Withdrawal/Redaction Sheet
Clinton Library

DOCUMENT NO. AND TYPE	SUBJECT/TITLE	DATE	RESTRICTION
001. email	Michele Jolin to Jeffrey A. Frankel, Rebecca M. Blank, and Janet L. Yellen at 14:41:17.00. Subject: Update on Staffing issues. (partial) (1 page)	05/28/1998	b(6)

COLLECTION:

Clinton Presidential Records
Automated Records Management System [Email]
CEA ([Yellen])
OA/Box Number: 950000

FOLDER TITLE:

[05/15/1998 - 05/28/1998]

2013-0723-F
ab1278

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P1 National Security Classified Information [(a)(1) of the PRA]
P2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P3 Release would violate a Federal statute [(a)(3) of the PRA]
P4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P5 Release would disclose confidential advice between the President and his advisors, or between such advisors [a)(5) of the PRA]
P6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.
PRM. Personal record misfile defined in accordance with 44 U.S.C. 2201(3).
RR. Document will be reviewed upon request.

Freedom of Information Act - [5 U.S.C. 552(b)]

b(1) National security classified information [(b)(1) of the FOIA]
b(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
b(3) Release would violate a Federal statute [(b)(3) of the FOIA]
b(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
b(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
b(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
b(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
b(9) Release would disclose geological or geophysical information concerning wells [(b)(9) of the FOIA]

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Steven N. Braun (CN=Steven N. Braun/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:15-MAY-1998 19:18:25.00

SUBJECT: MSR announcement remarks

TO: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/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:
Attached is a draft of remarks Janet could make for the MSR
announcement. =================== ATTACHMENT 1 ===================
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D59]MAIL440170533.126 to ASCII,
The following is a HEX DUMP:

STATEMENT OF CEA CHAIR JANET L. YELLEN ON THE ECONOMIC ASUMPTIONS OF THE MSR (FY 1999) BUDGET (scheduled for 5/20?)

My role today is to tell you about the budget's economic assumptions. For the past 5½ years, this Administration has built a record of conservative and credible economic assumptions. The Administration's economic forecasting team was committed to ensuring that our budget balancing efforts would be based on realistic assumptions about the economy's performance. The assumptions in this year's budget are similarly credible and are consistent with the views of a consensus of economic forecasters.

The news over the past two years has been very good. Real GDP growth averaged 3.8 percent over the past 8 quarters--the highest growth rate in nine years. The unemployment rate has been below 5 percent for the last 10 months. Over 3 million jobs were created just this past year. And all this has been accomplished while inflation has declined to its lowest level in over 30 years.

Although growth has exceeded our expections in recent years, we believe that it would not be prudent for budgetary purposes to count on a continuation of growth at its recent extraordinary pace. Looking ahead, our economic assumptions are hard-headed and pragmatic. We are projecting real GDP to continue to grow--but at a slower 2 percent annual rate over the next 3 years. At the same time, the unemployment rate is projected to edge up about about two tenths of a percentage point per year. Inflation, as measured by the CPI, is assumed to edge up slightly over the next three years. After 2001, real GDP growth is projected to resume its trend growth rate of 2.4 percent, and the unemployment rate stabilizes at 5.4 percent.

Our economic projections are very similar to those in the budget we put forward last February. The differences stem largely from integrating the better-than-expected economic performance during the past 2 quarters. Compared with where we thought we would be, the level of output is now higher--while unemployment, inflation, and long-term interest rates are lower.

The shift to more moderate growth assumed in this budget recognizes that, by conservative, mainstream assumptions, growth has exceeded the pace that can be maintained on a sustained basis without an eventual tendency for upward inflationary pressure. It is important to note that our assumed real growth rates are not the *best* that the Administration believes the economy can achieve--the outcome could be better.

