

## Global Warming—Hot Problem or Hot Air?\*

*Scare stories about global warming are overblown, and the proposed solutions pose a greater threat than the problem.*

El Niño is the overhyped weather event of the decade. It has even made CNN's "Larry King Live." A natural warm spot in the Pacific Ocean that recurs every several years, El Niño exerts significant influence on global weather patterns; therefore, it's news. It was also an opportunity for Vice President Al Gore to bang the drums for a global-warming treaty.

Speaking at the "El Niño summit" in Santa Monica last fall, Gore said that "El Niño events have become much more common and much stronger," suggesting that human activity is warming the globe. Preparing for the impacts of El Niño (which are typically mild in the United States), Gore said, will get people ready for the climatic disruptions brought by global warming.

This was not the first time that the Clinton administration linked global warming to the weather. In 1997, President Clinton suggested that flooding in North Dakota during the spring thaw was actually the product of global warming: "We do not know for sure that the warming of the earth is responsible for what seems to be a substantial increase in highly disruptive weather events; but many people believe that it is," he said. Later in the year, Gore visited Glacier National Park in Montana and proclaimed that the glacier's hundred-year retreat was further evidence that human activity is causing the globe to overheat.

These speeches were more than presidential photo-ops. They were steps in a successful campaign for an international treaty to prevent climate change by controlling the use of fossil fuels. In Japan late last year, the administration signed the Kyoto Proto-

col, which, if ratified by the U.S. Senate, would require the United States to reduce carbon dioxide and other emissions an average of 7 percent below 1990 levels through 2012.

### *The Heat Is On*

The push for a global-warming treaty got two big boosts in 1996, first from reports that 1995 was the hottest year on record and second from the publication of a United Nations report that purportedly demonstrated a scientific consensus behind global warming.

In January 1996 the British Meteorological Office reported that 1995 was the hottest year on record, edging out 1990 by a bare 0.07 degrees Fahrenheit. Temperature records have been kept in the United Kingdom since the nineteenth century and are compiled from a network of land-based measurements. Asked whether this was a sign of human-induced global warming, one British researcher commented, "I think we're beginning to see it."

Not really. The "warmest year on record" announcement was based on incomplete data. Because December readings were not yet available, the British team only used readings from the first 11 months of the year; December's temperature was estimated. But temperatures took a nosedive at the end of 1995. Indeed, it was the greatest December drop on record in the Northern Hemisphere. Global weather satellites, which have taken the earth's temperature since 1979, found that 1995 was actually an average year—only the eighth-warmest since the satellites began taking climate measurements.

Soon thereafter the United Nations Intergovernmental Panel on Climate Change (IPCC) published its long-awaited report, *Climate Change 1995* (the report was late, like most U.N. publications). The study, purportedly the work of 2,500 scientists worldwide, was heralded as proof positive of a scientific consensus that human activity was causing the earth to heat up. Yet here again,

the hype was hollow.

The striking conclusion of the report was rather mild. In one chapter of the gargantuan study, the authors concluded that "the balance of evidence suggests that there is a discernible human influence on global climate." That highly qualified sentence, quoted incessantly in the media as proof of global warming, is the strongest claim in the entire report.... Those who read the entire report realize that the scientific "consensus" is a lot more circumspect about humanity's affect than the summary suggests. As Harvard University's Peter Rogers told *Forbes*, the report "says we aren't sure what is happening, and we need at least five more years to study the problem." Yet this cautious view made few headlines.

While major media outlets uncritically report the existence of a scientific "consensus" on climate change, surveys of climatologists suggest that there is still broad disagreement about the extent of human influence on the atmosphere.... A clear majority of the climatologists surveyed disagreed with the statement, "The overwhelming balance of evidence and scientific opinion is that it is no longer a theory but now a fact that global warming is for real. There is ample evidence that human activities are already disrupting the global climate." Who said that? President Clinton, opening a White House conference on climate change.

### *Is the World Warming?*

The greenhouse effect is unquestionably real. It is what keeps the earth's atmosphere livable. Certain atmospheric gases ("greenhouse gases"), including water vapor, carbon dioxide (CO<sub>2</sub>), and methane, trap solar radiation and help warm the planet. Without the greenhouse effect, the earth would be a frigid, desolate place.

Scientists have long believed that as the concentration of greenhouse gases in the atmosphere increased, the earth's temperature might follow. The first prediction of such a greenhouse warming was made by the Swedish scientist Svante Arrhenius in 1896. He hypothesized that doubling the amount of CO<sub>2</sub> in the atmosphere would increase average temperatures by 6 degrees Celsius.

