RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 4-OCT-1998 23:40:25.00

SUBJECT: testimony

TO: Quindi C. Franco (CN=Quindi C. Franco/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Alan S. Polasky (CN=Alan S. Polasky/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
Attached is the most recent draft of the testimony -- I made some minor changes to the draft Steve circulated. I expect that this is the final version, but I need to talk with Bob Tuccillo first thing in the morning to confirm that he is satisfied with how we incorporated suggestions through the interagency clearance process.

I will have a draft of oral testimony in the morning.

In terms of what we will send up to the Hill, in addition to copies of the testimony, we should also send a copy of the Administration Economic Analysis and the DOE supporting analysis on electricity restructuring. I have these in paper and electronic versions (on a disk) that we can submit to the committee.

Joe

=================== ATTACHMENT 1 ===================
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D17]MAIL48132277X.226 to ASCII,
The following is a HEX DUMP:

TESTIMONY OF DR. JANET YELLEN
CHAIR, COUNCIL OF ECONOMIC ADVISERS
BEFORE THE
U.S. HOUSE OF REPRESENTATIVES
COMMERCE SUBCOMMITTEE ON ENERGY AND POWER

TUESDAY OCTOBER 6, 1998

Thank you, Mr. Chairman. I appreciate having this opportunity to discuss with you the economics of climate change and the Administration's efforts to address this significant environmental challenge. As you know, I have testified on this topic before this Committee on two prior occasions. In my first appearance, prior to the Kyoto negotiations, I emphasized that if flexible, market-based mechanisms are effectively used, the costs of cutting greenhouse gas emissions would be significantly reduced. Elaborating on this point, I stated in March of this year that, in the Administration's view, the costs of achieving our Kyoto target would be modest if we can succeed in implementing international trading, joint implementation, and the Clean Development Mechanism in an efficient manner and we achieve meaningful developing country participation. A report released by the Administration in July, entitled "The Kyoto Protocol and the President's Policies to Address Climate Change: Administration Economic Analysis" elaborates the assumptions and analysis underlying this conclusion. In addition, the Stanford Energy Modeling Forum has been coordinating an economic modeling exercise of the Kyoto agreement, and the participating modelers, who include academic, private sector and government analysts, have made available some of their preliminary results. Today, I will provide a brief summary of the Administration's Economic Analysis and review several of the key findings of the Energy Modeling Forum effort.

The Potential Impact of Climate Change

The Intergovernmental Panel on Climate Change (IPCC) concluded in 1995 that "the balance of evidence suggests that there is a discernible human influence on global climate." Current concentrations of greenhouse gases have reached levels well above those of preindustrial times. If growth in global emissions continues unabated, the atmospheric concentration of carbon dioxide (CO_2) will likely double relative to its preindustrial level by midway through the next century and continue to rise thereafter. As a result of the increased concentration of CO_2, the IPCC estimates that global temperatures will increase by between 2 to 6 degrees Fahrenheit in the next 100 years, with a best guess of about 3.5 degrees Fahrenheit. Potential consequences associated with this shift in climate include a rise in sea levels, greater frequency of severe weather events, shifts in agricultural growing conditions from changing weather patterns, threats to human health from increased range and incidence of diseases, changes in availability of freshwater supplies, and damage to ecosystems and biodiversity. Further discussion of the costs of climate change is contained in the Administration Economic Analysis.[1]

The Kyoto Protocol and the Buenos Aires Conference of the Parties

Previously, Undersecretary Eizenstat and I appeared before this Committee to discuss the Kyoto Protocol and the Administration's efforts to address the risks of climate change. In my testimony, I described the many important flexibility mechanisms in the Kyoto Protocol and explained how they would allow countries to achieve cost-effectively the emissions targets established in this agreement. These mechanisms, which permit what we have termed "when", "what", and "where" flexibility in meeting the Kyoto emissions targets, are described in detail in the Administration Economic Analysis. Since securing international emissions trading, the Clean Development Mechanism, and joint implementation last year in Kyoto, the Administration has worked in bilateral and multilateral arenas to promote understanding of these mechanisms and to develop rules that will promote their efficient operation. This work will continue in the talks in Buenos Aires and beyond. While I will defer to the Department of State for a discussion of the upcoming international negotiations, I will reiterate that efficient implementation of these flexibility mechanisms is critical to reducing the costs of achieving the targets established in the Kyoto Protocol.

Costs of Action

In assessing the economic effects of the Kyoto Protocol, the Administration has drawn on the insights of a wide range of models and analysis. Examples include models of the energy sector and economy over the next 25 years, such as the Stanford Energy Modeling Forum, the Intergovernmental Panel on Climate Change's review of the economic and social dimensions of climate change, the work of the Organization for Economic Co-operation and Development (OECD) on the economic dimensions and policy responses to global warming, and the Administration's staff-level interagency analysis. In addition, the Administration used other tools, such as a meta-analysis, basic economic reasoning, overviews of the domestic and international energy sectors, statistics regarding energy efficiency and greenhouse gas emissions, and economic indicators from World Bank, International Energy Agency, and Energy Information Administration databases.

Assuming that effective mechanisms for international trading, joint implementation, and the Clean Development Mechanism are established, and assuming also that the United States achieves meaningful participation of key developing countries, the Administration's overall assessment is that the economic cost of attaining the targets and timetables specified in the Kyoto

[1] Please refer to the attached paper copy or http://www.whitehouse.gov/WH/New/html/kyoto.pdf for a PDF version of this document.

Protocol will be modest for the United States in aggregate and for typical households. This conclusion is not entirely dependent upon, but is fully consistent with, formal model results. The Administration continues to believe that there are limitations to relying on any single model to assess the economic impact of the Kyoto Protocol. However, model results can further inform and improve the understanding of the effects of climate change policy. To complement the economic analysis of the Administration's policy to address climate change, we have conducted an illustrative assessment with a modified version of the Second Generation Model (SGM). The results from the SGM substantiate the conclusion that the economic effects of an efficient, effective, and global policy to address the risks of climate change will be modest.

An assessment using the SGM model that accounts for effective trading and developing country participation yields permit price estimates ranging between $14/ton and $23/ton, and direct resource costs to the U.S. between $7 billion and $12 billion/year. The range reflects uncertainty about the extent of Annex I participation in international trading.

Under the assumptions of the Administration's analysis, permit prices in the range of $14/ton to $23/ton translate into energy price increases at the household level between 3 and 5%. Under these permit prices, fuel oil prices would increase about 5 to 9 percent, natural gas prices about 3 to 5 percent, gasoline prices about 3 to 4 percent (or around 4 to 6 cents per gallon), and electricity prices about 3 to 4 percent. This increase in energy prices at the household level would raise the average household's energy bill in ten years by between $70 and $110 per year, although such predictions may not be observable because they would be small relative to typical energy price changes, and nearly fully offset by electricity price declines from Federal electricity restructuring. By 2008-2012, the anticipated 10 percent decline in electricity prices from restructuring is projected to lead to expenditure reductions of about $90 per year for the average household.

The illustrative modeling analysis does not account for several key components of the Kyoto Protocol and the Administration's policies to reduce greenhouse gas emissions. These include the benefits of reducing net emissions through carbon sinks, the Administration's electricity restructuring proposal, the Administration's Climate Change Technology Initiative (R&D funding and tax incentives in the FY 1999 Budget), the Administration's sectoral consultations to encourage and support voluntary efforts by U.S. industry to undertake emissions reductions, including the provision of credit for early action, and the Administration's efforts to reduce federal energy use. There are also ancillary benefits of reducing greenhouse gas emissions -- in particular, the corresponding reductions in conventional air pollutants like sulfur dioxide or nitrogen oxides. These benefits alone could produce savings equal to about a quarter of the costs of meeting our Kyoto target.

Since I last testified before this Committee, the Administration has released its proposed electricity restructuring legislation and the supporting analysis of this proposal. The Administration's proposed Comprehensive Electricity Competition Act (CECA) is estimated to reduce greenhouse gas emissions by about 25 to 40 million metric tons of carbon equivalent per year by 2010. Further, the electricity restructuring proposal provides potential cost-savings in four areas: dispatch efficiency, improved capital utilization, savings in capital additions and cost reductions in fuel procurement, non-fuel operation and maintenance expenses, and administrative and general expenses. These four categories of savings are likely to reach or exceed $20 billion annually. The Department of Energy's CECA supporting analysis documents[2] contain further discussion of the Administration's electricity restructuring proposal.

Recent Research on the Economics of Climate Change

Since I last appeared before this Committee, many economists have conducted and made available their analyses of the Kyoto Protocol. I noted in both of my previous appearances that there are limitations to relying on one or a small set of models and that we were eager to see assessments of the Kyoto Protocol by other models. In March, I indicated that the Energy Modeling Forum (EMF) based at Stanford University, a long-running model comparison exercise involving many of the leading climate and energy models, would conduct full scale analyses of the Kyoto Protocol. We have now received a compilation of the preliminary analyses by the participating modeling teams.

EMF Kyoto Analyses

The Energy Modeling Forum comparison exercise of the Kyoto Protocol has included ten modeling teams from the United States, Europe, and Asia. In evaluating the Kyoto Protocol, all of the participating teams used economic models that incorporate the potential for international trading in greenhouse gas permits. By explicitly incorporating international trading, these models can evaluate the opportunities for cost-savings through trading among Annex I nations and among Annex I and developing countries were they to adopt emissions targets. Since the Kyoto Protocol enables all countries with emissions targets to trade emissions allowances among other countries with targets, these models are well-suited to assess the economic implications of the international trading component of the agreement.

While the EMF models can assess international trading, there are several other flexibility mechanisms of the Kyoto Protocol that they cannot, at present, readily assess. For example, these models did not incorporate the effects of sinks. While several modelers did assess the economic costs of achieving the Kyoto targets with "off-line" assumptions about sink activity, none incorporated an integrated energy-land use model. Further, most of the modelers did not evaluate opportunities to reduce costs by trading across greenhouse gases. These models are primarily energy models and are focused on the economics of reducing carbon emissions from

[2] Please refer to the attached paper copy or http://www.doe.gov/ceca/ceca.htm for the PDF version of the supporting analysis.

fossil fuel combustion. Again, some modelers analyzed the Protocol by making some "off-line" assumptions about the potential reductions in non-carbon dioxide greenhouse gases, but none employed a model with cost curves for these gases. Finally, it should be noted that these models did not include opportunities for emissions reduction through Administration proposals, such as electricity restructuring or the Climate Change Technology Initiative, that could lower greenhouse gas permit prices.

The EMF results provide very useful context for the Administration's economic analysis. First, the illustrative model used by the Administration, the Second Generation Model of the Pacific Northwest National Laboratory, tends to fall in the middle of the range of this set of models in terms of U.S. permit prices.[3] For example, under Annex I trading SGM generates a permit price which is at the median of this set of models. Under full global trading, the SGM permit price is just below the median permit price. Second, the EMF exercise found that the reduction in permit prices as trading expands from no trading to Annex I trading to full global trading is robust. On average, the EMF models found that Annex I trading would cut the U.S. permit price by 52% relative to a no trading scenario. Of these models, one estimated a 72% reduction in the permit price under Annex I trading. In full global trading, the permit price would be, on average, 78% lower than the no trading price. Several models estimated permit price reductions of about 90%.

Analyses of Trading Constraints

In addition to the modeling of various efficient international trading scenarios, several EMF modeling teams have considered the impact of constraints on the opportunity to buy or sell emissions allowances in an international market. While the United States is unambiguously opposed to trading restrictions, several parties to the agreement have indicated support for some form of a trading constraint, for example, by setting a limit on the amount a party can purchase through the trading system. Trading restrictions would generate no benefit for the global climate while they could significantly increase the costs of achieving the Kyoto targets.

Before describing the economic costs of trading constraints, I would like to explain why such constraints yield no climate benefits. Regardless of where an emission reduction occurs, it has the same effect on total emissions and the same effect on the climate. A ton reduced in New York generates the same climate benefit as a ton reduced in Berlin. In proposing trading constraints, some have focused on countries such as Russia, that will have emissions below their

[3] Please note that the version of SGM used in EMF differs from the analysis conducted by the Administration because the EMF version does not include cost curves for non-carbon dioxide greenhouse gases used by the Administration. Since efficient trading across gases would lower costs and permit prices, the EMF version of SGM yields slightly higher permit prices than the Administration version.

Kyoto targets during the commitment period because of the decline in their economic output associated with the transition to market economies. If trading constraints are established that restrict the ability of Russia to sell permits (or restrict the opportunity for other Annex I countries to buy Russian permits), then emissions during the first commitment period would be lower than in the absence of such constraints. However, Russia would simply bank its allowances and use these allowances in a subsequent commitment period when its emissions exceed its target. While a trading constraint might lower emissions during the first commitment period, the cumulative emissions over several commitment periods from Annex I countries would be the same with and without the trading constraint. Given the long residence times of greenhouse gases (on the order of a 100 or more years), the cumulative effect is what is most relevant in terms of changes in the global climate.

To provide a sense of the economic implications of trading constraints, I would like to share with you two examples from work done by EMF modeling teams. First, consider a trading constraint that mandates that at least two-thirds of the emissions reductions necessary for a country to achieve its Kyoto target must occur through domestic actions. Evaluating this trading constraint with the EPPA model based at the Massachusetts Institute of Technology, the permit price for the United States is almost four times higher with the constraint than under an unconstrained global trading system. It is important to note that the effects of this constraint are even more pronounced for the European Union and for Japan. The permit price for the EU would be more than five times higher than the unconstrained global trading permit price, and the Japanese permit price would be thirteen times higher. As these results indicate, the trading constraint would result in each country experiencing a different marginal cost of abatement, and there would be no common permit price for a ton of carbon equivalent. Since the constraint restricts opportunities for countries like the United States, Japan, and members of the EU to buy emissions allowances, the competitive price for emission allowances from countries like Russia would fall below the unconstrained level.

Second, consider a trading constraint that mandates that acquisitions of permits through international trading could not exceed 10% of a country's emissions allocation. For example, the U.S. target is approximately 1.5 billion tons of carbon equivalent on an annualized basis. Under this trading constraint, the United States, or private firms in the United States, could not purchase more than 150 million tons on an annual basis from other countries. Assessing this trading constraint with the Second Generation Model based at the Pacific Northwest National Laboratory, the permit price for the United States would more than triple relative to the unconstrained global trading permit price. For the EU, the permit price would nearly double, and for Japan, the permit price would be eleven times as high as the unconstrained global price.

While trading constraints increase greenhouse gas permit prices (and subsequently, energy prices) in the United States, the European Union, and Japan, they also reduce the gains from trade by the countries likely to be sellers of emissions allowances. For example, Russia and large developing countries that adopt emissions growth targets and participate in international trading, e.g., China and India, would sell fewer emissions allowances at lower international permit prices under such trading constraints than in an unconstrained global trading environment. Such restrictions lessen the benefits of participation by developing countries in international trading.

Developing Country Participation

While no non-Annex I country has yet adopted a binding emissions target, economic and environmental benefits would accrue if some developing countries do so. Setting a target below the business as usual emissions level for the commitment period would generate climate benefits by reducing global emissions below what they would otherwise have been. In addition, if the target is set not too far below the business as usual emissions level, the participation of the country in a global trading system would produce economic benefits or "gains from trade" for both the developing country and its trading partners. Emissions trading by developing countries would occur only if they chose to undertake emissions reductions above and beyond their commitments -- reductions that would generate trading extra income for them as long as their marginal abatement cost is below the world trading price for greenhouse gas permits. Many of the EMF models reveal that, for large developing countries, like China, such excess reductions would indeed be profitable, so that these countries would export allowances and gain from trade. Developing countries would also reap ancillary benefits of reducing conventional air pollutants, which may be substantial. Benefits from trading would also accrue to Annex I countries. Annex I countries (and private firms in these countries), who would purchase these emissions allowances in the world market, would achieve their targets at lower cost than without the participation of the developing countries. However, it should be noted that the more stringent the target for the developing country, the lower the gains from trade both for that country and for Annex I countries such as the United States. Indeed, an extremely stringent target could conceivably make the developing country a net importer of emissions allowances, and raise the international trading price for a greenhouse gas permit. Still, these models illustrate the potential to create targets that simultaneously make the environment, the developing country, and Annex I countries all better off.

Conclusion

The Administration's overall conclusion is that the economic impact of the Protocol will be modest under the conditions we have identified in our economic analysis. The purpose of this testimony has been to summarize the analysis we have presented in the Administration Economic Analysis on climate change and to provide a brief update of recent modeling efforts outside of the government.

I look forward to continuing to work with members of this Committee, as well as with other interested parties, in further analyzing the Kyoto Protocol and evaluating the net effects of reducing greenhouse gas emissions. It is my hope that economic analysis will continue to play a key role in designing policies in this area.

I welcome your questions.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Elise H. Golan (CN=Elise H. Golan/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 5-OCT-1998 16:18:28.00

SUBJECT: Update on Russian Food Aid

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
I just spoke with Chris Goldthwait (General Sales Manager for USDA). The U.S. is considering two different types of food aid to Russia.

First, we've offered to expand the amount of food aid distributed through private voluntary organizations. We have offered 100,000 tons of direct feeding commodities (flour, vegetable oil, milk powder and beans and lentils).

Second, we have offered to send over bulk wheat - and Russia has responded positively. This wheat could be sent over through the 416B donation mechanism or through CCC funds rolled into PL480 Title 1. The Russian government would be given the responsibility for distributing the wheat, though we may be able to reach an agreement to put some in government stocks or target specific regions of the country. Pricing has not yet been discussed though Mr. Goldthwait expressed the opinion that it should be sold at prevailing prices. These negotiation are still in early stages.

Let me know if you need more information.

Elise

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 5-OCT-1998 13:10:01.00

SUBJECT: draft of oral testimony

TO: Quindi C. Franco (CN=Quindi C. Franco/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Alan S. Polasky (CN=Alan S. Polasky/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
Attached is the first draft of the oral testimony.

=================== ATTACHMENT 1 ===================
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D72]MAIL49806097K.226 to ASCII,
The following is a HEX DUMP:

ORAL TESTIMONY OF DR. JANET YELLEN
CHAIR, COUNCIL OF ECONOMIC ADVISERS
BEFORE THE
U.S. HOUSE OF REPRESENTATIVES
COMMERCE SUBCOMMITTEE ON ENERGY AND POWER

TUESDAY OCTOBER 6, 1998

Thank you, Mr. Chairman. I appreciate having this opportunity to discuss with you the economics of climate change and the Administration's efforts to address this significant environmental challenge. As you know, in my previous appearances before this Committee, I emphasized that if flexible, market-based mechanisms are effectively used, the costs of cutting greenhouse gas emissions would be significantly reduced. To further elaborate on these points I made in testimony, the Administration released in July its report on the economic analysis of the Kyoto Protocol. In addition, the Stanford Energy Modeling Forum has been coordinating an economic modeling exercise of the Kyoto agreement, and the participating modelers have made available some of their preliminary results. Today, I will briefly summarize the Administration's Economic Analysis and review several of the key findings of the Energy Modeling Forum effort.

