans have rushed to assume greater interest-rate risk. Borrowers - especially homebuyers - haven't reacted to recent increases by borrowing less.

In the first quarter of 2004, debt rose at an annual clip of 8.6 percent, more than double the growth rate of the economy. No, we've kept the interest bill down by swapping fixed-rate for adjustable-rate financing. The Mortgage Bankers Association reported that adjustable-rate mortgages constituted 35 percent of new mortgages in the second quarter this year, up from 27 percent in the fourth quarter of 2003.
Consumers, whose maxed-out credit cards generally bear floating interest rates, and the federal government, which skews its borrowing to short-term instruments, have essentially done the same thing. So if interest rates rise, we'll all have to spend more dollars on debt service, leaving fewer dollars for more productive uses - like buying 90-inch flat-screen TV's. If money becomes more expensive, we may have to downshift our spending and consumption, like drivers trading in expensive Hummers for gas-sipping imports. And that may shrink the economy.

HIGHER collective leverage, in turn, means that we're more susceptible to external shocks. "The bigger the debt, the smaller the margin for error," said Austan D. Goolsbee, a University of Chicago economist. Companies with no debt can weather several lean quarters; companies with piles of debt often find that a single bad quarter spells disaster.

The same holds for consumers. All kinds of wild cards that are scary even in placid times - another spike in gas prices, a rupture of the housing bubble, fresh job losses, a period of sustained inflation - become nightmares during times of greater leverage. So as we go to bed with our suppers and our home-equity lines of credit, Professor Goolsbee says: "I think we should be a little nervous."