Today, global warming is an issue because the atmospheric concentrations of greenhouse gases have been increasing. Since the beginning of the Industrial Revo-

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lution, the CO<sub>2</sub> equivalent in the atmosphere has increased by 50 percent, largely due to the burning of fossil fuels, such as coal, oil, and gas. Also, since 1881, global average temperatures have increased by almost one degree Fahrenheit.

Environmental activists claim that this slight temperature increase over the last 100 years proves that global warming is upon us and that people are the cause. Yet most of the temperature rise *preceded* the increase in emissions. Two-thirds of the temperature increase occurred in the first half of the century, as the world emerged from the so-called "little ice age." Most of the industrial emissions of greenhouse gases occurred after World War II. For this reason, most climate scientists believe that the temperature changes over the last 100 years are due to natural climate fluctuations.

A possible explanation for recent climate changes, one that is gathering scientific support, is the sun. In particular, slight variations in solar output, combined with fluctuations in the earth's orbit, might be responsible for changes in global temperature. Sallie Baliunas of the Harvard-Smithsonian Center for Astrophysics reports that there is a remarkable correlation between solar cycles and surface temperatures over the past 240 years. While the sun-climate connection needs more study, early results challenge premonitions of apocalyptic warming. As *Science* recently reported, "the sun could have been responsible for as much as half of the warming of the past century. If so, the role of greenhouse gases... would dwindle—as would estimates of how much they will warm the climate in the future as they continue to build up."

### ***Garbage In, Garbage Out***

Lacking empirical evidence of human-induced warming in the temperature records, proponents of global warming point to the global circulation models, highly complex computer programs that seek to replicate how the atmosphere will respond to increases in industrial emissions. The computer models almost uniformly predict that increased human emissions will cause the earth to warm. But whereas the models suggest that the earth already should have warmed measurably over the past 20 years due to the buildup of CO<sub>2</sub> and other gases, the atmosphere has refused to cooperate. Global satellite measurements, which are precise enough to measure minuscule temperature fluctuations caused by the reflection of sunlight off the moon, find no warming trend whatsoever. Indeed, the satellites detect a slight global cooling over the past two decades, a finding confirmed by weather-balloon measurements....

In May 1997, *Science*, America's most prestigious scientific journal, published a news story, "Greenhouse Forecast Uncertain," highlighting the raft of uncertainties

that remain in predictions of global warming. The article concluded that "most [computer] modelers now agree that the climate models will not be able to link greenhouse warming unambiguously to human actions for a decade or more." One month later, the *Bulletin of the American Meteorological Society* published a paper suggesting that computer models may be misrepresenting the effect of water-vapor feedback within the climate system.

Indeed, as these models have become more accurate at estimating present temperatures, they have also forecast less extreme temperature rises due to the accumulation of greenhouse gases. Based on the models' findings, the IPCC predicts a warming of 0.8 to 3.5 degrees Celsius by the year 2100. That is significantly less warming than predicted in the apocalyptic scenarios with which we are all too familiar. Indeed, the IPCC's lower-bound warming estimate is just over half that predicted just a few years ago. Newer models predict *even less* warming over the next century.

None of this is to say that human activity is having no effect on the climate whatsoever. The reality is that human activity, from changes in land-use patterns to the combustion of fossil fuels, is probably having some effect on the world around us and will into the future. For example, the existence of an urban "heat island" effect is indisputable. Cities, with lots of cement and asphalt and little vegetation, tend to be significantly warmer than surrounding areas. Moreover, these "heat islands" often affect local rainfall patterns and thunderstorm activity, as does large-scale irrigation.

Human-induced changes are real, says warming skeptic Patrick Michaels of the University of Virginia, "but the changes are so small and of such a benign nature that they are insufficient to support any expensive or disruptive policy. If anything, they indicate that the best policy is probably to do nothing."

### ***Is Warming Bad?***

The more that is known, the less it seems humans have to fear from global warming. Environmentalists recite a litany of horrors that it will produce: heat waves, hurricanes, drought, and disease. Such scare stories are way overblown, if not outright frauds.

It seems commonsense that if the earth were to get warmer, scorching summers would become the norm. Yet the majority of scientific evidence suggests quite the opposite. Any warming will occur in the winter and at night, making winters more benign rather than summers more intense. When scientists examined temperature records to see if higher global temperatures correlated with urban heat waves, they found no evidence of a link, environmentalist claims notwithstanding.