Administration Economic Analysis

The Administration's Economic Analysis found that, assuming that effective mechanisms for international trading, joint implementation, and the Clean Development Mechanism are established, and assuming also that the United States achieves meaningful participation of key developing countries, the economic cost of attaining the targets and timetables specified in the Kyoto Protocol will be modest for the United States in aggregate and for typical households.

An illustrative assessment using the Second Generation Model that accounts for effective trading and developing country participation yields permit price estimates ranging between \$14/ton and \$23/ton, and direct resource costs to the U.S. between \$7 billion and \$12 billion/year. Under the assumptions of the Administration's analysis, permit prices in the range of \$14/ton to \$23/ton translate into energy price increases at the household level between 3 and 5%, but this would be roughly offset by the Administration's electricity restructuring proposal. I would be happy to further discuss this analysis during the question and answer period.

Recent Research on the Economics of Climate Change

Over the past nine months, the Stanford Energy Modeling Forum has conducted a model comparison exercise of the Kyoto Protocol which has included ten modeling teams from academia, government, and the private sector. The EMF results provide very useful context for the Administration's economic analysis. First, the illustrative model used by the Administration, the Second Generation Model of the Pacific Northwest National Laboratory, tends to fall in the middle of the range of this set of models in terms of U.S. permit prices. For example, under Annex I trading SGM generates a permit price which is at the median of this set of models. Under full global trading, the SGM permit price is just below the median permit price. Second, the EMF exercise found that the reduction in permit prices as trading expands from no trading to Annex I trading to full global trading is robust. On average, the EMF models found that Annex I trading would cut the U.S. permit price by 53% relative to a no trading scenario. In full global trading, the permit price would be, on average, 80% lower than the no trading price.

In addition to the modeling of various efficient international trading scenarios, several EMF modeling teams have considered the impact of constraints on the opportunity to buy or sell emissions allowances in an international market. While the United States is unambiguously opposed to trading restrictions, several parties to the agreement have indicated support for some form of a trading constraint. Trading restrictions would generate no benefit for the global climate while they could significantly increase the costs of achieving the Kyoto targets. In my written testimony I describe two examples of trading constraints where the U.S. permit price would increase by up to four times higher than the unconstrained price.

While no non-Annex I country has yet adopted a binding emissions target, the EMF modeling indicates that economic and environmental benefits would accrue if some developing countries do so. Setting a binding emissions target would generate climate benefits by reducing global emissions below what they would otherwise have been. In addition, if the target is set not too far below the business as usual emissions level, the participation of the country in a global trading system would produce economic benefits or "gains from trade" for both the developing country and its trading partners, such as the United States. Annex I countries (and private firms in these countries), who would purchase these emissions allowances in the world market, would achieve their targets at lower cost than without the participation of the developing countries.

Conclusion

The Administration's overall conclusion is that the economic impact of the Protocol will be modest under the conditions we have identified in our economic analysis. The purpose of this testimony has been to summarize the analysis we have presented in the Administration Economic Analysis on climate change and to provide a brief update of recent modeling efforts outside of the government.

I look forward to continuing to work with members of this Committee, as well as with other interested parties, in further analyzing the Kyoto Protocol and evaluating the net effects of reducing greenhouse gas emissions. It is my hope that economic analysis will continue to play a key role in designing policies in this area.

I welcome your questions.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 5-OCT-1998 10:18:01.00

SUBJECT: NABE Speech

TO: Matthew R. McBrady (CN=Matthew R. McBrady/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
---------------------- Forwarded by Janet L. Yellen/CEA/EOP on 10/05/98
10:17 AM ---------------------------

Janet L. Yellen
10/05/98 08:40:38 AM
Record Type: Record

To: Nouriel Roubini/CEA/EOP, Michele Jolin/CEA/EOP
cc:
Subject: NABE Speech

Attached is a copy of the NABE speech. I would be grateful for comments.
Nouriel--is it possible for Matt to fact check the speech?

=================== ATTACHMENT 1 ===================
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D81]MAIL43484687R.226 to ASCII,
The following is a HEX DUMP:

Remarks of
Janet L. Yellen
Chair of the President's Council of Economic Advisers
at the National Association for Business Economics
October 6, 1998

Thank you. It is a pleasure to join you at the 40th Annual Meeting of the National Association for Business Economics. Last June I received a brochure from the organizers of this meeting asserting that "We live in a golden economic age--healthy economic growth, low inflation, low unemployment and rising stock markets." It goes on to ask "Will this scenario continue into the next millennium?" The Administration's overriding objective is to ensure an affirmative answer to this question. This afternoon, I would like to describe some of the policies we believe are required to maximize the odds that the economic prosperity we are enjoying will indeed continue into the next millennium.

Let me begin by agreeing with the brochure's main assertion. U.S. growth has indeed been strong and inflation and unemployment remain exceptionally low. Contrary to the brochure's statement, the stock market has not continued to rise, but even with the retreat from its July high, household net worth remains at extraordinary levels relative to disposable income. In all of these ways, U.S. economic performance has been excellent. With all the recent attention on baseball records, it is worth noting that our economy too is on track to set a record this year. With continued growth through December, this expansion will enter its 93rd month, replacing 1982-90 as the longest peacetime expansion on record. But we should be much more ambitious. If growth is sustained into the next millennium, until February 2000 to be exact, this expansion will become the longest on record, surpassing the expansion of 1961 to 1969, which lasted 106 months.

But what are the odds that we can achieve this record? Although continued solid growth into the next millennium remains a likely outcome, the risks to this forecast have risen substantially as a consequence of the growing turmoil in international financial markets and the marked slowing of growth we are now witnessing in the world economy. Therefore, policies to contain the current crisis, to promote growth in the world economy and--taking the longer view--to reduce the odds of future crises-- are top priority items on the Administration's growth oriented economic agenda. I would like to focus primarily on these international issues in my remarks today touching only briefly on other policies that are needed to promote prosperity into the next century.

More than a year has elapsed since the Asian crisis began. Unfortunately, what started as a regional economic and financial crisis in East Asia has now developed into a larger global crisis, spreading to financial markets around the world, impacting global commodity markets, impairing economic development and imposing extraordinary hardship in the crisis afflicted countries, and posing risks to growth in industrial countries including the United States. There are few countries around the globe that have been unaffected.

The economic slump in the original crisis countries (Korea, Indonesia, Thailand and Malaysia) remains severe. The spillovers to other countries in the region, such as Hong Kong, Singapore and Taiwan have been substantial. Japan, already in a serious and deepening recession prior to the crisis, has seen a substantial decline in its exports to its key Asian trading partners, and its banks have been hit with financial losses related to lending in the region. Currencies and stock markets in Latin America have come under pressure, especially following the crisis in Russia. Emerging market spreads over Treasuries, about 1500 basis points in

September 1998, are now close to their highs during the 1995 Mexican peso crisis. The appetite for risk of international investors has fallen and there is some retrenchment from emerging markets towards safe haven assets and from stocks towards liquidity.

Over the past year, commodity prices have also declined, impacting industrial countries like Canada, Australia and New Zealand. In Latin America, the fall in oil prices has hit Mexico and Venezuela; the fall in copper prices is hurting Chile and Peru; and the decline in agricultural prices is affecting Argentina. Globally, all commodity exporters are hurting.

The impact of the crisis on the prospects for worldwide growth is evident in the most recent IMF *World Economic Outlook*, released in October 1998. The IMF's now forecasts 2.0% world real growth in 1998, a precipitous drop from the 4.3% growth expected in October 1997. Forecasted world growth for 1998 is now comparable to levels not seen since the pronounced world recessions of 1974-75, 1980-83, and 1990-91. Japan's economy is expected to decline by 2.5%. The newly industrialized Asian economies (Hong Kong, Taiwan, Singapore, and Korea) are predicted to contract by 2.9%. The economies of the ASEAN-4 nations (Indonesia, Malaysia, Phillippines, and Thailand) are now expected to shrink by a staggering 10.4%. Moreover, expected growth in the developing countries in the Western Hemisphere is now 2.8%, down from 5.1% a year ago; and Russia is expected to contract by 6% this year.

From the U.S. standpoint, the main impact of the international financial crisis on our economy to date has been a deterioration of net exports and a widening of the trade deficit. Real U.S. exports of goods and services fell in the first half of the year and net exports subtracted 2 percentage points from GDP growth. According to our estimates, the Asian crisis has reduced

exports thus far by about $30 billion at an annual rate. It appears that all of the past year's weakness in exports is accounted for by the drop in our exports to seven Asian countries: China, Indonesia, Japan, Korea, Malaysia, the Philippines, and Thailand. Our imports from these countries have also risen—although these imports have been on an uptrend for several years. The Asian crisis has also affected U.S. farmers, who are experiencing low prices and shrinking exports, on top of bad weather in some regions. The manufacturing sector is experiencing weakness related to the crisis' impact. Financial institutions with emerging market exposure have also suffered losses and are exposed to further losses, particularly if the impact of the crisis spreads to important trading partners in our own hemisphere; and market volatility has clearly increased. We have recently seen rising spreads on corporate debt, dramatically so in the case of junk bonds, and there has been a noticeable recent tightening of credit standards and loan terms in commercial lending--evidence of a generalized flight to safety by participants in financial markets. These conditions imply an effective tightening of financial conditions. Further deterioration in the international economic situation remains the single largest risk to a forecast of continued solid growth into the next millennium.

Turning to the question of how to sustain America's growth, the first imperative is to work with the international community to promote growth in the world economy and to stabilize international financial conditions. Chairman Greenspan noted recently that no country, including the United States, is an island in the world economy. The growth prospects of all industrial nations will suffer unless we all do our part to help the world economy to grow. This need has been clearly recognized by the G-7 finance ministers and central bank governors who issued a joint statement several weeks ago indicating that, in their view, the balance of risks in

the world economy has shifted so that countries should commit to preserving or creating conditions for sustainable domestic growth. Strong growth in the industrialized countries is a prerequisite for recovery of crisis afflicted economies.

In serving as a major engine of global growth, the United States will inevitably see an increase in its trade deficit and some sectors, particularly those that are heavily exposed to trade, will experience disproportionate impacts. Even so, the United States must accept a rising trade deficit if the crisis countries are to recover. This means working to counter protectionist pressures at home just as we urge the crisis impacted countries to keep their own markets open. The Clinton Administration is committed to outward looking, internationalist policies.

As the world's second largest economy, Japan has a key role to play in maintaining world economic growth and its performance will determine the prospects for Asia's recovery. Japan has now entered a full fledged recession. Real growth over the four quarters of 1997 amounted to -0.4%. In the first half of 1998, Japanese real GDP was down 4.3% at an annual rate--far worse than expected. Japan risks descent into a deflationary spiral in which falling prices raise real interest rates, further discouraging spending. The United States continues to believe that Japan must take strong measures to stimulate domestic demand, to restore confidence, to deal with the problems of its banking system, to open its markets and to deregulate its economy.

Beyond working to insure growth in the industrial world, the United States has been focused since the outset of this crisis on the need to contain financial contagion and to restore the confidence of market participants--a prerequisite for capital flows to continue. We have supported the IMF in its goal of providing financial assistance to countries in crisis that are willing to implement the often tough reforms needed to restore economic confidence and

strengthen the underpinnings of their economies. It is now widely agreed that structural weaknesses, particularly in the process of financial intermediation, were an element in initiating the crisis. We continue to believe that countries must eschew inflationary finance, end cronyism in lending, act to discourage corruption and take steps to strengthen their banking systems by closing or recapitalizing inefficient or insolvent banks.

In a speech last Thursday, Secretary Rubin emphasized that the contagious effects of the ongoing crisis now threaten countries that have made great progress in implementing sound macroeconomic and structural policies and worked to strengthen the fundamentals of their economies. To deal with such threats, the President proposed on Friday to create a precautionary financial facility based in the IMF whose goal would be to provide assured access to assistance in the event of need to countries with sound policies which have acted responsibly, thereby helping them fight off the contagious impact of the ongoing crisis. In its communique on Saturday, the G-7 ministers and governors indicated their willingness to explore this idea. However, for the IMF to play its critical role in countering contagion, its resources must be expanded and the key step is for the U.S. at long last to meet its obligation to the International Monetary Fund. The IMF's resources are now badly strained and Congress simply must act now to enable the United States to meet its own IMF obligations by paying our dues and providing our contribution to the NAB. Market participants need to know that the IMF has the ability to act and failure by the Congress to pay our dues threatens this confidence, placing our own economy at substantial risk. The President also urged the major economies to stand ready to activate the $15 billion now in the emergency fund of the IMF--the General Agreement to Borrow--to ensure that the IMF continues to support reform and fight contagion.

At the same time that we support the basic IMF approach, which entails asking countries to take responsibility for improving economic fundamentals, we need to do more to help countries get back on their feet, to restore growth and to mitigate the suffering which has been afflicted on so many citizens in the affected countries.

In his speech at the Council on Foreign Relations, President Clinton announced that he has asked Secretary Rubin to work with other financial authorities and international economic institutions to explore comprehensive plans to help Asian corporations emerge from massive debt, where individual firms have been swept under by systemic national economic problems. In Indonesia, Korea and Thailand, for example, the combination of sustained high interest rates and illiquidity has led to harsh economic contraction and a vast overhang of bad debt. Debt to equity ratios that were already very high before the crisis (about 300% in Korea for the top 30 chaebols) have become unsustainable now (over 500% in Korea, 400% in Thailand and even higher in Indonesia) due to the real devaluation of their currencies and the burden of high real interest rates. In Indonesia, Korea, and Thailand, the World Bank estimates that 20-65 percent of firms have balance sheet losses greater than equity. When insolvent, highly leveraged companies cannot service their debt, a self reenforcing spiral is created in which banks' cash flows are squeezed, forcing them to contract new lending not only to illiquid corporations but even to those in better health. The object of comprehensive restructuring is to restore the flow of credit so that firms in these countries can get back to the business of producing output and creating jobs.

In an effort to insure access of crisis impacted countries to critical imports and to help American businesses continue selling abroad, the Export-Import Bank will establish new

short-term credit facilities for critical Latin American markets. We will coordinate these efforts with our counterparts in other leading industrial nations to ensure that trade credit continues to flow during this period of financial stress. Moreover, to keep private capital flowing to crisis impacted economies, the Overseas Private Investment Corporation (OPIC) has developed a new instrument to do help emerging economies raise money from international capital markets.

The President also has asked the World Bank and Asia Development Bank to double their aid through an expanded Social Compact initiative with a focus on strengthening the social safety net in crisis affected countries. The focus would be on job assistance, basic needs, children, the elderly and groups in the affected countries who are most vulnerable to economic change.

Even as we work to mitigate the impact and contain the spread of the current crisis, the Administration is collaborating with other countries to find ways to strengthen the architecture of the financial system so that it is less crisis prone going forward. We need to improve the rules of the road so that the countries can enjoy the benefits of capital flows while reducing the risks and impacts of economic crises of confidence. Yesterday, at a meeting attended by the President, ministers and central bank governors from a group of industrial and key emerging market countries presented interim reports containing a plethora of recommendations to strengthen the international financial system. The report will be presented to heads of state by the end of 1998. The work of this committee represents a continuation of a process begun in Naples and Halifax. The measures proposed by the G-22 focus on increasing transparency, strengthening financial systems, and devising strategies for orderly workouts in the event of a future crisis.

There is a broad consensus on the need for greater transparency and openness both on

the part of debtor countries and official institutions such as the IMF. *The Working Group report on transparency and accountability urges the IMF to examine and broadly publicize countries' adherence to international standards of transparency including both data and measures of fiscal and monetary policy. It proposes international agreements on improved accounting and disclosure standards for private financial institutions -- including sound practices for loan evaluation, loan-loss provisioning and credit risk disclosure. And it recommends that both the private and official sectors consider increased disclosure of international exposures of all types of financial institutions, including hedge funds.* Finally, it urges the IMF itself to be more open and transparent.

Transparency is necessary to provide investors with the information necessary to evaluate risk in lending, but such measures are not likely to be sufficient on their own to prevent another major crisis from occurring. In the current crisis, for example, some information was unavailable, but available indicators, many signaling caution, were apparently ignored by investors.

Most analyses of the crisis point to financial sector weaknesses as a central cause. National banks and other financial institutions borrowed excessively from abroad and lent excessively at home, thus playing a key role in channeling funds toward projects that were marginal if not outright unprofitable. Lax supervision and weak regulation of the financial system, low capital adequacy ratios, lack of well designed deposit insurance schemes,

insufficient expertise in the regulatory institutions, distorted incentives for project selection and monitoring, and outright corrupt lending practices, all contributed to the build-up of severe structural weaknesses in undercapitalized financial systems, whose most visible manifestation was a growing share of non-performing loans. The distortions generated by such behavior were enhanced by the rapid process of capital account liberalization and financial market deregulation in the region during the 1990s, that dramatically increased access to funds from abroad. Accordingly, the report proposes a series of reforms to strengthen domestic financial institutions and to create stronger incentives for borrowers and lenders to weigh risk and act with appropriate discipline, thereby reducing the odds of a crisis. The task of strengthening financial systems is long term and daunting. A partial list of needed elements includes: strong prudential regulation and supervision of bank and non-bank financial institutions; application of Basle (or Basle-enhanced) capital adequacy ratios; design of incentive-compatible deposit insurance schemes; design and implementation of disclosure rules, bankruptcy and foreclosure laws; development of liquid and deep financial markets, especially securities (bond and equity) markets; national implementation of the Basle core principle of banking supervision; coordination and cooperation among international organizations and international supervisory entities in strengthening financial systems; technical assistance and training to government official and regulators; improved corporate governance in both the financial and non-financial sectors; and implementation of efficient insolvency and debtor-creditor regimes.

The experience of Asia suggests that an excessive accumulation of short-term foreign currency denominated and unhedged foreign liabilities by the financial system was an important cause of the financial fragility that triggered and exacerbated the crisis. Mismatches between the maturity and currency composition of financial institutions' assets and liabilities and an incorrect assessment of liquidity and currency risks aggravated the problem. These structural weaknesses, together with the herdlike mentality by international investors, who withdrew funds and failed to rollover their loans to the debtor financial institutions, triggered the crisis. Clearly, cross-border short-term interbank flows are highly volatile and there is now broad agreement that, at the minimum, they should be addressed in a strengthened regime of prudential supervision of banks. In addition to proposing measures to strengthen financial systems and guard against the buildup of unsustainable risk positions, the G-22 report proposes measures to strengthen the incentives of debtors and creditors to behave prudently. In particular, the report emphasizes the need to limit the scope of government guarantees and implicit insurance schemes, to maintain appropriate exchange rate regimes, and to develop methods for greater risk sharing between debtors and creditors, including increased reliance on bond markets as an alternative to bank finance. In recent crisis episodes, governmental guarantees at many levels apparently reduced the perception of risk by lenders and borrowers. In many countries, there was an expectation that corporations and banks would be bailed out by governments in the event of trouble. In many instances too, the incentive of private parties to hedge exchange risk was diminished by the prevalence of fixed or semi-fixed exchange regimes. Such implicit and explicit guarantees

may have distorted incentives, encouraging both debtors and creditors to take on excessive risk, to fail to hedge that risk, and to ignore available information pointing to potential problems. The report concludes that limiting guarantees, making those which are offered as explicit as possible and pricing them appropriately could also contribute to crisis prevention.