Let me conclude by saying that the growth-oriented economic policies enacted by this Administration have clearly paid off. The Administration's 1993 deficit reduction plan helped create the climate for the current strong economic performance, and our economy is the strongest in a generation. We have provided a solid foundation for sustained economic growth and rising living standards for all Americans--evident in the 2.9 percent increase in real wages, the largest increase in 25 years.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:15-MAY-1998 15:10:37.00

SUBJECT: Budget

TO: Steven N. Braun (CN=Steven N. Braun/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.D13]MAIL48062743J.126 to ASCII,
The following is a HEX DUMP:

STATEMENT OF CEA CHAIR JANET L. YELLEN ON THE ECONOMIC ASSUMPTIONS OF THE FY 1999 BUDGET

My job this afternoon is to tell you about the budget's economic assumptions. For the past 5 years, this Administration has built a record of conservative and credible economic assumptions. The Administration's economic forecasting team was committed to ensuring that our budget balancing efforts would be based on realistic assumptions about the economy's performance. The assumptions in this year's budget are similarly credible and are consistent with the views of a consensus of economic forecasters.

Over the past year, our economy's performance has been steady and strong. Real GDP grew 3.8 percent for 1997 as a whole--the highest growth rate in nine years, and measures of income have been growing even faster. The unemployment rate has been below 5 percent for the last 8 months. Over 3 million jobs were created just this past year. And all this has been accomplished while inflation has declined to its lowest level since 1965.

Although growth has exceeded our expectations in recent years, we believe that for budgetary purposes we should not count on a continuation of growth at its recent extraordinary pace. For this reason, in this budget we are projecting that real GDP will continue to grow--but at a slower 2 percent annual rate over the four quarters of 1998, and this 2 percent pace is projected to persist for another 2 years. At the same time, the unemployment rate is assumed to edge up about two tenths of a percentage point per year. And, inflation, as measured by the

CPI, is assumed to edge up only slightly over the next three years. After 2000, real GDP growth is projected to resume its trend growth rate of 2.4 percent, and the unemployment rate stabilizes at 5.4 percent.

The shift to more moderate growth assumed in this budget recognizes that, by conservative, mainstream assumptions, growth has exceeded the pace that can be maintained on a sustained basis without an eventual tendency for upward inflationary pressure. It is important to note that our assumed real growth rates are not the *best* that the Administration believes the economy can achieve--the outcome could be better.

Let me conclude by saying that the growth-oriented economic strategy adopted by this Administration has clearly paid off. The Administration's 1993 deficit reduction plan created the conditions necessary for the vibrant economic performance we are now enjoying; our economy is the strongest in a generation. We have in place a solid foundation for continued sustained economic growth and rising living standards for all Americans.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:15-MAY-1998 12:04:13.00

SUBJECT: current draft + [doct. request phrase]

TO: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Randall W. Lutter (CN=Randall W. Lutter/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:
Joe and Randy,
Since we don't yet have a decision on whether we are turning over all our documents, the square-bracket phrase that appears repeatedly will have to be replaced (at least for now) with the following phrase (per Janet):

White House Counsel has not yet made a determination concerning the document requests we have received. Our documents reflect internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover the documents include material that could influence ongoing negotiations. =================== ATTACHMENT 1
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ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
WPC!