What about storms? Scientific reviews

of storm data cannot find any correlation between warmer temperatures and increased hurricane activity. If anything, the existing data show a slight decline.

### ***Is Warming Good?***

Not only is the argument for an apocalyptic global warming exceedingly weak, but there are substantial reasons to believe that a modest warming will be beneficial. Night-time warming should lengthen growing seasons at the same time that increased levels of CO<sub>2</sub> accentuate the growth of plants. A rise in soil moisture is more likely to occur than a rise in severe droughts. This will probably be a boon for agriculture.

Thomas Gale Moore of the Hoover Institution...notes that over the past several centuries, the warmest periods have also been those of the greatest prosperity and technological advance.

Obviously, any changes in weather patterns could well prove disruptive, as are all unforeseen global changes. But most predictions of economic disaster assume that people are too stupid to adjust their behavior to mitigate the costs and enhance the benefits of a changing world....

### ***What's at Stake***

Advocates of the global-warming treaty claim that the risks of human-induced warming are too great, and therefore preventative steps are necessary. Yet even a cursory examination of the policy options reveals that the costs of global warming would be dwarfed by the costs of a global-warming treaty.

Preventing any chance of climate changes brought about by industrial activity would require stabilizing concentrations of CO<sub>2</sub> and other greenhouse gases in the atmosphere. People could not put more greenhouse gases into the air than is removed by natural processes. Such a policy would require drastic reductions in greenhouse-gas emissions. Industrialized nations would have to cut their emissions in half, if not more, and developing countries would have to hold their emissions constant. That is a recipe for economic disaster and would require unprecedented government intervention in the marketplace.

Stabilizing greenhouse gases will require limitations on energy use. The burning of oil, coal, and natural gas will have to be constrained through the imposition of energy taxes, supply controls, or other regulatory measures. That means higher energy prices, which will increase the cost of everything from heating a home and cooking a meal to driving to work and buying groceries. It would be the 1970s energy crisis all over again, if not far worse.

Some environmentalists suggest that fossil fuels can be replaced with alternative energy sources at little cost. Such arguments are absurd. On the whole, alternative en-









ergy sources are more expensive and less reliable than their carbon-based counterparts. Nuclear power might be an efficient non-emitting energy source, but environmental groups are unlikely to endorse its use anytime soon....

### ***Better Safe than Sorry?***

Despite the costs, some see cutting the emission of those gases as a form of insurance against a potential greenhouse world. Yet if the IPCC draft projections are to be taken seriously, then one must accept that much of the potential warming over the next century is a fait accompli. Lowering emissions will not prevent warming; at most it will modestly reduce the predicted temperature rise over the next century. More important, current projections suggest that there is little cost from delay.

As the value of a proposed insurance policy diminishes, and the cost of the premium increases, fewer will consider the policy a sound investment. Insurance in the form of choking off greenhouse emissions will come at tremendous cost, but if purchased today, it will provide only modest benefits—assuming that the results of global warming will be all bad. When one also considers the potential for adaptation and benefits like the increase in agricultural productivity that higher carbon-dioxide levels produce, it is possible that effects of global warming will be a wash. On the other hand,

reducing economic activity by blocking its lifeblood—energy use—will have real adverse consequences....

### ***What to Do?***

The arguments for dramatic greenhouse gas reductions are all variants of the precautionary principle that it is better to be safe than be sorry. If only it were that simple. It is true that economic growth and technological advance pose environmental risks. But stagnation is hardly a safer course. In the words of the late Aaron Wildavsky, “the results of doing too much can be as disastrous as doing too little.”

Policymakers should pursue the “safest” course, which in this instance is not greater government controls on economic activity, but fewer. Economic growth, market institutions, and technological advance are the best forms of insurance that a civilization can have. Free and open markets are also the best means to encourage greater efficiency in energy use and the development of non-emitting energy sources....

The earth is not on the brink of environmental ruin. Even if it were, an international treaty and global bureaucracy could not save it. The treaty can, however, impoverish nations, diminish prosperity, and subvert economic liberty—none of which is good for environmental protection. Indeed, there is more to fear from a global warming treaty than from global warming itself. □

## **BUSINESS-CYCLE CONDITIONS**

*Little has changed since our last appraisal of business-cycle conditions. The strength of the leading indicators suggests that continued expansion is the most probable scenario for the third quarter of 1998.*

Continued expansion is expected through at least the third quarter of 1998. Using the latest data for our twelve primary leading indicators, four series reached new cyclical highs in our most recent appraisal of business-cycle conditions. They are: *M2 money supply*, *initial claims for state unemployment insurance* (inverted), the *ratio of manufacturing and trade sales to inventories*, and the *index of common stock prices* (to adjust for price inflation, stock prices and all dollar denominated series are reported in constant dollars).