While strengthening domestic financial systems may prevent some crises and make those that do occur less virulent, it is still likely that crises will not be eliminated altogether. And while a well designed insolvency regime can facilitate orderly workouts of corporate debt, the G-22 report emphasizes that no comparable internationally agreed and binding bankruptcy regime is likely to emerge to handle sovereign debtors. The report emphasizes that **temporary suspensions of debt payments should occur only in extreme situations as a last resort after all other reasonable alternatives have been explored.** But in such instances, there is a need to develop mechanisms to facilitate the orderly workout of sovereign liquidity crises and it is essential for the private sector to share in the burden of crisis resolution.

Private sector burden sharing is critical, not only because official money is unlikely to be sufficient in all circumstances, but also because it is absolutely essential in inducing market discipline and reducing potential moral hazard problems deriving from official assistance. In spite of its importance, private sector burden sharing is more difficult to achieve now than in the days when banks accounted for the bulk of international capital flows. Today, the proliferation of creditor institutions and instruments and the growth of international bond markets makes the problem of coordinating the actions of creditors during a crisis extremely

difficult. Thus, a key recommendation of the G-22 is to include "collective action clauses" in bond contracts to provide for: collective representation of creditors; majority action to alter the payment terms of a contract; and sharing of payments among creditors. All of these provisions work to facilitate speedy and orderly workouts.

One question on which researchers and policymakers remain sharply divided concerns the desirability of implementing controls on inflows of capital, in advance of a crisis, to prevent the potential disruptions associated with volatile international capital flows. Debate on this topic is certain to continue. However, there is some agreement on the need for appropriate sequencing of capital account liberalization. The G-7 Finance Ministers statement at the Birmingham summit noted that, while progressive liberalization of a country's capital account may be warranted over time, countries should be careful to proceed in a gradual and orderly way. As long as financial systems are weak, poorly regulated and subject to political distortions a hasty rush to capital account liberalization may prove unwise and destabilizing. With strong financial systems, the argument in favor of unfettered capital flows may be strong. But during such a transition the liberalization of the capital account should be cautious, gradual and carefully managed to prevent the accumulation of debt, excessive borrowing and lending, mismatch of maturities and currency denomination of assets and liabilities of financial institutions and corporate firms that has proven to be so destabilizing in many recent and not recent episodes of financial and currency crises.

The international crisis has forced countries around to globe to confront the necessity of implementing the sound domestic policies which are ultimately fundamental to promote long-term economic growth and inspire investor confidence. The United States is no exception. From the outset, the Clinton Administration has focused on getting the policy fundamentals right to help the United States grow and to inspire investor confidence. That approach must continue. Three key policy fundamentals have been fiscal discipline, investing in the skills of the American people, and promoting policies to enhance competition at home and engagement in the global economy. These were the right policies early on for encouraging the job creation needed to move the economy to full employment and they are the right policies now for nurturing and sustaining the expansion into the next millennium.

The Federal budget is in the black for the first time since 1969. This is a remarkable accomplishment and reflects a virtuous cycle of sound policies and favorable economic performance. Successful deficit reduction has played an important role in restoring Americans' confidence in the ability of their government to manage its affairs. But in economic terms, the main purpose of deficit reduction is to boost national saving in order to lower interest rates, boost investment, and increase future consumption opportunities. Between the mid-1980s and the early 1990s, when it appeared that large deficits would persist as far as the eye could see, net national saving and net national investment declined as a share of national income. Since 1993, by contrast, we have seen double-digit rates of increase in business equipment investment, and net national investment as a share of national income has been on the rise.

The key challenge going forward is to protect the gains that have been achieved thus far. In particular, the President is committed to building a secure retirement for the baby boomers and a secure future for our children. That is why he has insisted that we preserve every penny of the budget surplus until we have taken care of the social security system and why he will resist reckless tax or spending schemes that would squander the surplus.

The second key element of the President's policy that will sustain America's growth is investment in the skills of the American people. In today's increasingly technologically complex world, it is important that American workers have the skills necessary to adapt and compete. A solid education from the early years on is critical to achieving that objective. The President is committed to making American education the best in the world, to having more teachers and smaller classes in the early grades, to extra help with early reading, to modernizing our schools, and to connecting all of our classrooms and libraries to the Internet by the year 2000.

Finally, sustaining America's growth means working to increase competition in our own markets, and to remain engaged in the world economy. The case for open and competitive commerce is that it forces us to innovate and to compete, ultimately speeding the productivity gains that are the source of improved living standards. That is why the President has introduced legislation, for example, to restructure the U.S. electricity sector--to enhance competition. The economic case for opening markets to international trade is equally strong. Trade offers American producers broader markets and it offers American consumers lower prices and a wider choice of goods although, like domestic competition, it brings challenges when it disrupts established patterns of economic activity.

Conclusion

Let me conclude by pointing out what is at stake in meeting the challenge of sustaining America's growth into the next millenium. Since the productivity slowdown of the early 1970s and until recently, real wages and standards of living have stagnated, especially for those at the bottom of the economic ladder. Gains achieved during expansions were given back in recessions. Now that we have achieved a high-employment economy grounded in sound policies, we have the potential to overcome some of the longer run problems that have plagued the economy for a long time. Continued strong investment should encourage growth in productivity and real wages. Strong labor markets should provide opportunities for workers who might otherwise have been discouraged to acquire job skills and experience that will create a stronger labor force attachment. Certainly, this Administration is committed to pursuing the policies most likely to achieve these gains.

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TESTIMONY OF DR. JANET YELLEN
CHAIR, COUNCIL OF ECONOMIC ADVISERS
BEFORE THE
U.S. HOUSE OF REPRESENTATIVES
COMMERCE SUBCOMMITTEE ON ENERGY AND POWER

TUESDAY OCTOBER 6, 1998

Thank you, Mr. Chairman. I appreciate having this opportunity to discuss with you the economics of climate change and the Administration's efforts to address this significant environmental challenge. As you know, I have testified on this topic before this Committee on two prior occasions. In my first appearance, prior to the Kyoto negotiations, I emphasized that if flexible, market-based mechanisms are effectively used, the costs of cutting greenhouse gas emissions would be significantly reduced. Elaborating on this point, I stated in March of this year that, in the Administration's view, the costs of achieving our Kyoto target would be modest if we can succeed in implementing international trading, joint implementation, and the Clean Development Mechanism in an efficient manner and we achieve meaningful developing country participation. A report released by the Administration in July, entitled "The Kyoto Protocol and the President's Policies to Address Climate Change: Administration Economic Analysis" elaborates the assumptions and analysis underlying this conclusion. In addition, the Stanford Energy Modeling Forum has been coordinating an economic modeling exercise of the Kyoto agreement, and the participating modelers, who include academic, private sector and government analysts, have made available some of their preliminary results. Today, I will provide a brief summary of the Administration's Economic Analysis and review several of the key findings of the Energy Modeling Forum effort.

The Potential Impact of Climate Change

The Intergovernmental Panel on Climate Change (IPCC) concluded in 1995 that "the balance of evidence suggests that there is a discernible human influence on global climate." Current concentrations of greenhouse gases have reached levels well above those of preindustrial times. If growth in global emissions continues unabated, the atmospheric concentration of carbon dioxide (CO_2) will likely double relative to its preindustrial level by midway through the next century and continue to rise thereafter. As a result of the increased concentration of CO_2, the IPCC estimates that global temperatures will increase by between 2 to 6 degrees Fahrenheit in the next 100 years, with a best guess of about 3.5 degrees Fahrenheit. Potential consequences associated with this shift in climate include a rise in sea levels, greater frequency of severe weather events, shifts in agricultural growing conditions from changing weather patterns, threats to human health from increased range and incidence of diseases, changes in availability of freshwater supplies, and damage to ecosystems and biodiversity. Further discussion of the costs of climate change is contained in the Administration Economic Analysis.[1]

[1] Please refer to the attached paper copy or

The Kyoto Protocol and the Buenos Aires Conference of the Parties

Previously, Undersecretary Eizenstat and I appeared before this Committee to discuss the Kyoto Protocol and the Administration's efforts to address the risks of climate change. In my testimony, I described the many important flexibility mechanisms in the Kyoto Protocol and explained how they would allow countries to achieve cost-effectively the emissions targets established in this agreement. These mechanisms, which permit what we have termed "when", "what", and "where" flexibility in meeting the Kyoto emissions targets, are described in detail in the Administration Economic Analysis. Since securing international emissions trading, the Clean Development Mechanism, and joint implementation last year in Kyoto, the Administration has worked in bilateral and multilateral arenas to promote understanding of these mechanisms and to develop rules that will promote their efficient operation. This work will continue in the talks in Buenos Aires and beyond. While I will defer to the Department of State for a discussion of the upcoming international negotiations, I will reiterate that efficient implementation of these flexibility mechanisms is critical to reducing the costs of achieving the targets established in the Kyoto Protocol.

Costs of Action

In assessing the economic effects of the Kyoto Protocol, the Administration has drawn on the insights of a wide range of models and analysis. Examples include models of the energy sector and economy over the next 25 years, such as the Stanford Energy Modeling Forum, the Intergovernmental Panel on Climate Change's review of the economic and social dimensions of climate change, the work of the Organization for Economic Co-operation and Development (OECD) on the economic dimensions and policy responses to global warming, and the Administration's staff-level interagency analysis. In addition, the Administration used other tools, such as a meta-analysis, basic economic reasoning, overviews of the domestic and international energy sectors, statistics regarding energy efficiency and greenhouse gas emissions, and economic indicators from World Bank, International Energy Agency, and Energy Information Administration databases.

Assuming that effective mechanisms for international trading, joint implementation, and the Clean Development Mechanism are established, and assuming also that the United States achieves meaningful participation of key developing countries, the Administration's overall assessment is that the economic cost of attaining the targets and timetables specified in the Kyoto Protocol will be modest for the United States in aggregate and for typical households. This conclusion is not entirely dependent upon, but is fully consistent with, formal model results. The Administration continues to believe that there are limitations to relying on any single model to assess the economic impact of the Kyoto Protocol. However, model results can further inform and improve the understanding of the effects of climate change policy. To complement

http://www.whitehouse.gov/WH/New/html/kyoto.pdf for a PDF version of this document.

the economic analysis of the Administration's policy to address climate change, we have conducted an illustrative assessment with a modified version of the Second Generation Model (SGM). The results from the SGM substantiate the conclusion that the economic effects of an efficient, effective, and global policy to address the risks of climate change will be modest.

An assessment using the SGM model that accounts for effective trading and developing country participation yields permit price estimates ranging between $14/ton and $23/ton, and direct resource costs to the U.S. between $7 billion and $12 billion/year. The range reflects uncertainty about the extent of Annex I participation in international trading.

Under the assumptions of the Administration's analysis, permit prices in the range of $14/ton to $23/ton translate into energy price increases at the household level between 3 and 5%. Under these permit prices, fuel oil prices would increase about 5 to 9 percent, natural gas prices about 3 to 5 percent, gasoline prices about 3 to 4 percent (or around 4 to 6 cents per gallon), and electricity prices about 3 to 4 percent. This increase in energy prices at the household level would raise the average household's energy bill in ten years by between $70 and $110 per year, although such predictions may not be observable because they would be small relative to typical energy price changes, and nearly fully offset by electricity price declines from Federal electricity restructuring. By 2008-2012, the anticipated 10 percent decline in electricity prices from restructuring is projected to lead to expenditure reductions of about $90 per year for the average household.

The illustrative modeling analysis does not account for several key components of the Kyoto Protocol and the Administration's policies to reduce greenhouse gas emissions. These include the benefits of reducing net emissions through carbon sinks, the Administration's electricity restructuring proposal, the Administration's Climate Change Technology Initiative (R&D funding and tax incentives in the FY 1999 Budget), the Administration's sectoral consultations to encourage and support voluntary efforts by U.S. industry to undertake emissions reductions, including the provision of credit for early action, and the Administration's efforts to reduce federal energy use. There are also ancillary benefits of reducing greenhouse gas emissions -- in particular, the corresponding reductions in conventional air pollutants like sulfur dioxide and fine particulate matter. These benefits alone could produce savings equal to about a quarter of the costs of meeting our Kyoto target.

Since I last testified before this Committee, the Administration has released its proposed electricity restructuring legislation and the supporting analysis of this proposal. The Administration's proposed Comprehensive Electricity Competition Act (CECA) is estimated to reduce greenhouse gas emissions by about 25 to 40 million metric tons of carbon equivalent per year by 2010. Further, the electricity restructuring proposal provides potential cost-savings in four areas: dispatch efficiency, improved capital utilization, savings in capital additions and cost reductions in fuel procurement, non-fuel operation and maintenance expenses, and administrative and general expenses. These four categories of savings are likely to reach or exceed $20 billion annually. The Department of Energy's CECA supporting analysis documents[2] contain further discussion of the Administration's electricity restructuring proposal.

Recent Research on the Economics of Climate Change

Since I last appeared before this Committee, many economists have conducted and made available their analyses of the Kyoto Protocol. I noted in both of my previous appearances that there are limitations to relying on one or a small set of models and that we were eager to see assessments of the Kyoto Protocol by other models. In March, I indicated that the Energy Modeling Forum (EMF) based at Stanford University, a long-running model comparison exercise involving many of the leading climate and energy models, would conduct full scale analyses of the Kyoto Protocol. We have now received a compilation of the preliminary analyses by the participating modeling teams.

EMF Kyoto Analyses

The Energy Modeling Forum comparison exercise of the Kyoto Protocol has included ten modeling teams from the United States, Europe, and Asia. In evaluating the Kyoto Protocol, all of the participating teams used economic models that incorporate the potential for international trading in greenhouse gas permits. By explicitly incorporating international trading, these models can evaluate the opportunities for cost-savings through trading among Annex I nations and among Annex I and developing countries were they to adopt emissions targets. Since the Kyoto Protocol enables all countries with emissions targets to trade emissions allowances among other countries with targets, these models are well-suited to assess the economic implications of the international trading component of the agreement.

While the EMF models can assess international trading, there are several other flexibility mechanisms of the Kyoto Protocol that they cannot, at present, readily assess. For example, these models did not incorporate the effects of sinks. While several modelers did assess the economic costs of achieving the Kyoto targets with "off-line" assumptions about sink activity, none incorporated an integrated energy-land use model. Further, most of the modelers did not evaluate opportunities to reduce costs by trading across greenhouse gases. These models are primarily energy models and are focused on the economics of reducing carbon emissions from fossil fuel combustion. Again, some modelers analyzed the Protocol by making some "off-line" assumptions about the potential reductions in non-carbon dioxide greenhouse gases, but none employed a model with cost curves for these gases. Finally, it should be noted that these models did not include opportunities for emissions reduction through Administration proposals, such as electricity restructuring or the Climate Change Technology Initiative, that could lower greenhouse gas permit prices.

[2] Please refer to the attached paper copy or http://www.doe.gov/ceca/ceca.htm for the PDF version of the supporting analysis.

The EMF results provide very useful context for the Administration's economic analysis. First, the illustrative model used by the Administration, the Second Generation Model of the Pacific Northwest National Laboratory, tends to fall in the middle of the range of this set of models in terms of U.S. permit prices.[3] For example, under Annex I trading SGM generates a permit price which is at the median of this set of models. Under full global trading, the SGM permit price is just below the median permit price. Second, the EMF exercise found that the reduction in permit prices as trading expands from no trading to Annex I trading to full global trading is robust. On average, the EMF models found that Annex I trading would cut the U.S. permit price by 53% relative to a no trading scenario. Of these models, one estimated a 72% reduction in the permit price under Annex I trading. In full global trading, the permit price would be, on average, 80% lower than the no trading price. Several models estimated permit price reductions of about 90%.

Analyses of Trading Constraints

In addition to the modeling of various efficient international trading scenarios, several EMF modeling teams have considered the impact of constraints on the opportunity to buy or sell emissions allowances in an international market. While the United States is unambiguously opposed to trading restrictions, several parties to the agreement have indicated support for some form of a trading constraint, for example, by setting a limit on the amount a party can purchase through the trading system. Trading restrictions would generate no benefit for the global climate while they could significantly increase the costs of achieving the Kyoto targets.

Before describing the economic costs of trading constraints, I would like to explain why such constraints yield no climate benefits. Regardless of where an emission reduction occurs, it has the same effect on total emissions and the same effect on the climate. A ton reduced in New York generates the same climate benefit as a ton reduced in Berlin. In proposing trading constraints, some have focused on countries such as Russia, that will have emissions below their Kyoto targets during the commitment period because of the decline in their economic output associated with the transition to market economies. If trading constraints are established that restrict the ability of Russia to sell permits (or restrict the opportunity for other Annex I countries to buy Russian permits), then emissions during the first commitment period would be lower than in the absence of such constraints. However, Russia would simply bank its allowances and use these allowances in a subsequent commitment period when its emissions exceed its target. While a trading constraint might lower emissions during the first commitment period, the cumulative emissions over several commitment periods from Annex I countries would be the same with and without the trading constraint. Given the long residence times of greenhouse

[3] Please note that the version of SGM used in EMF differs from the analysis conducted by the Administration because the EMF version does not include cost curves for non-carbon dioxide greenhouse gases used by the Administration. Since efficient trading across gases would lower costs and permit prices, the EMF version of SGM yields slightly higher permit prices than the Administration version.

gases (on the order of a 100 or more years), the cumulative effect is what is most relevant in terms of changes in the global climate.

To provide a sense of the economic implications of trading constraints, I would like to share with you two examples from work done by EMF modeling teams. First, consider a trading constraint that mandates that at least two-thirds of the emissions reductions necessary for a country to achieve its Kyoto target must occur through domestic actions. Evaluating this trading constraint with the EPPA model based at the Massachusetts Institute of Technology, the permit price for the United States is almost four times higher with the constraint than under an unconstrained global trading system. It is important to note that the effects of this constraint are even more pronounced for the European Union and for Japan. The permit price for the EU would be more than five times higher than the unconstrained global trading permit price, and the Japanese permit price would be thirteen times higher. As these results indicate, the trading constraint would result in each country experiencing a different marginal cost of abatement, and there would be no common permit price for a ton of carbon equivalent. Since the constraint restricts opportunities for countries like the United States, Japan, and members of the EU to buy emissions allowances, the competitive price for emission allowances from countries like Russia would fall below the unconstrained level.