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1.PleaseprovideatablewithFiscalYear(FY)89FY99historicalbudgetauthorityforyoura gencyforthevariouscomponentsofthePresidents ClimateChangeTechnologyInitiative,i ncludingtheprevious ClimateChangeActionProgram/Planandanyotherneworpreviouslyau thorizedResearchandDevelopment(R&D)herein(exceptfortheU.S.GlobalChangeResearchP rogramincludedinQuestion3below).Foreachcomponent,pleaseindicateeachspecificbudg etaccount,thespecificlegislativeauthority(includingthespecificstatute,thesectio ncitation,andthelanguageofthesection)fortheprogram,andabriefdescriptionofthepro gram.Response.TheCouncilofEconomicAdvisers(CEA)hasnohistoricalbudgetauthorityfo rany 4 componentofthePresidentsClimateChangeTechnologyInitiative,theClimateChan geActionPlan,oranyotherneworpreviouslyauthorizedR&Dprogram.2.InSection2(Progra mmaticDetails)ofOMBsFebruary2,1998handout, ClimateChangeTechnologyInitiative199 9BudgetBriefingMaterials,pleaseprovidethefollowinginformationassociatedwitheach paragraphdescriptioninwhichyouragencyhasbeenfundedorisrequestingfunding:theasso ciatedfundinginFY97,FY98,andFY99.Also,foreachparagraph,fortherequestedfundingfo rFY99,pleaseprovideevidenceofanyaccomplishmentsfromtheFY93FY97funding,ifany.Las tly,foreachparagraph,andforeachagency,pleaseindicateanyprogramperformancemeasur esfortherequestedfundingand,foreachsuchmeasure,pleaseprovideannualdataforthe199 0baseyearandannualdataformostrecentthreeyearperiodforwhichdataareavailable.Resp onse.TheCEAhasnotbeenfundedorrequestedfundingforprogramsassociatedwiththe ! Cli mateChangeTechnologyInitiative.3.PleaseprovideatablewithFY89FY99historicalbudge tauthorityforyouragencyforthevariouscomponentsofthe U.S.GlobalChangeResearchPro gramwhichwereoraredevotedexclusivelytoclimatechangeR&D.Foreachcomponent,pleasei ndicateeachspecificbudgetaccount,thespecificlegislativeauthority(includingthesp ecificstatute,thesectioncitation,andthelanguageofthesection),andabriefdescripti onoftheprogram."0IffundedinanyofFY93FY97pleaseprovideevidenceofanyaccomplishm entsfrom *h%(thesedollars.Also,forrequestedfundinginFY99,pleaseindicateanyprog ramperformancemeasuresfortherequestedfunding,and,foreachsuchmeasure,please +@'* providedatafortheI990baseyearandannualdataforthemostrecentthreeyearperiodforwh ichdataareavailable.
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Acontributedwasthe1994policydialogtorecommendoptionsforreducinggreenhousegasemi ssionsfrompersonalmotorvehicles,aninitiativeknownas CarTalk.CEAprovidedanalytic alsupporttomembersofthePolicyDialogAdvisoryCommittee.TheCEAhasalsobeenactiveone conomicissuesinwhichtheIntergovernmentalPanelonClimateChange(IPCC)andtheNationa lScienceandTechnologyCouncil(?)(NSTC)havebeeninvolved.WhilenocurrentCEAstaffser vesasanauthorforIPCCpublications,weunderstandthatpaststaffhavedoneso.CurrentCEA staffhavealsobeeninvolvedindevelopingtheAdministrationselectricityrestructuring proposal.RandallLutterhasbeenourprimaryeconomistonthatissue,althoughseveralofth estafflistedabovehavetakenpartinthediscussion.Onecomponentoftheinteragencydiscu ssionsonelectricityrestructuringistheextenttowhichdifferentpolicyoptionswouldre duceemissionsofairpollutants,includinggreenhousegasemissions.[CEAismakingavaila bleallddocuments,comments,data,andanalysesthathavebeenmaintainedinCEAfilesthatin volveclimatechangerelatedinteragencywork.]9:Hasyouragencyeitherpreparedorreview edanyenvironmental,cost-benefit,and/oreconomicdataandanalysesrelatingtotheWhite HouseInitiativeonGlobalClimateChange?Ifso,pleaseprovideacopyofalldata,analysis, andanycommentsbyyouragency.X(XXX(Response:TheCEAhasanalyzedtheeconomiceffectsof theKyotoProtocolandpresentedour (#' resultsinDr.JanetYellensMarch5,1998,testimo nybeforetheU.S.SenateCommitteeonAgriculture,Nutrition,andForestry.[Wealsohavepr eparedasupportingdocumentavailabletothepublic,whichexplainsingreaterdetailthean alysisweundertook.]Ifthequestionis h+&* referringtotheClimateChangeTechnologyIn itiative(CCTI)proposedbythePresidentinfortheFY99Budget,theCEAhasreliedoninforma tionfromDOE,EPA,andothersforassessmentsofthoseinitiatives.#X(XXX(N,#[CEAismakin gavailablealldocuments,comments,data,andanalysesthathavebeen ` maintainedinCEAf ilesthatinvolveclimatechangerelatedinteragencywork.]X(XXX(L #X(XXX(/#10.Didyo uragencycommentonanyofthedrafttestimonyonclimatechangebyAdministrationwitnesses sincethePresident's1998State-of-the-Unionaddress?Ifso,pleaseprovideacopyofthedr afttestimonyandanycommentsbyyouragency.X(XXX(L Response:CEAhasreviewedandcom mentedinformallyonnumerouspublicstatementsby $ variousofficialsregardingclimatechangepolicy.Formalwrittencommentshavebeenprod ucedbythisofficeonlyrarely,butwehavemoreofteninformallymadesuggestionsastoconte ntorpresentation.#X(XXX(1#[CEAismakingavailablealldocuments,comments,data,andan alysesthathavebeen p maintainedinCEAfilesthatinvolveclimatechangerelatedinterag encywork.]X(XXX(\ 11.Hasyouragencysuggestedanyalternativepolicyoptionsforclima techange?Ifso,pleaseprovideacopyofalldraftsandsupportinganalysesandanycommentsf romotherFederalagenciesonyouralternatives.Response:TheCEAhasanalyzednumerousalt ernativepolicyoptionsforclimatechangeand 4 exploredtheadvantagesanddisadvantage sofvariousapproaches.TheCEAhasmadesuggestionsastowhichpolicyoptionswouldlowerth ecostofemissionsreductions,andmanyofoursuggestionswereincludedintheKyotoProtoco l.TheAdministrationisalsopursuingsomepolicies,suchaselectricityrestructuringand basicenergyresearch,thatwehaveadvocatedoneconomicgroundsevenindependentofclimat econcerns.#X(XXX(`3#[CEAismakingavailablealldocuments,comments,data,andanalyses thathavebeen X maintainedinCEAfilesthatinvolveclimatechangerelatedinteragencyw ork.]12:Doesyouragencyplantoreviseanyexistinglegislationorproposeanynewlegislat ionrelatingtoclimatechange(includinglegislationthatwillhavetheeffectofreducingg reenhousegasemissionswhetherornotthatistheintendedpurposeofregulatoryaction)?If so,pleaseidentifyanddescribeallsuchinitiatives,includingatimetablefortheirdevel opmentandsubmissiontoCongress.Also,provideanyandalllegalanalysesregardingtheapp licabilityandavailabilityofexistinglegislationtoimplementtheKyotoProtocolandany commentsfromotherFederalagenciesontheanalyses.Response:TheCEAisnotplanningtorev iseorproposeanynewlegislativeinitiatives.Wehave |*%) notpreparedanylegalanalyse softheapplicabilityandavailabilityofexistinglegislationto h+&* implementtheKyot oProtocolandhavenotcommentedtootherFederalagenciesonanysuchanalyses.13:Doesyour agencyplantoreviseanyexistingrulesorproposeanynewrulesrelatingtoclimatechange(i ncludingregulatoryactionsthatwillhavetheeffectofreducinggreenhousegasemissionsw