During the third and fourth quarter of last year, the upward trend in the sales to inventories ratio (an indicator of potential bottlenecks in the manufacturing sector) appeared to be weakening, and for the past 4 months the series has been appraised as only probably expanding. However, this month's increase was sufficient to raise its moving average slightly above the previous two interim peaks in the series and, at a new high, it now is appraised as clearly

expanding. The new high in this key ratio suggests that the recent buildup in manufacturing inventories has not yet been great enough to hamper future growth.

The base data for the index of common stock prices fell in May. Despite this drop, the moving average of the series increased by more than eight percentage points to another new high — in part because of continued moderation in the consumer price index, the series used to deflate stock prices. Over the past 12 months, the consumer price index has increased a relatively slight 1.7 percent.

*New housing permits*, an indicator of future housing construction, decreased one month off its previous high, but the trend is still clearly positive. It, too, remains appraised as clearly expanding. The housing permits series, of course, provides information not only about the probable level of residential construction activity, but also about probable future increases or decreases in spending on consumer durables used to furnish and

equip new homes.

*New orders for consumer goods*, now three months off its recent low, remains appraised as probably expanding. At \$156.62 billion, new orders are close to surpassing the most recent peak of \$157 billion reached last September. If the series continues to rise it is likely that its appraisal will be upgraded soon. For now it remains appraised as probably expanding.

*Contracts and orders for plant and equipment* increased this month after decreasing the previous two months. The one-month increase was not, however, sufficient to warrant upgrading the series' appraisal, which remains probably expanding. *M1 money supply*, the most narrow and liquid measure of the money supply, also remains appraised as probably expanding.

Two leading indicators currently have no apparent cyclical trends. The first is *vendor performance*. This series measures the percent of purchasing managers who reported a slower delivery time from their suppliers. Vendor performance declined again this month, but the declines are not large enough yet to suggest that the series might be contracting, and the cyclical status of the series remains indeterminate. The second series is the *average workweek in manufacturing*. The average workweek fell to 41.6 hours per week — the shortest workweek since April 1994. However, the May increase in the base data was strong enough to raise doubt that this series may be contracting, and for now the cyclical status of the series must remain indeterminate.

After two months of increases in the *3-month percent change in consumer debt*, the appraisal for the series was upgraded from clearly contracting to probably contracting. The *3-month change in sensitive materials prices*, the most volatile of the twelve leading indicators, remains appraised as clearly contracting. The base data for sensitive materials prices are up, but the trend in the moving average data is still clearly negative.

Overall, 80 percent (eight out of ten) of the primary leading indicators with apparent cyclical trends are expanding. Any percentage of leading indicators above 50 indicates that expansion is more probable over the next several months than contraction. The cyclical score, a more objective aggregate measurement of the twelve leading indicators, is 76 this month — unchanged from last month's revised score. A cyclical score above 50 also is an indication of continued expansion. In short, both of AIER's leading diffusion indexes strongly indicate continued expansion at least through the third quarter.

## Statistical Indicators of Business-Cycle Changes

Change in Base Data				Primary Leading Indicators	Cyclical Status		
Feb.	Mar.	Apr.	May		Apr.	May	Jun.
+	+	-		M1 money supply	?	+?	+?
+	+	+		M2 money supply	+	+	+
+	+	+		Change in sensitive materials prices	-	-	-
+	+	+		New orders for consumer goods	+?	+?	+?
-	+ <sup>r</sup>	+		Contracts and orders for plant and equipment	+	+?	+?
+	-	-		Index of new housing permits	+	+	+
+	+			Ratio of manufacturing and trade sales to inventories	+?	+?	+
+	+	-	-	Vendor performance	?	?	?
+	+	+	-	Index of common stock prices (constant purchasing power)	+	+	+
-	-	-	+	Average workweek in manufacturing	+?	?	?
+	+	-		Initial claims for unemployment insurance (inverted)	+	+	+
+	-	+		Change in consumer debt	-	-	-?
				Percentage expanding cyclically	80	80	80
				<b>Primary Roughly Coincident Indicators</b>			
+	+ <sup>r</sup>	+	+	Nonagricultural employment	+	+	+
-	+	+	+	Index of industrial production	+	+	+
+ <sup>r</sup>	-	-		Personal income in manufacturing	+	+	+?
+	+			Manufacturing and trade sales	+	+	+
-	-	+	-	Civilian employment to population ratio	+	+	+
+	+			Gross domestic product (quarterly)	+	+	+
				Percentage expanding cyclically	100	100	100
				<b>Primary Lagging Indicators</b>			
nc	+	nc	-	Average duration of unemployment (inverted)	+	+	+
+	+			Manufacturing and trade inventories	+	+	+
+	+	-		Commercial and industrial loans	+	+	+
-	-	nc		Ratio of consumer debt to personal income	-	-	-
+	- <sup>r</sup>	-		Change in labor cost per unit of output, manufacturing	?	+?	+?
nc	+	-	nc	Composite of short-term interest rates	?	?	?
nc No change. <sup>r</sup> Revised.				Percentage expanding cyclically	75	80	80