Second, consider a trading constraint that mandates that acquisitions of permits through international trading could not exceed 10% of a country's emissions allocation. For example, the U.S. target is approximately 1.5 billion tons of carbon equivalent on an annualized basis. Under this trading constraint, the United States, or private firms in the United States, could not purchase more than 150 million tons on an annual basis from other countries. Assessing this trading constraint with the Second Generation Model based at the Pacific Northwest National Laboratory, the permit price for the United States would more than triple relative to the unconstrained global trading permit price. For the EU, the permit price would nearly double, and for Japan, the permit price would be eleven times as high as the unconstrained global price.

While trading constraints increase greenhouse gas permit prices (and subsequently, energy prices) in the United States, the European Union, and Japan, they also reduce the gains from trade by the countries likely to be sellers of emissions allowances. For example, Russia and large developing countries that adopt emissions growth targets and participate in international trading, e.g., China and India, would sell fewer emissions allowances at lower international permit prices under such trading constraints than in an unconstrained global trading environment. Such restrictions lessen the benefits of participation by developing countries in international trading.

Developing Country Participation

While no non-Annex I country has yet adopted a binding emissions target, economic and environmental benefits would accrue if some developing countries do so. Setting a target below the business as usual emissions level for the commitment period would generate climate benefits by reducing global emissions below what they would otherwise have been. In addition, if the target is set not too far below the business as usual emissions level, the participation of the country in a global trading system would produce economic benefits or "gains from trade" for both the developing country and its trading partners. Emissions trading by developing countries would occur only if they chose to undertake emissions reductions above and beyond their commitments -- reductions that would generate trading extra income for them as long as their marginal abatement cost is below the world trading price for greenhouse gas permits. Many of the EMF models reveal that, for large developing countries, like China, such excess reductions would indeed be profitable, so that these countries would export allowances and gain from trade. Developing countries would also reap ancillary benefits of reducing conventional air pollutants, which may be substantial. Benefits from trading would also accrue to Annex I countries. Annex I countries (and private firms in these countries), who would purchase these emissions allowances in the world market, would achieve their targets at lower cost than without the participation of the developing countries. However, it should be noted that the more stringent the target for the developing country, the lower the gains from trade both for that country and for Annex I countries such as the United States. Indeed, an extremely stringent target could conceivably make the developing country a net importer of emissions allowances, and raise the international trading price for a greenhouse gas permit. Still, these models illustrate the potential to create targets that simultaneously make the environment, the developing country, and Annex I countries all better off.

Conclusion

The Administration's overall conclusion is that the economic impact of the Protocol will be modest under the conditions we have identified in our economic analysis. The purpose of this testimony has been to summarize the analysis we have presented in the Administration Economic Analysis on climate change and to provide a brief update of recent modeling efforts outside of the government.

I look forward to continuing to work with members of this Committee, as well as with other interested parties, in further analyzing the Kyoto Protocol and evaluating the net effects of reducing greenhouse gas emissions. It is my hope that economic analysis will continue to play a key role in designing policies in this area.

I welcome your questions.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 5-OCT-1998 08:40:36.00

SUBJECT: NABE Speech

TO: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Nouriel Roubini (CN=Nouriel Roubini/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
Attached is a copy of the NABE speech. I would be grateful for comments.
Nouriel--is it possible for Matt to fact check the speech?=================== ATTACHMENT 1
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ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D50]MAIL41324587N.226 to ASCII,
The following is a HEX DUMP:

Remarks of
Janet L. Yellen
Chair of the President's Council of Economic Advisers
at the National Association for Business Economics
October 6, 1998

Thank you. It is a pleasure to join you at the 40th Annual Meeting of the National Association for Business Economics. Last June I received a brochure from the organizers of this meeting asserting that "We live in a golden economic age--healthy economic growth, low inflation, low unemployment and rising stock markets." It goes on to ask "Will this scenario continue into the next millennium?" The Administration's overriding objective is to ensure an affirmative answer to this question. This afternoon, I would like to describe some of the policies we believe are required to maximize the odds that the economic prosperity we are enjoying will indeed continue into the next millennium.

Let me begin by agreeing with the brochure's main assertion. U.S. growth has indeed been strong and inflation and unemployment remain exceptionally low. Contrary to the brochure's statement, the stock market has <u>not</u> continued to rise, but even with the retreat from its July high, household net worth remains at extraordinary levels relative to disposable income. In all of these ways, U.S. economic performance has been excellent. With all the recent attention on baseball records, it is worth noting that our economy too is on track to set a record this year. With continued growth through December, this expansion will enter its 93rd month, replacing 1982-90 as the longest peacetime expansion on record. But we should be much more ambitious. If growth is sustained into the next millennium, until February 2000 to be exact, this expansion will become the longest on record, surpassing the expansion of 1961 to 1969, which lasted 106 months.

But what are the odds that we can achieve this record? Although continued solid growth into the next millennium remains a likely outcome, the risks to this forecast have risen substantially as a consequence of the growing turmoil in international financial markets and the marked slowing of growth we are now witnessing in the world economy. Therefore, policies to contain the current crisis, to promote growth in the world economy and--taking the longer view--to reduce the odds of future crises-- are top priority items on the Administration's growth oriented economic agenda. I would like to focus primarily on these international issues in my remarks today touching only briefly on other policies that are needed to promote prosperity into the next century.

More than a year has elapsed since the Asian crisis began. Unfortunately, what started as a regional economic and financial crisis in East Asia has now developed into a larger global crisis, spreading to financial markets around the world, impacting global commodity markets, impairing economic development and imposing extraordinary hardship in the crisis afflicted countries, and posing risks to growth in industrial countries including the United States. There are few countries around the globe that have been unaffected.

The economic slump in the original crisis countries (Korea, Indonesia, Thailand and Malaysia) remains severe. The spillovers to other countries in the region, such as Hong Kong, Singapore and Taiwan have been substantial. Japan, already in a serious and deepening recession prior to the crisis, has seen a substantial decline in its exports to its key Asian trading partners, and its banks have been hit with financial losses related to lending in the region. Currencies and stock markets in Latin America have come under pressure, especially following the crisis in Russia. Emerging market spreads over Treasuries, about 1500 basis points in

September 1998, are now close to their highs during the 1995 Mexican peso crisis. The appetite for risk of international investors has fallen and there is some retrenchment from emerging markets towards safe haven assets and from stocks towards liquidity.

Over the past year, commodity prices have also declined, impacting industrial countries like Canada, Australia and New Zealand. In Latin America, the fall in oil prices has hit Mexico and Venezuela; the fall in copper prices is hurting Chile and Peru; and the decline in agricultural prices is affecting Argentina. Globally, all commodity exporters are hurting.

The impact of the crisis on the prospects for worldwide growth is evident in the most recent IMF *World Economic Outlook*, released in October 1998. The IMF's now forecasts 2.0% world real growth in 1998, a precipitous drop from the 4.3% growth expected in October 1997. Forecasted world growth for 1998 is now comparable to levels not seen since the pronounced world recessions of 1974-75, 1980-83, and 1990-91. Japan's economy is expected to decline by 2.5%. The newly industrialized Asian economies (Hong Kong, Taiwan, Singapore, and Korea) are predicted to contract by 2.9%. The economies of the ASEAN-4 nations (Indonesia, Malaysia, Phillippines, and Thailand) are now expected to shrink by a staggering 10.4%. Moreover, expected growth in the developing countries in the Western Hemisphere is now 2.8%, down from 5.1% a year ago; and Russia is expected to contract by 6% this year.

From the U.S. standpoint, the main impact of the international financial crisis on our economy to date has been a deterioration of net exports and a widening of the trade deficit. Real U.S. exports of goods and services fell in the first half of the year and net exports subtracted 2 percentage points from GDP growth. According to our estimates, the Asian crisis has reduced

exports thus far by about $30 billion at an annual rate. It appears that all of the past year's weakness in exports is accounted for by the drop in our exports to seven Asian countries: China, Indonesia, Japan, Korea, Malaysia, the Philippines, and Thailand. Our imports from these countries have also risen—although these imports have been on an uptrend for several years. The Asian crisis has also affected U.S. farmers, who are experiencing low prices and shrinking exports, on top of bad weather in some regions. The manufacturing sector is experiencing weakness related to the crisis' impact. Financial institutions with emerging market exposure have also suffered losses and are exposed to further losses, particularly if the impact of the crisis spreads to important trading partners in our own hemisphere; and market volatility has clearly increased. We have recently seen rising spreads on corporate debt, dramatically so in the case of junk bonds, and there has been a noticeable recent tightening of credit standards and loan terms in commercial lending--evidence of a generalized flight to safety by participants in financial markets. These conditions imply an effective tightening of financial conditions. Further deterioration in the international economic situation remains the single largest risk to a forecast of continued solid growth into the next millennium.

Turning to the question of how to sustain America's growth, the first imperative is to work with the international community to promote growth in the world economy and to stabilize international financial conditions. Chairman Greenspan noted recently that no country, including the United States, is an island in the world economy. The growth prospects of all industrial nations will suffer unless we all do our part to help the world economy to grow. This need has been clearly recognized by the G-7 finance ministers and central bank governors who issued a joint statement several weeks ago indicating that, in their view, the balance of risks in

the world economy has shifted so that countries should commit to preserving or creating conditions for sustainable domestic growth. Strong growth in the industrialized countries is a prerequisite for recovery of crisis afflicted economies.

In serving as a major engine of global growth, the United States will inevitably see an increase in its trade deficit and some sectors, particularly those that are heavily exposed to trade, will experience disproportionate impacts. Even so, the United States must accept a rising trade deficit if the crisis countries are to recover. This means working to counter protectionist pressures at home just as we urge the crisis impacted countries to keep their own markets open. The Clinton Administration is committed to outward looking, internationalist policies.

As the world's second largest economy, Japan has a key role to play in maintaining world economic growth and its performance will determine the prospects for Asia's recovery. Japan has now entered a full fledged recession. Real growth over the four quarters of 1997 amounted to -0.4%. In the first half of 1998, Japanese real GDP was down 4.3% at an annual rate--far worse than expected. Japan risks descent into a deflationary spiral in which falling prices raise real interest rates, further discouraging spending. The United States continues to believe that Japan must take strong measures to stimulate domestic demand, to restore confidence, to deal with the problems of its banking system, to open its markets and to deregulate its economy.

Beyond working to insure growth in the industrial world, the United States has been focused since the outset of this crisis on the need to contain financial contagion and to restore the confidence of market participants--a prerequisite for capital flows to continue. We have supported the IMF in its goal of providing financial assistance to countries in crisis that are willing to implement the often tough reforms needed to restore economic confidence and

strengthen the underpinnings of their economies. It is now widely agreed that structural weaknesses, particularly in the process of financial intermediation, were an element in initiating the crisis. We continue to believe that countries must eschew inflationary finance, end cronyism in lending, act to discourage corruption and take steps to strengthen their banking systems by closing or recapitalizing inefficient or insolvent banks.

In a speech last Thursday, Secretary Rubin emphasized that the contagious effects of the ongoing crisis now threaten countries that have made great progress in implementing sound macroeconomic and structural policies and worked to strengthen the fundamentals of their economies. To deal with such threats, the President proposed on Friday to create a precautionary financial facility based in the IMF whose goal would be to provide assured access to assistance in the event of need to countries with sound policies which have acted responsibly, thereby helping them fight off the contagious impact of the ongoing crisis. In its communique on Saturday, the G-7 ministers and governors indicated their willingness to explore this idea. However, for the IMF to play its critical role in countering contagion, its resources must be expanded and the key step is for the U.S. at long last to meet its obligation to the International Monetary Fund. The IMF's resources are now badly strained and Congress simply must act now to enable the United States to meet its own IMF obligations by paying our dues and providing our contribution to the NAB. Market participants need to know that the IMF has the ability to act and failure by the Congress to pay our dues threatens this confidence, placing our own economy at substantial risk. The President also urged the major economies to stand ready to activate the $15 billion now in the emergency fund of the IMF--the General Agreement to Borrow--to ensure that the IMF continues to support reform and fight contagion.

At the same time that we support the basic IMF approach, which entails asking countries to take responsibility for improving economic fundamentals, we need to do more to help countries get back on their feet, to restore growth and to mitigate the suffering which has been afflicted on so many citizens in the affected countries.

In his speech at the Council on Foreign Relations, President Clinton announced that he has asked Secretary Rubin to work with other financial authorities and international economic institutions to explore comprehensive plans to help Asian corporations emerge from massive debt, where individual firms have been swept under by systemic national economic problems. In Indonesia, Korea and Thailand, for example, the combination of sustained high interest rates and illiquidity has led to harsh economic contraction and a vast overhang of bad debt. Debt to equity ratios that were already very high before the crisis (about 300% in Korea for the top 30 chaebols) have become unsustainable now (over 500% in Korea, 400% in Thailand and even higher in Indonesia) due to the real devaluation of their currencies and the burden of high real interest rates. In Indonesia, Korea, and Thailand, the World Bank estimates that 20-65 percent of firms have balance sheet losses greater than equity. When insolvent, highly leveraged companies cannot service their debt, a self reenforcing spiral is created in which banks' cash flows are squeezed, forcing them to contract new lending not only to illiquid corporations but even to those in better health. The object of comprehensive restructuring is to restore the flow of credit so that firms in these countries can get back to the business of producing output and creating jobs.

In an effort to insure access of crisis impacted countries to critical imports and to help American businesses continue selling abroad, the Export-Import Bank will establish new

short-term credit facilities for critical Latin American markets. We will coordinate these efforts with our counterparts in other leading industrial nations to ensure that trade credit continues to flow during this period of financial stress. Moreover, to keep private capital flowing to crisis impacted economies, the Overseas Private Investment Corporation (OPIC) has developed a new instrument to do help emerging economies raise money from international capital markets.

The President also has asked the World Bank and Asia Development Bank to double their aid through an expanded Social Compact initiative with a focus on strengthening the social safety net in crisis affected countries. The focus would be on job assistance, basic needs, children, the elderly and groups in the affected countries who are most vulnerable to economic change.

Even as we work to mitigate the impact and contain the spread of the current crisis, the Administration is collaborating with other countries to find ways to strengthen the architecture of the financial system so that it is less crisis prone going forward. We need to improve the rules of the road so that the countries can enjoy the benefits of capital flows while reducing the risks and impacts of economic crises of confidence. Yesterday, at a meeting attended by the President, ministers and central bank governors from a group of industrial and key emerging market countries presented interim reports containing a plethora of recommendations to strengthen the international financial system. The report will be presented to heads of state by the end of 1998. The work of this committee represents a continuation of a process begun in Naples and Halifax. The measures proposed by the G-22 focus on increasing transparency, strengthening financial systems, and devising strategies for orderly workouts in the event of a future crisis.

There is a broad consensus on the need for greater transparency and openness both on

the part of debtor countries and official institutions such as the IMF. *The Working Group report on transparency and accountability urges the IMF to examine and broadly publicize countries' adherence to international standards of transparency including both data and measures of fiscal and monetary policy. It proposes international agreements on improved accounting and disclosure standards for private financial institutions -- including sound practices for loan evaluation, loan-loss provisioning and credit risk disclosure. And it recommends that both the private and official sectors consider increased disclosure of international exposures of all types of financial institutions, including hedge funds.* Finally, it urges the IMF itself to be more open and transparent.

Transparency is necessary to provide investors with the information necessary to evaluate risk in lending, but such measures are not likely to be sufficient on their own to prevent another major crisis from occurring. In the current crisis, for example, some information was unavailable, but available indicators, many signaling caution, were apparently ignored by investors.

Most analyses of the crisis point to financial sector weaknesses as a central cause. National banks and other financial institutions borrowed excessively from abroad and lent excessively at home, thus playing a key role in channeling funds toward projects that were marginal if not outright unprofitable. Lax supervision and weak regulation of the financial system, low capital adequacy ratios, lack of well designed deposit insurance schemes,

insufficient expertise in the regulatory institutions, distorted incentives for project selection and monitoring, and outright corrupt lending practices, all contributed to the build-up of severe structural weaknesses in undercapitalized financial systems, whose most visible manifestation was a growing share of non-performing loans. The distortions generated by such behavior were enhanced by the rapid process of capital account liberalization and financial market deregulation in the region during the 1990s, that dramatically increased access to funds from abroad. Accordingly, the report proposes a series of reforms to strengthen domestic financial institutions and to create stronger incentives for borrowers and lenders to weigh risk and act with appropriate discipline, thereby reducing the odds of a crisis. The task of strengthening financial systems is long term and daunting. A partial list of needed elements includes: strong prudential regulation and supervision of bank and non-bank financial institutions; application of Basle (or Basle-enhanced) capital adequacy ratios; design of incentive-compatible deposit insurance schemes; design and implementation of disclosure rules, bankruptcy and foreclosure laws; development of liquid and deep financial markets, especially securities (bond and equity) markets; national implementation of the Basle core principle of banking supervision; coordination and cooperation among international organizations and international supervisory entities in strengthening financial systems; technical assistance and training to government official and regulators; improved corporate governance in both the financial and non-financial sectors; and implementation of efficient insolvency and debtor-creditor regimes.

The experience of Asia suggests that an excessive accumulation of short-term foreign currency denominated and unhedged foreign liabilities by the financial system was an important cause of the financial fragility that triggered and exacerbated the crisis. Mismatches between the maturity and currency composition of financial institutions' assets and liabilities and an incorrect assessment of liquidity and currency risks aggravated the problem. These structural weaknesses, together with the herdlike mentality by international investors, who withdrew funds and failed to rollover their loans to the debtor financial institutions, triggered the crisis. Clearly, cross-border short-term interbank flows are highly volatile and there is now broad agreement that, at the minimum, they should be addressed in a strengthened regime of prudential supervision of banks. In addition to proposing measures to strengthen financial systems and guard against the buildup of unsustainable risk positions, the G-22 report proposes measures to strengthen the incentives of debtors and creditors to behave prudently. In particular, the report emphasizes the need to limit the scope of government guarantees and implicit insurance schemes, to maintain appropriate exchange rate regimes, and to develop methods for greater risk sharing between debtors and creditors, including increased reliance on bond markets as an alternative to bank finance. In recent crisis episodes, governmental guarantees at many levels apparently reduced the perception of risk by lenders and borrowers. In many countries, there was an expectation that corporations and banks would be bailed out by governments in the event of trouble. In many instances too, the incentive of private parties to hedge exchange risk was diminished by the prevalence of fixed or semi-fixed exchange regimes. Such implicit and explicit guarantees

may have distorted incentives, encouraging both debtors and creditors to take on excessive risk, to fail to hedge that risk, and to ignore available information pointing to potential problems. The report concludes that limiting guarantees, making those which are offered as explicit as possible and pricing them appropriately could also contribute to crisis prevention.

While strengthening domestic financial systems may prevent some crises and make those that do occur less virulent, it is still likely that crises will not be eliminated altogether. And while a well designed insolvency regime can facilitate orderly workouts of corporate debt, the G-22 report emphasizes that no comparable internationally agreed and binding bankruptcy regime is likely to emerge to handle sovereign debtors. The report emphasizes that **temporary suspensions of debt payments should occur only in extreme situations as a last resort after all other reasonable alternatives have been explored.** But in such instances, there is a need to develop mechanisms to facilitate the orderly workout of sovereign liquidity crises and it is essential for the private sector to share in the burden of crisis resolution.

Private sector burden sharing is critical, not only because official money is unlikely to be sufficient in all circumstances, but also because it is absolutely essential in inducing market discipline and reducing potential moral hazard problems deriving from official assistance. In spite of its importance, private sector burden sharing is more difficult to achieve now than in the days when banks accounted for the bulk of international capital flows. Today, the proliferation of creditor institutions and instruments and the growth of international bond markets makes the problem of coordinating the actions of creditors during a crisis extremely

difficult. Thus, a key recommendation of the G-22 is to include "collective action clauses" in bond contracts to provide for: collective representation of creditors; majority action to alter the payment terms of a contract; and sharing of payments among creditors. All of these provisions work to facilitate speedy and orderly workouts.

One question on which researchers and policymakers remain sharply divided concerns the desirability of implementing controls on inflows of capital, in advance of a crisis, to prevent the potential disruptions associated with volatile international capital flows. Debate on this topic is certain to continue. However, there is some agreement on the need for appropriate sequencing of capital account liberalization. The G-7 Finance Ministers statement at the Birmingham summit noted that, while progressive liberalization of a country's capital account may be warranted over time, countries should be careful to proceed in a gradual and orderly way. As long as financial systems are weak, poorly regulated and subject to political distortions a hasty rush to capital account liberalization may prove unwise and destabilizing. With strong financial systems, the argument in favor of unfettered capital flows may be strong. But during such a transition the liberalization of the capital account should be cautious, gradual and carefully managed to prevent the accumulation of debt, excessive borrowing and lending, mismatch of maturities and currency denomination of assets and liabilities of financial institutions and corporate firms that has proven to be so destabilizing in many recent and not recent episodes of financial and currency crises.

The international crisis has forced countries around to globe to confront the necessity of implementing the sound domestic policies which are ultimately fundamental to promote long-term economic growth and inspire investor confidence. The United States is no exception. From the outset, the Clinton Administration has focused on getting the policy fundamentals right to help the United States grow and to inspire investor confidence. That approach must continue. Three key policy fundamentals have been fiscal discipline, investing in the skills of the American people, and promoting policies to enhance competition at home and engagement in the global economy. These were the right policies early on for encouraging the job creation needed to move the economy to full employment and they are the right policies now for nurturing and sustaining the expansion into the next millennium.

The Federal budget is in the black for the first time since 1969. This is a remarkable accomplishment and reflects a virtuous cycle of sound policies and favorable economic performance. Successful deficit reduction has played an important role in restoring Americans' confidence in the ability of their government to manage its affairs. But in economic terms, the main purpose of deficit reduction is to boost national saving in order to lower interest rates, boost investment, and increase future consumption opportunities. Between the mid-1980s and the early 1990s, when it appeared that large deficits would persist as far as the eye could see, net national saving and net national investment declined as a share of national income. Since 1993, by contrast, we have seen double-digit rates of increase in business equipment investment, and net national investment as a share of national income has been on the rise.

The key challenge going forward is to protect the gains that have been achieved thus far. In particular, the President is committed to building a secure retirement for the baby boomers and a secure future for our children. That is why he has insisted that we preserve every penny of the budget surplus until we have taken care of the social security system and why he will resist reckless tax or spending schemes that would squander the surplus.

The second key element of the President's policy that will sustain America's growth is investment in the skills of the American people. In today's increasingly technologically complex world, it is important that American workers have the skills necessary to adapt and compete. A solid education from the early years on is critical to achieving that objective. The President is committed to making American education the best in the world, to having more teachers and smaller classes in the early grades, to extra help with early reading, to modernizing our schools, and to connecting all of our classrooms and libraries to the Internet by the year 2000.

Finally, sustaining America's growth means working to increase competition in our own markets, and to remain engaged in the world economy. The case for open and competitive commerce is that it forces us to innovate and to compete, ultimately speeding the productivity gains that are the source of improved living standards. That is why the President has introduced legislation, for example, to restructure the U.S. electricity sector--to enhance competition. The economic case for opening markets to international trade is equally strong. Trade offers American producers broader markets and it offers American consumers lower prices and a wider choice of goods although, like domestic competition, it brings challenges when it disrupts established patterns of economic activity.

Conclusion

Let me conclude by pointing out what is at stake in meeting the challenge of sustaining America's growth into the next millenium. Since the productivity slowdown of the early 1970s and until recently, real wages and standards of living have stagnated, especially for those at the bottom of the economic ladder. Gains achieved during expansions were given back in recessions. Now that we have achieved a high-employment economy grounded in sound policies, we have the potential to overcome some of the longer run problems that have plagued the economy for a long time. Continued strong investment should encourage growth in productivity and real wages. Strong labor markets should provide opportunities for workers who might otherwise have been discouraged to acquire job skills and experience that will create a stronger labor force attachment. Certainly, this Administration is committed to pursuing the policies most likely to achieve these gains.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 5-OCT-1998 11:04:10.00

SUBJECT: Qs and As

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
==================== ATTACHMENT 1 ====================
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D64]MAIL42730787T.226 to ASCII,
The following is a HEX DUMP:

Economic Analysis

Q: What portion of reductions does your analysis anticipate will be made in the U.S.?

A: The President is committed to significant emissions reductions here at home. This report does not specify what percentage of our reductions would be made at home. However, we think that percentage could be quite substantial. The illustrative model we used -- on the assumption of international trading with industrialized and key developing countries -- assumes 25% domestic action, but that is *not* an accurate representation of what we think will be done domestically because it explicitly excludes domestic policies that we think will have a large impact on the amount of reductions accomplished at home. Those policies include:

- *Electricity restructuring.* We conservatively estimate 25-40 million tons of reductions, or 4-7% domestic;

- *Sink mitigation activities.* Large potential here. We cite two studies that claim very large possibilities. With good interpretive provisions negotiated and reasonable policies, could have sizable reductions -- perhaps in 5-10% range or higher. **[Awaiting EPA backup]**

- *Technology.* Many experts believe that the rate of technology improvement could be enhanced through policies. The President has offered a $6.3 billion R&D and tax initiative to spur technology, and that will presumably be other policies offered in the 10-year period between now and 2008. We have assumed a rate of technology of improvement of .96/year. Each additional .1 would add about 2% to our domestic reductions.

- *Industry consultations, federal energy.* Other efforts, like voluntary agreements with industry sectors and federal energy reform could further increase amount of domestic reductions.

Let me say finally that we need to view these estimates of reductions at home and abroad with a good deal of humility. We can no more expect precision on these estimates than we could in estimating what the budget deficit will be in 2008; and since we all know that our year to year budget projections are commonly way off, you can get some idea of the range of uncertainty here. Clearly, trading may be less robust than the SGM model assumes, causing the domestic percentage to increase substantially, while low-cost domestic opportunities may be very prevalent.

In short, Further, the whole business of predicting the domestic/international split is highly imprecise at best.

Q: If your model does not account for key factors like domestic initiatives, carbon sinks, or electricity restructuring, why did you use that model?

A: No one model can handle all characteristics of the Kyoto Protocol and the President's policies to reduce greenhouse gas emissions. Indeed, as we have said previously, no one model is capable of providing definitive answers on climate change. However, models can aid our understanding of some of the key policy parameters. As we have seen, both with SGM, and through our review of the literature, including modeling exercises through the Energy Modeling Forum, flexible, market-based mechanisms for reducing emissions are critical to lowering the cost of meeting our target. Because of this insight, we employed a model to illustrate the cost-savings opportunities to trade across space and to trade across types of greenhouse gases. However, while SGM provides a solid understanding of the benefits of trading and the potential permit price under an international trading system, it does not assess other kinds of policies, like our domestic initiatives. Indeed, none of the large, international models can assess our domestic initiatives. Given the international nature of the Kyoto Protocol, we decided it would be most valuable to employ an international model to assess the effects of trading. In this analysis, we attempted to be conservative in our assumptions, and while domestic initiatives will be quite important in meeting our target, their effects are still imprecise enough that we did not want to include them in the modeling.

Q: What about your $14/ton estimate? Doesn't that assume even more trading from abroad?

A: The answer is the same as for the $23/estimate, except that at $14/ton, the model would start off assuming more trading. However, it is our policy to work out acceptable trading rules with the European Union so that they will join us in a trading system -- the assumption underlying the $23/ton case.

Q: Why didn't you devise some way to factor those elements into your analysis, rather than putting them aside?

The SGM model we used cannot assess the affect of domestic actions -- e.g., whether with respect to technology, sinks, voluntary actions -- directly **[What does this mean?]**. Moreover, we try to be conservative in our approach and while we think the domestic policies can be quite important, their effects are still imprecise enough that we didn't think it appropriate to include them in our model.

Q: **Isn't the real problem here that you haven't proposed domestic policies that are likely to have any real effect? Like increased CAFE standards, or a cap and trade on CO2 in the electricity restructuring bill? If you were proposing serious domestic policies instead of a lot of toothless, voluntary initiatives, you could probably estimate the domestic impact better. How can you on the one hand keep saying this is the great environmental challenge of the 21st century, and on the other propose such weak measures to meet it? When are you going to put your money where your mouth is?**

A: The President has proposed a good initial set of policies to start us on the path of reducing emissions, while recognizing that we do not yet have a ratified treaty. It would be premature to propose a set of mandatory measures explicitly tailored to meet our Kyoto target before the treaty is ratified. But our $6.3 billion R&D/tax incentive package is an excellent first step, which the Congress should be endorsing instead of trying to gut. Our proposal on electricity restructuring is a serious one that can make a real difference. We think there is important potential in our industry consultation program and that potential will grow when the elements of an early credit system are fleshed out more, and we also think we can help push the ball forward through the example and procurement power of the federal government. Finally, we think that there is great potential for reducing carbon through forestry and soil activities, once some further diplomatic work is accomplished regarding the "sink" provisions of the treaty. So we reject the notion that we aren't doing enough yet. We think the President has struck just about the right balance.

Q: **Is this CEA's analysis or the Administration's analysis? If it's the Administration's analysis, why does it not reflect any of the bottom-up perspective that DOE has used in the past?**

A: This is an Administration analysis in which CEA had the lead.

Q: **Why is there only one scenario? Didn't you think it appropriate at least to represent other views?**

The Administration's analysis presents the economic implications of a scenario that best reflects the U.S. government's position on international trading and global participation.

Q: **Why are you so optimistic about international trading but conservative about technology?**

A: Our conservative approach on technology is intended to avoid rosy scenarios, the same way we try to do that in budgeting. I think our trading assumption is appropriate because it is consistent with both the provisions of the Kyoto Protocol itself and the United States' firm position on how trading rules should be worked out.

Q: **Isn't your program based on buying up the so-called "hot air" tons from Russia -- which will do absolutely nothing for the environment? Unless you commit to real, serious domestic action, with credible limits on the amount of permits you buy from abroad, won't this whole effort be a sham?**

A: The "hot air" tons from Russia are no less legitimate than similar tons that Germany will be using from the former East Germany. This is a treaty in the real world and targets were negotiated with former East Bloc countries with full knowledge of what their anticipated emissions would be. We think it makes a lot more sense to get on with this process and work with the Russians and others to make sure they have adequate monitoring and verification processes and, hopefully, that funds they earn through the sale of permits will be at least partially plowed into clean and green activities. The alternative is to try to undo the Kyoto Protocol and start renegotiating it -- and we think that is a road to disaster.

Q: **How much money would be sent abroad? Isn't this a tax on American business and government transfers to Russia?**

A: There will be no taxes on Americans or government transfers to Russia. U.S. firms -- not the U.S. government --- may choose to purchase international emissions permits. That will be up to them and they will undoubtedly do so only if they think it is in their economic interest to do so. We think our companies should have maximum flexibility to meet their emissions obligations in ways that will be cost-effective. U.S. firms interested in international investment and emissions credits will have an incentive to ensure that other countries meet the international standards for adequately monitoring and reporting their emissions of greenhouse gases. Russia will have a significant incentive to use the revenues to invest in modern, climate-friendly plants and equipments so that as its economy recovers, it continues to produce emissions reductions for sale on international markets.

Q: **Why don't you present a view that does not include the optimistic assumption that China, India, and other developing countries assume emissions targets?**

The scenario we analyze is consistent with our policy. The report illustrates, by the way, how developing countries can maintain sustainable growth while participating in an international system of emissions reductions and trading. By participating in international trading, developing countries could attract investment for cleaner energy and technologies while generating cost-effective abatement opportunities for firms in industrialized countries.

Q: **You have essentially assumed an international trading system that operates as seamlessly as the New York Stock Exchange. Have you found a single outside validator to support an assumption that is this extraordinarily optimistic?**

A: Because we are still engaged internationally on trading rules, we have the opportunity to develop a system that would promote active private sector participation with minimal transaction costs. Given the interest in climate change by such major actors like the World Bank, the Chicago Board of Trade, and the International Petroleum Exchange in London, and the efforts we have undertaken to learn from traders in other markets, we believe the potential exists to transform the concept of international trading into a practical, workable system. **[WE HAVE TO HAVE SOMEONE TO POINT TO; HOW ABOUT SANDOR]**

Q: **Has this analysis been peer-reviewed? Why not?**

A: It has not been peer-reviewed. CEA had the lead in preparing the document and CEA, as a matter of policy, does not submit its reports for peer review.

Q: **How did you model "meaningful participation by key developing countries"?**

A: As the Administration has noted on numerous occasions, meaningful participation varies according to the circumstances of each developing country. (Insert standard response)

In this analysis, the $14 to $23/ton scenarios reflect an assumption that some developing countries take on emissions targets and participate in trading. Emissions targets in the first commitment period would surely constitute meaningful participation.

Q: **Your analysis includes "key developing countries" with emissions targets. Are China, India, Mexico, and Korea the only key developing countries?**

A: These are key countries modeled in the Second Generation Model. While each would certainly qualify as a "key developing country" for the Administration, there are many other countries that would constitute "key developing countries" as well.

Q: **Your analysis assumes that "key developing countries" take on targets at their 2010 BAU emissions level -- this implies that they do not have to undertake any emissions reductions to comply with their targets. Is this consistent with Byrd-Hagel? Is this "meaningful participation"?**

A: As we have said previously, there is no one-size-fits-all for meaningful participation. We have used targets set at 2010 BAU simply for illustrative purposes. It should not be construed as a statement on either Byrd-Hagel or meaningful participation, but simply as an illustration.

Q: How much will it cost if you don't get "key developing countries" to take on targets?

A: We have made it clear that we're not submitting this treaty to the Senate without meaningful participation by key developing countries. We think that emission targets that would permit developing countries to engage in trading would be very much in their interest and would certainly satisfy the meaningful participation standard.

Q: How much will it cost if their are restrictions on international trading?

A: It is contrary to U.S. policy to accept restrictions on trading. We do not discuss scenarios that are contrary to our policy. The U.S. position is to secure effective trading rules to promote low-cost emissions reductions. We have stated repeatedly our opposition to trading restrictions as both inefficient and infeasible. Since a ton of CO2 emitted in New York has the same environmental effect as a ton emitted in Poland, we see no environmental justification for placing restrictions on trading.

Q: Costs in other studies are more than 10 times yours. Why should we believe your estimates?

Those studies reflect neither the flexibility measures we secured in the Kyoto Protocol nor Administration's policies for future action. These studies, some which even claim to be analyses of Kyoto, do not include many of the important flexibility mechanisms in the Kyoto Protocol, such as international emissions trading, the Clean Development Mechanism, or the potential to trade across greenhouse gases. Further, these analyses do not account for the Administration's position on developing country participation. As I have said before, we can do it dumb, or we can do it smart. Doing it dumb means that we would ignore many of the cost-effective opportunities to reduce emissions.

Q: **You have provided direct costs. The economic literature indicates that total costs of a policy like this should be 2 - 4 times the direct costs. What are the total costs of your policy?**

A: Our approach follows the practice of the researchers who have developed the SGM model and is consistent with other uses of this model. This same approach is also used by researchers at the Massachusetts Institute of Technology. It reports costs as the sum of 1) the cost of emissions reductions achieved in the U.S., calculated to reflect only the incremental cost of each reduction, i.e., the minimum compensation that a profit-oriented firm would need as compensation for such reductions, and 2) the total value of payments to foreigners for emission permits acquired through international trading.

Although we have followed a practice accepted by many modelers the measurement of total costs in the computable general equilibrium models used to assess the economic impacts of mitigating climate change is an area of ongoing study. For example, researchers within the Energy Modeling Forum recognize that modelers need a better understanding of why the costs are so different across models and some way to decompose the many components contributing to the overall cost of mitigation. Differences in cost have not yet been decomposed into distinct components in a manner that lets independent researchers evaluate the validity of such claims.

Q: **What are the benefits of Kyoto?**

A: Fully implementing the Kyoto Protocol would generate several kinds of benefits. First, it will be an important first step in seriously addressing the risks of climate change. Kyoto alone will not completely mitigate these risks, however, as the first step, it is essential to take the second, third, and further steps. As the report indicates, inaction on this issue could result in substantial economic costs in the next century. Second, abating greenhouse gas emissions would generate significant ancillary benefits, such as improved air quality and decreased reliance on imported oil.

Q: **Would a less stringent alternative capture most of the benefits of this approach? Why didn't you assess any such alternatives?**

A: Some economic research does suggest that relative to the targets in the Kyoto Protocol, a more backloaded approach to emissions reductions could reduce the costs involved, even while resulting in the same ultimate concentration of carbon in the atmosphere. But the emissions paths called for under such a plan rely on very steep -- and perhaps implausible -- declines in the out-years to ensure that the same concentration goal is met. [If we had proposed such a path, we would undoubtedly have been criticized for proposing a plan that was too backloaded.]

The targets in the Kyoto Protocol strike the proper balance between those who wish to do more, at the possible risk of imposing significant costs on the economy, and those who wish to do less, at the possible risk of imposing significant costs on the environment.

Q: In your analysis, you modeled a tradable permit scheme. Isn't such a scheme modeled the same way as a carbon tax? Doesn't this mean that a tradable permit scheme is just a euphemism for higher energy taxes?