Under "Change in Base Data," plus and minus signs indicate increases and decreases from the previous month or quarter and blank spaces indicate data not yet available. Under "Cyclical Status," plus and minus signs indicate expansions or contractions of each series as currently appraised; question marks indicate doubtful status when shown with another sign and indeterminate status when standing alone.

Among the six primary roughly coincident indicators, four reached new highs. *Nonagricultural employment* rose by 296,000 jobs to a new high. This overall increase occurred despite a loss of 26,000 jobs in the goods-producing sector — the 332,000 jobs created in the services-producing sector more than compensated for the decline in the goods-producing sector. The *index of industrial production* increased 0.5 percent to 128.8 to reach a new high. *Manufacturing and trade sales* remains strong as does *gross domestic product* (quarterly). The preliminary estimates for gross domestic product suggest the economy grew at an annual rate of 4.8 percent in the first quarter of 1998 — an increase from last month's first quarter advance estimate of 4.2 percent. There will be one more revision before the final estimate next month. Both manufacturing and trade sales and gross domestic product are at new highs for the cycle.

Despite a drop in the base data, *civilian employment as a percentage of the working-age population* increased this month to 64.17, only slightly below a new high for the series. The series remains appraised as clearly expanding. Following a 2-month decrease, we downgraded our appraisal for *personal income in manu-*

*facturing* from clearly expanding to probably expanding.

Thus, 100 percent (six out of six) of the primary roughly coincident indicators with apparent cyclical trends are expanding. As has happened during some prior business cycles, even when the leading and coincident indicators are showing strength (as they are now), bottlenecks that eventually thwart an expansion may nevertheless be developing among the lagging indicators. Currently, however, there are no indications that such may be occurring.

Rather, only one lagging indicator, *manufacturing and trade inventories*, reached a new high this month. Both the *average duration of unemployment* (inverted) and *commercial and industrial loans*, both of which were at new highs last month, declined this month. The average duration fell to 14.5 weeks, but this

drop was not enough to warrant changing the series' appraised status; and commercial and industrial loans fell for the first time since November 1996, but neither did this one-month decrease warrant downgrading the series' status. Both series remain appraised as clearly expanding.

The *percent change from a year earlier in manufacturing labor cost per unit of output*, remains appraised as probably expanding after a decrease this month. This is the second consecutive month that the change in labor costs is above zero. Throughout most of the current expansion, manufacturing labor costs have been falling (the change in labor costs was below zero for 54 of the 85 months of the current expansion for which data are available).

The *composite of short-term interest rates* was unchanged this month at 5.49 percent. For over 2 years, short-term rates have fluctuated narrowly around the 5.5 percent level, while long-term rates continue to fall. Since short-term rates remain "stuck" the cyclical status of the series remains indeterminate. There was also no change for the *ratio of consumer debt to personal income*. The ratio remains at 17.4 percent — still significantly below the highs attained 2 years ago — and the series remains clearly contracting. By itself, the current direction of the series would suggest that the burden of consumer debt has eased somewhat over the past few years. However, the debt data used to calculate this ratio are not all-inclusive. While they include auto loans, credit card debt, and student loans, they exclude loans secured by real estate (such as home equity lines of credit) that may be used to finance consumer purchases — and so understate the actual burden of consumer debt outstanding.

Overall, the percentage of lagging indicators with an apparent expanding cyclical trend remains at 80 percent (four out of five). With half of the lagging indicators posting decreases, and two others unchanged, there is little if any indication that expansion-ending bottlenecks now are developing. It goes without saying that all of the above could change quickly. But for now the economy appears still to be on cruise control. □

### PRICE OF GOLD

	1996	1997	— 1998 —	
	June 20	June 19	June 11	June 18
Final fixing in London	\$384.40	\$340.20	\$290.30	\$292.45

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