A: In large international models like SGM, the model assesses the effects of tradable permits on emissions in a similar fashion as they do carbon taxes. However, there are several critical differences between a permit system and a tax. For example, a permit system provides insurance that a given quantitative target will be met, whereas a tax does not. Further, a tradable permit system allows for private sector participation in international trading, while a system of energy taxes would not. Finally, it should be noted that some increase in the relative price of energy will ultimately be necessary to address the critical issue of climate change. But it would be irresponsible not to explore all possible alternatives before resorting to a modest relative price change. The President has therefore proposed a graduated, three-stage approach to emissions reductions -- starting with a period of voluntary action, tax incentives, R&D, and Federal efficiency improvements, and then followed by the permit trading system a decade from now.

Q: In the model, aren't permits auctioned? Does the Administration intend to auction permits?

A: In SGM, greenhouse gas permits are modeled as auctioned. However, it should be noted that the Administration has not decided to auction the permits. Further, just for the record, there are still several critical differences between such an auctioned permit system and a tax. For example, the permit system provides insurance that a given quantitative target will be met, whereas a tax does not. And any revenue from the auctions could be used to *reduce* other taxes -- so that the entire effort would be revenue-neutral.

Q: The Protocol includes a provision on banking. Did you assess the effect of banking on costs in the first commitment period? Why not?

A: We did not assess the effects of banking on permit prices and costs because the Kyoto Protocol stipulates emissions targets for only the first target period. To analyze banking, we need to know the emissions targets for the second and subsequent periods. Without this information, it is impossible to assess the incentive for countries and private firms to bank emissions for use in later periods.

Q: Why can't you estimate sinks? You agreed to something in Kyoto, and you don't understand its implications 6 months later?

A: There are ongoing international efforts through the UNFCCC and the IPCC to develop rules and methodologies for assessing sinks. Given that there is not an internationally agreed interpretation of Article 3.3, it would be premature to present an estimate of sinks for the United States. Moreover, we are still in the process of collecting data from other countries to better understand the extent of their sink potential.

Q: Battelle has recently released a draft paper of its assessment of Kyoto. It indicates that the permit price with full global trading would be $25/ton. Why is their estimate higher than yours with the same model?

A: The permit price in the Battelle paper is close to the range presented in the Administration report. The Administration's range is lower for three reasons. First, we incorporated a cost curve for non-carbon dioxide greenhouse gases for the United States, which allows for more low-cost abatement opportunities. Second, we incorporated a 6 gas baseline for other countries as well. Third, our lower bound reflects a scenario with umbrella trading, which the Battelle paper did not assess. This umbrella trading with developing countries, which assumes that the E.U. decides not to participate in international trading, has lower costs because of fewer buyers in the international market.

Q: You used only 1 model. With all the same assumptions, what would the likely permit prices be using other models?

A: This is somewhat of an unknown since the Administration modified the SGM model with the non-carbon dioxide cost curve and developed 6 gas baselines for all countries. However, based on results presented at previous Energy Modeling Forum (EMF) workshops, we know that SGM generates neither the highest nor the lowest permit prices among its class of models (computable general equilibrium, or CGE). Moreover, recent studies using bottom-up models have found much lower costs for reducing emissions than SGM or other top-down models.

Q: Last summer, you said that relying on 3 models would be futile. Yet, now you deliver an economic analysis relying on just 1 of the 3. What has happened since then that allows you to more comfortably rely on SGM?

A: We are not relying on SGM. The model results we present from SGM are merely an illustration of our conclusion that costs could be modest. We assessed the economic literature on climate change mitigation, including the last three EMF exercises on climate change, in reaching our conclusion.

Q: The report indicates that electricity restructuring will lower carbon emissions by up to 40 MMTCE. How can making electricity cheaper result in lower emissions? Won't people consume more electricity if the price falls?

A: Although competition will lower prices, which will tend to increase consumption, it will also provide a direct profit incentive for generators to produce more electricity with less fuel and improve energy efficiency as competitive sellers seek to maximize the value of their product offerings to buyers by bundling electricity with energy efficiency and management services. Specific provisions of the Administration's proposal that will yield additional emission reductions include a renewable portfolio standard, a public benefits fund that will support renewable energy and energy efficiency investments, "green" labeling to help consumers who value clean energy choose it, and a net metering provision encouraging the installation of small renewable systems.

Q: The report indicates a range of ancillary benefits. Why the large range?

A: The range reflects the 2 methodologies used in the NAAQS RIA (National Ambient Air Quality Standards Regulatory Impact Analysis) last summer. There is still uncertainty regarding several key variables in monetizing public health benefits associated with reducing particulate matter emissions. While the academic literature continues to debate these points, we have taken the conservative approach of providing a broad range. Note that the claim that ancillary benefits could offset 1/4 the compliance costs reflects the lower end of the range in the report.

Q: Isn't the upper bound of the ancillary benefits estimate derived from EPA's 812 report methodology? Isn't it true that the Administration's economic agencies do not accept that methodology as legitimate? Why then is it in the report?

A: The ancillary benefits range reflects the 2 methodologies used in the NAAQS RIA (National Ambient Air Quality Standards Regulatory Impact Analysis) last summer. This RIA enjoyed interagency agreement, so it is reasonable to use it in an Administration report.

Q: The testimony presented on March 4 before House Commerce and at several hearings since indicated that, in addition to improved air quality, the ancillary benefits include reduced congestion and traffic fatalities. However, there is no mention of these benefits in the report. Why not? Further, why would congestion and traffic fatalities decrease with a tradable permit system?

A: The magnitude, and perhaps the direction, of the these benefits are very sensitive to the point in the energy system that the domestic cap and trade program is implemented. Since the Administration has not made developed the cap and trade policy yet, it would be premature to present estimates that would prejudge the policy. The magnitude of the ancillary air quality benefits is such that the conservative conclusion that ancillary benefits are equal to 1/4 of the resource costs of compliance still holds.

Q: **Isn't it true that the permit price without trading would be $193/ton? Wouldn't this be about $0.50 per gallon in higher gasoline taxes?**

A: The permit price and gasoline price could be that high with that assumption, but this permit price reflects a hypothetical scenario which is neither Administration policy nor is it consistent with what was achieved in Kyoto. Only if part or all of Articles 3.1, 3.3, 3.4, 6, 12, and 17 were removed from the Kyoto Protocol would this even be conceivable.

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SUBJECT: revised speech

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
here it is.
Nouriel
==================== ATTACHMENT 1 ====================
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D48]MAIL48474497Q.226 to ASCII,
The following is a HEX DUMP:

Remarks of
Janet L. Yellen
Chair of the President's Council of Economic Advisers
at the National Association for Business Economics
October 6, 1998

Thank you. It is a pleasure to join you at the 40th Annual Meeting of the National Association for Business Economics. Last June I received a brochure from the organizers of this meeting asserting that "We live in a golden economic age--healthy economic growth, low inflation, low unemployment and rising stock markets." It goes on to ask "Will this scenario continue into the next millennium?" The Administration's overriding objective is to ensure an affirmative answer to this question. This afternoon, I would like to describe some of the policies we believe are required to maximize the odds that the economic prosperity we are enjoying will indeed continue into the next millennium.

Let me begin by agreeing with the brochure's main assertion. U.S. growth has indeed been strong and inflation and unemployment remain exceptionally low. Contrary to the brochure's statement, the stock market has not continued to rise, but even with the retreat from its July high, household net worth remains at extraordinary levels relative to disposable income. In all of these ways, U.S. economic performance has been excellent. With all the recent attention on baseball records, it is worth noting that our economy too is on track to set a record this year. With continued growth through December, this expansion will enter its 93rd month, replacing 1982-90 as the longest peacetime expansion on record. But we should be much more ambitious. If growth is sustained into the next millennium, until February 2000 to be exact, this expansion will become the longest on record, surpassing the expansion of 1961 to 1969, which lasted 106 months.

But what are the odds that we can achieve this record? Although continued solid growth into the next millennium remains a likely outcome, the risks to this forecast have risen substantially as a consequence of the growing turmoil in international financial markets and the marked slowing of growth we are now witnessing in the world economy. Therefore, policies to contain the current crisis, to promote growth in the world economy and--taking the longer view--to reduce the odds of future crises-- are top priority items on the Administration's growth oriented economic agenda. I would like to focus primarily on these international issues in my remarks today touching only briefly on other policies that are needed to promote prosperity into the next century.

More than a year has elapsed since the Asian crisis began. Unfortunately, what started as a regional economic and financial crisis in East Asia has now developed into a larger global crisis, spreading to financial markets around the world, impacting global commodity markets, impairing economic development and imposing extraordinary hardship in the crisis afflicted countries, and posing risks to growth in industrial countries including the United States. There are few countries around the globe that have been unaffected.

The economic slump in the original crisis countries (Korea, Indonesia, Thailand and Malaysia) remains severe. The spillovers to other countries in the region, such as Hong Kong, Singapore and Taiwan have been substantial. Japan, already in a serious and deepening recession prior to the crisis, has seen a substantial decline in its exports to its key Asian trading partners, and its banks have been hit with financial losses related to lending in the region. Currencies and stock markets in Latin America have come under pressure, especially following the crisis in Russia. Emerging market spreads over Treasuries, about 1500 basis points in

September 1998, are now close to their highs during the 1995 Mexican peso crisis. The appetite for risk of international investors has fallen and there is some retrenchment from emerging markets towards safe haven assets and from stocks towards liquidity.

Over the past year, commodity prices have also declined, impacting industrial countries like Canada, Australia and New Zealand. In Latin America, the fall in oil prices has hit Mexico and Venezuela; the fall in copper prices is hurting Chile and Peru; and the decline in agricultural prices is affecting Argentina. Globally, all commodity exporters are hurting.

The impact of the crisis on the prospects for worldwide growth is evident in the most recent IMF *World Economic Outlook*, released in October 1998. The IMF's now forecasts 2.0% world real growth in 1998, a precipitous drop from the 4.3% growth expected in October 1997. Forecasted world growth for 1998 is now comparable to levels not seen since the pronounced world recessions of 1974-75, 1980-83, and 1990-91. Japan's economy is expected to decline by 2.5%. The newly industrialized Asian economies (Hong Kong, Taiwan, Singapore, and Korea) are predicted to contract by 2.9%. The economies of the ASEAN-4 nations (Indonesia, Malaysia, Phillippines, and Thailand) are now expected to shrink by a staggering 10.4%. Moreover, expected growth in the developing countries in the Western Hemisphere is now 2.8%, down from 5.1% a year ago; and Russia is expected to contract by 6% this year.

From the U.S. standpoint, the main impact of the international financial crisis on our economy to date has been a deterioration of net exports and a widening of the trade deficit. Real U.S. exports of goods and services fell in the first half of the year and net exports subtracted 2 percentage points from GDP growth. According to our estimates, the Asian crisis has reduced

exports thus far by about $30 billion at an annual rate. It appears that all of the past year's weakness in exports is accounted for by the drop in our exports to seven Asian countries: China, Indonesia, Japan, Korea, Malaysia, the Philippines, and Thailand. Our imports from these countries have also risen—although these imports have been on an uptrend for several years. The Asian crisis has also affected U.S. farmers, who are experiencing low prices and shrinking exports, on top of bad weather in some regions. The manufacturing sector is experiencing weakness related to the crisis' impact. Financial institutions with emerging market exposure have also suffered losses and are exposed to further losses, particularly if the impact of the crisis spreads to important trading partners in our own hemisphere; and market volatility has clearly increased. We have recently seen rising spreads on corporate debt, dramatically so in the case of junk bonds, and there has been a noticeable recent tightening of credit standards and loan terms in commercial lending--evidence of a generalized flight to safety by participants in financial markets. These conditions imply an effective tightening of financial conditions. Further deterioration in the international economic situation remains the single largest risk to a forecast of continued solid growth into the next millennium.

Turning to the question of how to sustain America's growth, the first imperative is to work with the international community to promote growth in the world economy and to stabilize international financial conditions. Chairman Greenspan noted recently that no country, including the United States, is an island in the world economy. The growth prospects of all industrial nations will suffer unless we all do our part to help the world economy to grow. This need has been clearly recognized by the G-7 finance ministers and central bank governors who issued a joint statement several weeks ago indicating that, in their view, the balance of risks in

the world economy has shifted so that countries should commit to preserving or creating conditions for sustainable domestic growth. Strong growth in the industrialized countries is a prerequisite for recovery of crisis afflicted economies.

In serving as a major engine of global growth, the United States will inevitably see an increase in its trade deficit and some sectors, particularly those that are heavily exposed to trade, will experience disproportionate impacts. Even so, the United States must accept a rising trade deficit if the crisis countries are to recover. This means working to counter protectionist pressures at home just as we urge the crisis impacted countries to keep their own markets open. The Clinton Administration is committed to outward looking, internationalist policies.

As the world's second largest economy, Japan has a key role to play in maintaining world economic growth and its performance will determine the prospects for Asia's recovery. Japan has now entered a full fledged recession. Real growth over the four quarters of 1997 amounted to -0.4%. In the first half of 1998, Japanese real GDP was down 4.3% at an annual rate--far worse than expected. Japan risks descent into a deflationary spiral in which falling prices raise real interest rates, further discouraging spending. The United States continues to believe that Japan must take strong measures to stimulate domestic demand, to restore confidence, to deal with the problems of its banking system, to open its markets and to deregulate its economy.

Beyond working to insure growth in the industrial world, the United States has been focused since the outset of this crisis on the need to contain financial contagion and to restore the confidence of market participants--a prerequisite for capital flows to continue. We have supported the IMF in its goal of providing financial assistance to countries in crisis that are willing to implement the often tough reforms needed to restore economic confidence and

strengthen the underpinnings of their economies. It is now widely agreed that structural weaknesses, particularly in the process of financial intermediation, were an element in initiating the crisis. We continue to believe that countries must eschew inflationary finance, end cronyism in lending, act to discourage corruption and take steps to strengthen their banking systems by closing or recapitalizing inefficient or insolvent banks.

In a speech last Thursday, Secretary Rubin emphasized that the contagious effects of the ongoing crisis now threaten countries that have made great progress in implementing sound macroeconomic and structural policies and worked to strengthen the fundamentals of their economies. To deal with such threats, the President proposed on Friday to create a precautionary financial facility based in the IMF whose goal would be to provide assured access to assistance in the event of need to countries with sound policies which have acted responsibly, thereby helping them fight off the contagious impact of the ongoing crisis. In its communique on Saturday, the G-7 ministers and governors indicated their willingness to explore this idea. However, for the IMF to play its critical role in countering contagion, its resources must be expanded and the key step is for the U.S. at long last to meet its obligation to the International Monetary Fund. The IMF's resources are now badly strained and Congress simply must act now to enable the United States to meet its own IMF obligations by paying our dues and providing our contribution to the NAB. Market participants need to know that the IMF has the ability to act and failure by the Congress to pay our dues threatens this confidence, placing our own economy at substantial risk. The President also urged the major economies to stand ready to activate the $15 billion now in the emergency fund of the IMF--the General Agreement to Borrow--to ensure that the IMF continues to support reform and fight contagion.

At the same time that we support the basic IMF approach, which entails asking countries to take responsibility for improving economic fundamentals, we need to do more to help countries get back on their feet, to restore growth and to mitigate the suffering which has been afflicted on so many citizens in the affected countries.

In his speech at the Council on Foreign Relations, President Clinton announced that he has asked Secretary Rubin to work with other financial authorities and international economic institutions to explore comprehensive plans to help Asian corporations emerge from massive debt, where individual firms have been swept under by systemic national economic problems. In Indonesia, Korea and Thailand, for example, the combination of sustained high interest rates and illiquidity has led to harsh economic contraction and a vast overhang of bad debt. Debt to equity ratios that were already very high before the crisis (about 300% in Korea for the top 30 chaebols) have become unsustainable now (over 500% in Korea, 400% in Thailand and even higher in Indonesia) due to the real devaluation of their currencies and the burden of high real interest rates. In Indonesia, Korea, and Thailand, the World Bank estimates that 20-65 percent of firms have balance sheet losses greater than equity. When insolvent, highly leveraged companies cannot service their debt, a self reenforcing spiral is created in which banks' cash flows are squeezed, forcing them to contract new lending not only to illiquid corporations but even to those in better health. The object of comprehensive restructuring is to restore the flow of credit so that firms in these countries can get back to the business of producing output and creating jobs.

In an effort to insure access of crisis impacted countries to critical imports and to help American businesses continue selling abroad, the Export-Import Bank will establish new

short-term credit facilities for critical Latin American markets. We will coordinate these efforts with our counterparts in other leading industrial nations to ensure that trade credit continues to flow during this period of financial stress. Moreover, to keep private capital flowing to crisis impacted economies, the Overseas Private Investment Corporation (OPIC) has developed a new instrument to help emerging economies raise money from international capital markets.

The President also has asked the World Bank and Asia Development Bank to double their aid through an expanded Social Compact initiative with a focus on strengthening the social safety net in crisis affected countries. The focus would be on job assistance, basic needs, children, the elderly and groups in the affected countries who are most vulnerable to economic change.

Even as we work to mitigate the impact and contain the spread of the current crisis, the Administration is collaborating with other countries to find ways to strengthen the architecture of the financial system so that it is less crisis prone going forward. We need to improve the rules of the road so that the countries can enjoy the benefits of capital flows while reducing the risks and impacts of economic crises of confidence. Yesterday, at a meeting attended by the President, ministers and central bank governors from a group of industrial and key emerging market countries presented interim reports containing a plethora of recommendations to strengthen the international financial system. The report will be presented to heads of state by the end of 1998. The work of this committee represents a continuation of a process begun in Naples and Halifax. The measures proposed by the G-22 focus on increasing transparency, strengthening financial systems, and devising strategies for orderly workouts in the event of a future crisis.

There is a broad consensus on the need for greater transparency and openness both on

the part of debtor countries and official institutions such as the IMF. The Working Group report on

transparency and accountability made a series of recommendations. It stressed the need to anhance the relevance and reliability of information disclosed by the private sectors by having compliance with high-qualiy accounting standards. Also, it called for braodening the public disclosure of data on foreign exchange reserves, external debt and financial sector soundness. It also recommended greater disclosure of data on the international exposure of investment banks, hedge funds and other international investors. Finally, it urged the international financial institutions to be more open and transparent; information should be promty released, except where release might compromise a well defined need for confidentiality..

Transparency is necessary to provide investors with the information necessary to evaluate risk in lending, but such measures are not likely to be sufficient on their own to prevent another major crisis from occurring. In the current crisis, for example, some information was unavailable, but available indicators, many signaling caution, were apparently ignored by investors.

Most analyses of the crisis point to financial sector weaknesses as a central cause. National banks and other financial institutions borrowed excessively from abroad and lent excessively at home, thus playing a key role in channeling funds toward projects that were marginal if not outright unprofitable. Lax supervision and weak regulation of the financial system, low capital adequacy ratios, lack of well designed deposit insurance schemes,

insufficient expertise in the regulatory institutions, distorted incentives for project selection and monitoring, and outright corrupt lending practices, all contributed to the build-up of severe structural weaknesses in undercapitalized financial systems, whose most visible manifestation was a growing share of non-performing loans. The distortions generated by such behavior were enhanced by the rapid process of capital account liberalization and financial market deregulation in the region during the 1990s, that dramatically increased access to funds from abroad. Accordingly, the report proposes a series of reforms to strengthen domestic financial institutions and to create stronger incentives for borrowers and lenders to weigh risk and act with appropriate discipline, thereby reducing the odds of a crisis.

The task of strengthening financial systems is long term and daunting. A partial list of needed elements includes: strong prudential regulation and supervision of bank and non-bank financial institutions; application of Basle (or Basle-enhanced) capital adequacy ratios; design of incentive-compatible deposit insurance schemes; design and implementation of disclosure rules, bankruptcy and foreclosure laws; development of liquid and deep financial markets, especially securities (bond and equity) markets; national implementation of the Basle core principle of banking supervision; coordination and cooperation among international organizations and international supervisory entities in strengthening financial systems; technical assistance and training to government official and regulators; improved corporate governance in both the financial and non-financial sectors; and implementation of efficient insolvency and debtor-creditor regimes.

The experience of Asia suggests that an excessive accumulation of short-term foreign currency denominated and unhedged foreign liabilities by the financial system was an important cause of the financial fragility that triggered and exacerbated the crisis. Mismatches between the maturity and currency composition of financial institutions' assets and liabilities and an incorrect assessment of liquidity and currency risks aggravated the problem. These structural weaknesses, together with the herdlike mentality by international investors, who withdrew funds and failed to rollover their loans to the debtor financial institutions, triggered the crisis. Clearly, cross-border short-term interbank flows are highly volatile and there is now broad agreement that, at the minimum, they should be addressed in a strengthened regime of prudential supervision of banks. In addition to proposing measures to strengthen financial systems and guard against the buildup of unsustainable risk positions, the G-22 report proposes measures to strengthen the incentives of debtors and creditors to behave prudently. In particular, the report emphasizes the need to limit the scope of government guarantees and implicit insurance schemes, to maintain appropriate exchange rate regimes, and to develop methods for greater risk sharing between debtors and creditors, including increased reliance on bond markets as an alternative to bank finance. In recent crisis episodes, governmental guarantees at many levels apparently reduced the perception of risk by lenders and borrowers. In many countries, there was an expectation that corporations and banks would be bailed out by governments in the event of trouble. In many instances too, the incentive of private parties to hedge exchange risk was diminished by the prevalence of fixed or semi-fixed exchange regimes. Such implicit and explicit guarantees

may have distorted incentives, encouraging both debtors and creditors to take on excessive risk, to fail to hedge that risk, and to ignore available information pointing to potential problems. The report concludes that limiting guarantees, making those which are offered as explicit as possible and pricing them appropriately could also contribute to crisis prevention.

While strengthening domestic financial systems may prevent some crises and make those that do occur less virulent, it is still likely that crises will not be eliminated altogether. And while a well designed insolvency regime can facilitate orderly workouts of corporate debt, the G-22 report emphasizes that no comparable internationally agreed and binding bankruptcy regime is likely to emerge to handle sovereign debtors. The report emphasizes that **temporary suspensions of debt payments should occur only in extreme situations as a last resort after all other reasonable alternatives have been explored.** But in such instances, there is a need to develop mechanisms to facilitate the orderly workout of sovereign liquidity crises and it is essential for the private sector to share in the burden of crisis resolution.

Private sector burden sharing is critical, not only because official money is unlikely to be sufficient in all circumstances, but also because it is absolutely essential in inducing market discipline and reducing potential moral hazard problems deriving from official assistance. In spite of its importance, private sector burden sharing is more difficult to achieve now than in the days when banks accounted for the bulk of international capital flows. Today, the proliferation of creditor institutions and instruments and the growth of international bond markets makes the problem of coordinating the actions of creditors during a crisis extremely

difficult. Thus, a key recommendation of the G-22 is to include "collective action clauses" in bond contracts to provide for: collective representation of creditors; majority action to alter the payment terms of a contract; and sharing of payments among creditors. All of these provisions work to facilitate speedy and orderly workouts.

One question on which researchers and policymakers remain sharply divided concerns the desirability of implementing controls on flows of capital, in advance of a crisis, to prevent the potential disruptions associated with volatile international capital flows. Debate on this topic is certain to continue. However, there is some agreement on the need for appropriate sequencing of capital account liberalization. The G-7 Finance Ministers statement at the Birmingham summit noted that, while progressive liberalization of a country's capital account may be warranted over time, countries should be careful to proceed in a orderly way. With strong financial systems, the arguments in favor of unfettered capital flows are strong. But during such a transition the liberalization of the capital account should be gradual and carefully managed to prevent the excessive accumulation of short-term debt, excessive borrowing and lending, mismatches of maturities and currency denomination of assets and liabilities of financial institutions and corporate firms that have proven to be so destabilizing in many recent and not recent episodes of financial and currency crises.

The international crisis has forced countries around to globe to confront the necessity of implementing the sound domestic policies which are ultimately fundamental to promote long-term economic growth and inspire investor confidence. The United States is no exception. From the outset, the Clinton Administration has focused on getting the policy fundamentals right to help the United States grow and to inspire investor confidence. That approach must continue. Three key policy fundamentals have been fiscal discipline, investing in the skills of the American people, and promoting policies to enhance competition at home and engagement in the global economy. These were the right policies early on for encouraging the job creation needed to move the economy to full employment and they are the right policies now for nurturing and sustaining the expansion into the next millennium.

The Federal budget is in the black for the first time since 1969. This is a remarkable accomplishment and reflects a virtuous cycle of sound policies and favorable economic performance. Successful deficit reduction has played an important role in restoring Americans' confidence in the ability of their government to manage its affairs. But in economic terms, the main purpose of deficit reduction is to boost national saving in order to lower interest rates, boost investment, and increase future consumption opportunities. Between the mid-1980s and the early 1990s, when it appeared that large deficits would persist as far as the eye could see, net national saving and net national investment declined as a share of national income. Since 1993, by contrast, we have seen double-digit rates of increase in business equipment investment, and net national investment as a share of national income has been on the rise.

The key challenge going forward is to protect the gains that have been achieved thus far. In particular, the President is committed to building a secure retirement for the baby boomers and a secure future for our children. That is why he has insisted that we preserve every penny of the budget surplus until we have taken care of the social security system and why he will resist reckless tax or spending schemes that would squander the surplus.

The second key element of the President's policy that will sustain America's growth is investment in the skills of the American people. In today's increasingly technologically complex world, it is important that American workers have the skills necessary to adapt and compete. A solid education from the early years on is critical to achieving that objective. The President is committed to making American education the best in the world, to having more teachers and smaller classes in the early grades, to extra help with early reading, to modernizing our schools, and to connecting all of our classrooms and libraries to the Internet by the year 2000.

Finally, sustaining America's growth means working to increase competition in our own markets, and to remain engaged in the world economy. The case for open and competitive commerce is that it forces us to innovate and to compete, ultimately speeding the productivity gains that are the source of improved living standards. That is why the President has introduced legislation, for example, to restructure the U.S. electricity sector--to enhance competition. The economic case for opening markets to international trade is equally strong. Trade offers American producers broader markets and it offers American consumers lower prices and a wider choice of goods although, like domestic competition, it brings challenges when it disrupts established patterns of economic activity.

Conclusion

Let me conclude by pointing out what is at stake in meeting the challenge of sustaining America's growth into the next millenium. Since the productivity slowdown of the early 1970s and until recently, real wages and standards of living have stagnated, especially for those at the bottom of the economic ladder. Gains achieved during expansions were given back in recessions. Now that we have achieved a high-employment economy grounded in sound policies, we have the potential to overcome some of the longer run problems that have plagued the economy for a long time. Continued strong investment should encourage growth in productivity and real wages. Strong labor markets should provide opportunities for workers who might otherwise have been discouraged to acquire job skills and experience that will create a stronger labor force attachment. Certainly, this Administration is committed to pursuing the policies most likely to achieve these gains.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 5-OCT-1998 12:09:17.00

SUBJECT: hearings this week

TO: Quindi C. Franco (CN=Quindi C. Franco/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Alan S. Polasky (CN=Alan S. Polasky/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
Here is some news to update you:

1) The "outside economist panel" to come after Janet's testimony looks like it will include Mary Novak of WEFA, Joyce Brinner of DRI, and Bob Hahn of AEI.

2) The House Science Committee will hold a hearing Friday where EIA will release its economic analysis. Hakes will testify, as will apparently someone from UMW, Howard Geller of ACEEE, and maybe some others.

3) The House Government Oversight Committee will hold a hearing at the same time Friday so McGinty can respond to Rep. McIntosh regarding document requests.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 5-OCT-1998 18:56:45.00

SUBJECT: EMF Qs and As

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

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==================== ATTACHMENT 1 ====================
ATT CREATION TIME/DATE: 0 00:00:00.00

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The following is a HEX DUMP:

Questions on EMF

1. Dr. Yellen, in your testimony you reference the most recent Stanford Energy Modeling Forum exercise. Could you provide us with some background information on this exercise and its participants?

Background on EMF

The EMF (Energy Modeling Forum) was established in 1976 to provide a structured forum within
which energy experts from government, industry, universities, and other research organizations could meet to study important energy and environmental issues of common interest. The Forum seeks to:

(1) harness the collective capabilities of participating experts for improving our understanding of an important energy/environment problem,
(2) explain the strengths and limitations of competing analytical approaches, and
(3) identify high priority directions for future research.

EMF studies emphasize the important insights for energy planning and policy that are learned from a comparison of alternative modeling approaches. These insights are far more important than precise "forecasts" based upon a single perspective or expert. This focus makes the Forum's conclusions relevant to policy makers and decision makers who are not modeling experts.

While much is learned from comparing existing energy models, EMF studies have increasingly included supporting analyses of issues less amenable to modeling. In this way, the EMF has become a forum for improving energy and environmental analysis in private and public decision making.

The heart of each EMF study is an ad hoc working group, organized to examine a single topic to which many existing models can be applied. The working group chairman and the issues to be studied are determined before the working group is formed, with the chairman helping to recruit the working group members. Individuals invited to participate in a study are considered to have expertise in the topic under investigation. Also these individuals may be able to recommend other prospective participants for a study. A working group consists of 50-100 members, comprised of equal numbers of model builders and users, who are volunteers with very diverse backgrounds. Approximately 1/3 of the participants are from government, 1/3 are from academia, and 1/3 are from the private sector. These individuals represent a mix of corporate, academic and government perspectives. The goal is to form a diverse working group, composed of members familiar with models and modeling, policy issues, and with a desire to improve the application of models to policy and planning processes.

A study normally requires four to six working group meetings and a substantial amount of interim
model execution and EMF staff work. The first meeting establishes the problem structure and key

parameters of the topic under review. The participants select the set of energy/environmental models to be examined in the analysis.

At the second conference the working group reviews, analyzes, and interprets the first set of model runs and decides whether the outputs are plausible, consistent and complete. The group also provides scenario specifications and parameter inputs for a second and possibly third and fourth cycle of model runs and supporting operations. Following this meeting, the preliminary reports describing the results of the analysis and major insights about the behavior of the models are prepared.

The working group meets for a fourth/fifth time for a final review of the model results, interpretation and analysis of the models, and preparation of the final working group report. At the fifth (and possibly sixth) conference, the final report is reviewed in great depth. When the working group reaches a consensus, it compiles the results of the study into a published report with the aid of the EMF staff.

The final report is published in two parts: about a 100-page summary directed at a broad audience
that includes corporations, academia, industry-sponsored research institutes, foreign companies and agencies as well as government agencies, and a much longer series of supporting documents aimed at a smaller, more technically-oriented audience. The emphasis in the writing of the report is to communicate the insights the models can provide to the interested lay reader. The EMF generally issues the final report. If general interest in a topic is strong enough, the EMF will publish the final report through a university press.

The overall planning, coordination, daily operations, and administration are handled by the EMF staff, supervised by the EMF Director, Professor John Weyant . He is aided by the EMF Executive Director, Dr. Hillard Huntington, administrative and secretarial staff and Stanford graduate students assigned to the various studies (staff members) underway. The EMF staff aids in the recruiting and forming of the working groups, participates as working group members in the studies, aids in the preparation of the reports, and publishes the final reports. With observers and others who closely follow the working groups and rotations of the working groups as new issues are selected, well over 1000 individuals have been involved in the 15 studies to date (and the EMF's master mailing list includes over 7,000 energy-environment experts from all over the world). Over 200 individuals might be active in EMF studies during any one year.

EMF-16

The most recent Energy Modeling Forum exercise, EMF-16, is an assessment of the Kyoto Protocol. A group of ten modeling teams using models that can account for trade in greenhouse gas permits have evaluated various scenarios related to Kyoto. These include the following trading scenarios:

- No trading
- Annex I trading

- Double Bubble (EU trades among member countries, the rest of Annex I countries trade among themselves)
- Global Trading

The modelers have also evaluated constraints on trading, non-competitive market behavior, the effects of various sink offsets, the effects of various non-carbon dioxide offsets, and the effects of various emissions paths beyond the first commitment period.

The Energy Modeling Forum is in the process of pulling together papers from the exercise participants for a special issue of an energy journal later this year. Until these papers are final, the modelers do not want their specific permit price and cost estimates published.

Energy Modeling Forum 16 Participants

Model	**Lead Researcher**	**Affiliation**
AIM	Tsuneyuki Morita	National Institute for Environmental Studies, Japan
CETA	Tom Teisberg	Teisberg Associates, Charlottesville, VA
EPPA	Henry "Jake" Jacoby	Massachusetts Institute of Technology, Cambridge, MA
FUND	Richard Tol	Institute for Environmental Studies, Vrije University, Amsterdam, The Netherlands
G-Cubed	Bob Shackleton	Environmental Protection Agency, Washington, DC
MERGE3	Richard Richels	Electric Power Research Institute, Palo Alto, CA
MRT	David Montgomery	Charles River Associates, Washington, DC
Oxford	Adrian Cooper	Oxford Econometric Forecasting, Oxford, England
RICE	Bill Nordhaus	Yale University, New Haven, CT
SGM	Jae Edmonds	Pacific Northwest National Lab, Washington, DC

2. Dr. Yellen, in your written testimony you state that all of the models participating in the present Energy Modeling Forum exercise model international trading in greenhouse gas permits. Could you explain why you believe it is important to use models that can handle international trading to evaluate the Kyoto Protocol?

We secured international trading in the Protocol and it is part of our position to allow our private sector to make the best business decisions in terms of reducing emissions, which could include purchases of foreign emissions allowances. Models which do not have international trading fail to reveal the substantial cost-savings available through this mechanism of the Protocol.

3. Dr. Yellen, you note that the models in the Energy Modeling Forum exercise do not account for some of the flexibility in the Kyoto Protocol, such as the opportunity to use carbon sinks and reductions across six greenhouse gases. How would accounting for these flexibilities affect the cost of achieving the Kyoto target?

These flexibility mechanisms, by providing more opportunities to the private sector to make cost-effective decisions to reduce emissions, would further lower costs of compliance with the Kyoto targets.

4. Dr. Yellen, you describe the findings from the Energy Modeling Forum on the effects of trading on reducing permit prices as robust and use it in support of the Administration's analysis. Do all of these models illustrate that international trading can lower permit prices? Could you provide for us the intuition on why trading can reduce costs as much as you and the Energy Modeling Forum have indicated?

All of the models find that international trading can significantly lower permit prices. Trading lowers costs because it provides incentives for low-cost abaters to sell to higher-cost abaters, and through the development of an emissions market, bidding for emissions would result in the least-cost solution. It is your basic gains from trade argument.

5. Dr. Yellen, in your discussion of the Energy Modeling Forum assessments of constraints on trading, you note that permit prices would increase with these trading constraints, and that permit prices would be higher in Japan than in the U.S. Could you explain why trading constraints increase permit prices and why they affect countries differently?

Trading constraints prevent the market from finding the suite of emissions reductions opportunities that result in least-cost abatement. Some countries would have to abate more in a constrained system than they would otherwise in an unconstrained trading system, and thus have higher permit prices. Because marginal abatement costs vary across countries (e.g., Japan has higher marginal costs than the United States), the permit prices under constrained trading would vary. This is a clear signal that trading constraints would result in efficiency losses by forcing more than optimal abatement in some countries, and less than optimal abatement in others (such as Russia and large developing countries were they to adopt targets).

6. Dr. Yellen, if trading constraints increase costs to the buying countries, and reduce gains to selling countries, and result in no climate benefits, what is the economic rationale for a quantitative limit on trading?

There is no economic rationale for trading constraints.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME: 5-OCT-1998 19:02:26.00

SUBJECT: NABE Speech - final draft

TO: Matthew R. McBrady (CN=Matthew R. McBrady/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP @ EOP [CEA])
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Remarks of
Janet L. Yellen
Chair of the President's Council of Economic Advisers
at the National Association for Business Economics
October 6, 1998

Thank you. It is a pleasure to join you at the 40th Annual Meeting of the National Association for Business Economics. Last June I received a brochure from the organizers of this meeting asserting that "We live in a golden economic age--healthy economic growth, low inflation, low unemployment and rising stock markets." It goes on to ask "Will this scenario continue into the next millennium?" The Administration's overriding objective is to ensure an affirmative answer to this question. This afternoon, I would like to describe some of the policies we believe are required to maximize the odds that the economic prosperity we are enjoying will indeed continue into the next millennium.

Let me begin by agreeing with the brochure's main assertion. U.S. growth has indeed been strong and inflation and unemployment remain exceptionally low. Contrary to the brochure's statement, the stock market has <u>not</u> continued to rise, but even with the retreat from its July high, household net worth remains at extraordinary levels relative to disposable income. In all of these ways, U.S. economic performance has been excellent. With all the recent attention on baseball records, it is worth noting that our economy too is on track to set a record this year. With continued growth through December, this expansion will enter its 93rd month, replacing 1982-90 as the longest peacetime expansion on record. But we should be much more ambitious. If growth is sustained into the next millennium, until February 2000 to be exact, this expansion will become the longest on record, surpassing the expansion of 1961 to 1969, which lasted 106 months.

But what are the odds that we can achieve this record? Although continued solid growth into the next millennium remains a likely outcome, the risks to this forecast have risen substantially as a consequence of the growing turmoil in international financial markets and the marked slowing of growth we are now witnessing in the world economy. Therefore, policies to contain the current crisis, to promote growth in the world economy and--taking the longer view--to reduce the odds of future crises-- are top priority items on the Administration's growth oriented economic agenda. I would like to focus primarily on these international issues in my remarks today touching only briefly on other policies that are needed to promote prosperity into the next century.

More than a year has elapsed since the Asian crisis began. Unfortunately, what started as a regional economic and financial crisis in East Asia has now developed into a larger global crisis, spreading to financial markets around the world, impacting global commodity markets, impairing economic development and imposing extraordinary hardship in the crisis afflicted countries, and posing risks to growth in industrial countries including the United States. There are few countries around the globe that have been unaffected.

The economic slump in the original crisis countries (Korea, Indonesia, Thailand and Malaysia) remains severe. The spillovers to other countries in the region, such as Hong Kong, and Singapore, have been substantial. Japan, already in a serious and deepening recession prior to the crisis, has seen a significant decline in its exports to its key Asian trading partners, and its banks have been hit with financial losses related to lending in the region. Currencies and stock markets in Latin America have come under pressure, especially following the crisis in Russia. Emerging market spreads over Treasuries, about 1500 basis points in September 1998, are now close to their highs during the 1995 Mexican peso crisis. The appetite for risk of international investors has fallen and there is some retrenchment from emerging markets towards safe haven assets and from stocks towards liquidity.

Over the past year, commodity prices have also declined, impacting industrial countries like Canada, Australia and New Zealand. In Latin America, the fall in oil prices has hit Mexico and Venezuela; the fall in copper prices is hurting Chile and Peru; and the decline in agricultural prices is affecting Argentina. Globally, all commodity exporters are hurting.

The impact of the crisis on the prospects for worldwide growth is evident in the most recent IMF *World Economic Outlook*, released in October 1998. The IMF now forecasts 2.0% world real growth in 1998, a precipitous drop from the 4.3% growth expected in October 1997. Forecasted world growth for 1998 is now comparable to levels not seen since the pronounced world recessions of 1974-75, 1980-83, and 1990-91. Japan's economy is expected to decline by 2.5%. The newly industrialized Asian economies (Hong Kong, Taiwan, Singapore, and Korea) are predicted to contract by 2.9%. The economies of the ASEAN-4 nations (Indonesia, Malaysia, Phillippines, and Thailand) are now expected to shrink by a staggering 10.4%. Moreover, expected growth in the developing countries in the Western Hemisphere is now 2.8%, down from 5.1% a year ago; and Russia is expected to contract by 6% this year.

From the U.S. standpoint, the main impact of the international financial crisis on our economy to date has been a deterioration of net exports and a widening of the trade deficit. Real U.S. exports of goods and services fell in the first half of the year and net exports subtracted 2 percentage points from GDP growth. According to our estimates, the Asian crisis has reduced

exports thus far by about $30 billion at an annual rate. It appears that all of the past year's weakness in exports is accounted for by the drop in our exports to seven Asian countries: China, Indonesia, Japan, Korea, Malaysia, the Philippines, and Thailand. Our imports from these countries have also risen—although these imports have been on an uptrend for several years. The Asian crisis has also affected U.S. farmers, who are experiencing low prices and shrinking exports, on top of bad weather in some regions. The manufacturing sector is experiencing weakness related to the crisis' impact. Financial institutions with emerging market exposure have also suffered losses and are exposed to further losses, particularly if the impact of the crisis spreads to important trading partners in our own hemisphere; and market volatility has clearly increased. We have recently seen rising spreads on corporate debt, dramatically so in the case of junk bonds, and there has been a noticeable recent tightening of credit standards and loan terms in commercial lending--evidence of a generalized flight to safety by participants in financial markets. These conditions imply an effective tightening of financial conditions. Further deterioration in the international economic situation remains the single largest risk to a forecast of continued solid growth into the next millennium.

Turning to the question of how to sustain America's growth, the first imperative is to work with the international community to promote growth in the world economy and to stabilize international financial conditions. Chairman Greenspan noted recently that no country, including the United States, is an island in the world economy. The growth prospects of all industrial nations will suffer unless we all do our part to help the world economy to grow. This need has been clearly recognized by the G-7 finance ministers and central bank governors who issued a joint statement several weeks ago indicating that, in their view, the balance of risks in

the world economy has shifted so that countries should commit to preserving or creating conditions for sustainable domestic growth. Strong growth in the industrialized countries is a prerequisite for recovery of crisis afflicted economies.

In serving as a major engine of global growth, the United States will inevitably see an increase in its trade deficit and some sectors, particularly those that are heavily exposed to trade, will experience disproportionate impacts. Even so, the United States must accept a rising trade deficit if the crisis countries are to recover. This means working to counter protectionist pressures at home just as we urge the crisis impacted countries to keep their own markets open. The Clinton Administration is committed to outward looking, internationalist policies.

As the world's second largest economy, Japan has a key role to play in maintaining world economic growth and its performance will determine the prospects for Asia's recovery. Japan has now entered a full fledged recession. Real growth over the four quarters of 1997 amounted to -0.4%. In the first half of 1998, Japanese real GDP was down 4.3% at an annual rate--far worse than expected. Japan risks descent into a deflationary spiral in which falling prices raise real interest rates, further discouraging spending. The United States continues to believe that Japan must take strong measures to stimulate domestic demand, to restore confidence, to deal with the problems of its banking system, to open its markets and to deregulate its economy.

Beyond working to insure growth in the industrial world, the United States has been focused since the outset of this crisis on the need to contain financial contagion and to restore the confidence of market participants--a prerequisite for capital flows to continue. We have supported the IMF in its goal of providing financial assistance to countries in crisis that are willing to implement the often tough reforms needed to restore economic confidence and

strengthen the underpinnings of their economies. It is now widely agreed that structural weaknesses, particularly in the process of financial intermediation, were an element in initiating the crisis. We continue to believe that countries must eschew inflationary finance, end cronyism in lending, act to discourage corruption and take steps to strengthen their banking systems by closing or recapitalizing inefficient or insolvent banks.

In a speech last Thursday, Secretary Rubin emphasized that the contagious effects of the ongoing crisis now threaten countries that have made great progress in implementing sound macroeconomic and structural policies and worked to strengthen the fundamentals of their economies. To deal with such threats, the President proposed on Friday to create a precautionary financial facility based in the IMF whose goal would be to provide assured access to assistance in the event of need to countries with sound policies which have acted responsibly, thereby helping them fight off the contagious impact of the ongoing crisis. In its communique on Saturday, the G-7 ministers and governors indicated their willingness to explore this idea. However, for the IMF to play its critical role in countering contagion, its resources must be expanded and the key step is for the U.S. at long last to meet its obligation to the International Monetary Fund. The IMF's resources are now badly strained and Congress simply must act now to enable the United States to meet its own IMF obligations by paying our dues and providing our contribution to the NAB. Market participants need to know that the IMF has the ability to act and failure by the Congress to pay our dues threatens this confidence, placing our own economy at substantial risk. The President also urged the major economies to stand ready to activate the $15 billion now in the emergency fund of the IMF--the General Agreement to Borrow--to ensure that the IMF continues to support reform and fight contagion.

At the same time that we support the basic IMF approach, which entails asking countries to take responsibility for improving economic fundamentals, we need to do more to help countries get back on their feet, to restore growth and to mitigate the suffering which has been afflicted on so many citizens in the affected countries.

In his speech at the Council on Foreign Relations, President Clinton announced that he has asked Secretary Rubin to work with other financial authorities and international economic institutions to explore comprehensive plans to help Asian corporations emerge from massive debt, where individual firms have been swept under by systemic national economic problems. In Indonesia, Korea and Thailand, for example, the combination of sustained high interest rates and illiquidity has led to harsh economic contraction and a vast overhang of bad debt. Debt to equity ratios that were already very high before the crisis (about 300% in Korea for the top 30 chaebols) have become unsustainable now (over 500% in Korea, 400% in Thailand and even higher in Indonesia) due to the real devaluation of their currencies and the burden of high real interest rates. In Indonesia, Korea, and Thailand, the World Bank estimates that 20-65 percent of firms have balance sheet losses greater than equity. When insolvent, highly leveraged companies cannot service their debt, a self reenforcing spiral is created in which banks' cash flows are squeezed, forcing them to contract new lending not only to illiquid corporations but even to those in better health. The object of comprehensive restructuring is to restore the flow of credit so that firms in these countries can get back to the business of producing output and creating jobs.

In an effort to insure access of crisis impacted countries to critical imports and to help American businesses continue selling abroad, the Export-Import Bank will establish new

short-term credit facilities for critical Latin American markets. We will coordinate these efforts with our counterparts in other leading industrial nations to ensure that trade credit continues to flow during this period of financial stress. Moreover, to keep private capital flowing to crisis impacted economies, the Overseas Private Investment Corporation (OPIC) has developed a new instrument to help emerging economies raise money from international capital markets.

The President also has asked the World Bank and Asia Development Bank to double their aid through an expanded Social Compact initiative with a focus on strengthening the social safety net in crisis affected countries. The focus would be on job assistance, basic needs, children, the elderly and groups in the affected countries who are most vulnerable to economic change.

Even as we work to mitigate the impact and contain the spread of the current crisis, the Administration is collaborating with other countries to find ways to strengthen the architecture of the financial system so that it is less crisis prone going forward. We need to improve the rules of the road so that the countries can enjoy the benefits of capital flows while reducing the risks and impacts of economic crises of confidence. Yesterday, at a meeting attended by the President, ministers and central bank governors from a group of industrial and key emerging market countries presented reports containing a plethora of recommendations to strengthen the international financial system. The work of this committee represents a continuation of a process begun in Naples and Halifax. It focuses on measures to increase transparency and strengthen financial systems, and proposes strategies for orderly workouts in the event of a future crisis.

There is a broad consensus on the need for greater transparency and openness both on the part of debtor countries and official institutions such as the IMF. The Working Group report on

transparency and accountability stresses the need to enhance the relevance and reliability of information disclosed by the private sector through compliance with high-quality accounting standards. It calls for braodening the public disclosure of data_on foreign exchange reserves, external debt and financial sector soundness. And it recommends greater disclosure of data on the international exposure of investment banks, hedge funds and other international investors. Finally, it urges the IMF itself to be more open and transparent.

Transparency is necessary to provide investors with the information necessary to evaluate risk in lending, but such measures are not likely to be sufficient on their own to prevent another major crisis from occurring. In the current crisis, for example, some information was unavailable, but available indicators, many signaling caution, were apparently ignored by investors.

Most analyses of the crisis point to financial sector weaknesses as a central cause. National banks and other financial institutions borrowed excessively from abroad and lent excessively at home, thus playing a key role in channeling funds toward projects that were marginal if not outright unprofitable. Lax supervision and weak regulation of the financial system, low capital adequacy ratios, lack of well designed deposit insurance schemes, insufficient expertise in the regulatory institutions, distorted incentives for project selection and monitoring, and outright corrupt lending practices, all contributed to the build-up of severe structural weaknesses in undercapitalized financial systems, whose most visible manifestation was a growing share of non-performing loans. The distortions generated by such behavior were enhanced by the rapid process of capital account liberalization and financial market deregulation in the region during the 1990s, that dramatically increased access to funds from abroad. Accordingly, the report proposes a series of reforms to strengthen domestic financial institutions and to create stronger incentives for borrowers and lenders to weigh risk and act with appropriate discipline, thereby reducing the odds of a crisis.

The task of strengthening financial systems is long-term and daunting. A partial list of needed elements includes: strong prudential regulation and supervision of bank and non-bank financial institutions; application of Basle (or Basle-enhanced) capital adequacy ratios; design of incentive-compatible deposit insurance schemes; design and implementation of disclosure rules, bankruptcy and foreclosure laws; development of liquid and deep financial markets, especially securities (bond and equity) markets; national implementation of the Basle core principle of banking supervision; coordination and cooperation among international organizations and international supervisory entities in strengthening financial systems; technical assistance and training to government official and regulators; improved corporate governance in both the financial and non-financial sectors; and implementation of efficient insolvency and debtor-creditor regimes.

The experience of Asia suggests that an excessive accumulation of short-term foreign currency denominated and unhedged foreign liabilities by the financial system was an important cause of the financial fragility that triggered and exacerbated the crisis. Mismatches between the maturity and currency composition of financial institutions' assets and liabilities and an incorrect assessment of liquidity and currency risks aggravated the problem. These structural weaknesses, together with the herdlike mentality of international investors, who withdrew funds and failed to rollover their loans to the debtor financial institutions, triggered the crisis. Clearly, cross-border short-term interbank flows are highly volatile and there is now broad agreement that, at the minimum, they should be addressed in a strengthened regime of prudential supervision of banks. In addition to proposing measures to strengthen financial systems and guard against the buildup of unsustainable risk positions, the G-22 report proposes measures to strengthen the incentives of debtors and creditors to behave prudently. In particular, the report emphasizes the need to limit the scope of government guarantees and implicit insurance schemes, to maintain appropriate exchange rate regimes, and to develop methods for greater risk sharing between debtors and creditors, including increased reliance on bond markets as an alternative to bank finance. In recent crisis episodes, governmental guarantees at many levels apparently reduced the perception of risk by lenders and borrowers. In many countries, there was an expectation that corporations and banks would be bailed out by governments in the event of trouble. In many instances too, the incentive of private parties to hedge exchange risk was diminished by the prevalence of fixed or semi-fixed exchange regimes. Such implicit and explicit guarantees may have distorted incentives, encouraging both debtors and creditors to take on excessive risk, to fail to hedge that risk, and to ignore available information pointing to potential problems. The report concludes that limiting guarantees, making those which are offered as explicit as possible and pricing them appropriately could also contribute to crisis prevention.

While strengthening domestic financial systems may prevent some crises and make those that do occur less virulent, it is still likely that crises will not be eliminated altogether. And while a well designed insolvency regime can facilitate orderly workouts of corporate debt, the G-22 report emphasizes that no comparable internationally agreed and binding bankruptcy regime is likely to emerge to handle sovereign debtors. The report emphasizes that **temporary suspensions of debt payments should occur only in extreme situations as a last resort after all other reasonable alternatives have been explored.** But in such instances, there is a need to develop mechanisms to facilitate the orderly workout of sovereign liquidity crises and it is essential for the private sector to share in the burden of crisis resolution.

Private sector burden sharing is critical, not only because official money is unlikely to be sufficient in all circumstances, but also because it is absolutely essential in inducing market discipline and reducing potential moral hazard problems deriving from official assistance. In spite of its importance, private sector burden sharing is more difficult to achieve now than in the days when banks accounted for the bulk of international capital flows. Today, the proliferation of creditor institutions and instruments and the growth of international bond markets makes the problem of coordinating the actions of creditors during a crisis extremely difficult. **Thus, a key recommendation of the G-22** is to include **"collective action clauses" in bond contracts to provide for: collective representation of creditors; majority action to alter the payment terms of a contract; and sharing of payments among creditors.** All of these provisions work to facilitate speedy and orderly workouts.

One question on which researchers and policymakers remain sharply divided concerns the desirability of implementing controls on flows of capital, in advance of a crisis, to prevent the potential disruptions associated with volatile international capital flows. Debate on this topic is certain to continue. However, there is some agreement on the need for appropriate sequencing of capital account liberalization. The G-7 Finance Ministers statement at the Birmingham summit noted that, while progressive liberalization of a country's capital account may be warranted over time, countries should be careful to proceed in an orderly way. With strong financial systems, the arguments in favor of unfettered capital flows are strong. But during such a transition, the liberalization of the capital account should be gradual and carefully managed to prevent the excessive accumulation of short-term debt, excessive borrowing and lending, mismatches of maturities and currency denomination of assets and liabilities of financial institutions and corporate firms that have proven to be so destabilizing in many recent and not recent episodes of financial and currency crises.

The international crisis has forced countries around to globe to confront the necessity of implementing the sound domestic policies which are ultimately fundamental to promote long-term economic growth and inspire investor confidence. The United States is no exception. From the outset, the Clinton Administration has focused on getting the policy fundamentals right to help the United States grow and to inspire investor confidence. That approach must continue. Three key policy fundamentals have been fiscal discipline, investing in the skills of the American people, and promoting policies to enhance competition at home and engagement in the global economy. These were the right policies early on for encouraging the job creation needed to move the economy to full employment and they are the right policies now for nurturing and sustaining the expansion into the next millennium.

The Federal budget is in the black for the first time since 1969. This is a remarkable accomplishment and reflects a virtuous cycle of sound policies and favorable economic performance. Successful deficit reduction has played an important role in restoring Americans' confidence in the ability of their government to manage its affairs. But in economic terms, the main purpose of deficit reduction is to boost national saving in order to lower interest rates, boost investment, and increase future consumption opportunities. Between the mid-1980s and the early 1990s, when it appeared that large deficits would persist as far as the eye could see, net national saving and net national investment declined as a share of national income. Since 1993, by contrast, we have seen double-digit rates of increase in business equipment investment, and net national investment as a share of national income has been on the rise.

The key challenge going forward is to protect the gains that have been achieved thus far. In particular, the President is committed to building a secure retirement for the baby boomers and a secure future for our children. That is why he has insisted that we preserve every penny of the budget surplus until we have taken care of the social security system and why he will resist reckless tax or spending schemes that would squander the surplus.

The second key element of the President's policy that will sustain America's growth is investment in the skills of the American people. In today's increasingly technologically complex world, it is important that American workers have the skills necessary to adapt and compete. A solid education from the early years on is critical to achieving that objective. The President is committed to making American education the best in the world, to having more teachers and smaller classes in the early grades, to extra help with early reading, to modernizing our schools, and to connecting all of our classrooms and libraries to the Internet by the year 2000.

Finally, sustaining America's growth means working to increase competition in our own markets, and to remain engaged in the world economy. The case for open and competitive commerce is that it forces us to innovate and to compete, ultimately speeding the productivity gains that are the source of improved living standards. That is why the President has introduced legislation, for example, to restructure the U.S. electricity sector--to enhance competition. The economic case for opening markets to international trade is equally strong. Trade offers American producers broader markets and it offers American consumers lower prices and a wider choice of goods although, like domestic competition, it brings challenges when it disrupts established patterns of economic activity.

Conclusion

Let me conclude by pointing out what is at stake in meeting the challenge of sustaining America's growth into the next millenium. Since the productivity slowdown of the early 1970s and until recently, real wages and standards of living have stagnated, especially for those at the bottom of the economic ladder. Gains achieved during expansions were given back in recessions. Now that we have achieved a high-employment economy grounded in sound policies, we have the potential to overcome some of the longer run problems that have plagued the economy for a long time. Continued strong investment should encourage growth in productivity and real wages. Strong labor markets should provide opportunities for workers who might otherwise have been discouraged to acquire job skills and experience that will create a stronger labor force attachment. Certainly, this Administration is committed to pursuing the policies most likely to achieve these gains.