hetherornotthatistheintendedpurposeofregulatoryaction)?Ifso,pleaseidentifyanddescribeallsuchinitiatives,includinganycost-benefitanalyses,andatimetablefortheir developmentandpromulgation.Also,provideanyandallanalyses(preparedorconsidered)ofthecumulativeeffectontheU.S.economyand/orenergysystemofalloranycombinationofregulationsthatwereissuedsince1992,thatwereproposed,andthatarebeingdevelopedthathaveorwillhavesucheffects.X(XXX(
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Response:TheCEAisnotplanningtoreviseorproposeanynewregulationsrelatingtoclimate change.Wehaveconsideredduringitspreparationandinteragencyreview,theanalysis ofallFederalregulationspreparedbytheOfficeofManagementandBudgetlastyearinresponsetotheStevensAmendment,Section645oftheTreasury,PostalServicesandGeneralGovernmentAppropriationsAct1997(P.L.104208).Thisanalysis,datedSeptember30,1997,isentitled ReporttoCongressontheCostsandBenefitsofFederalRegulations,andwasforwardedto Congresslastfall.Wehavealsodocumentsrelatingtovariouspreviouslypromulgatedregulationsthatwouldhavetheeffectofimprovingfueleconomy.#X(XXX(=#[CEAismakingavailablealldocuments,comments,data,andanalysesthathavebeen \ maintainedinCEAfilesthatinvolveclimatechangerelatedinteragencywork.]14.Hasyouragencyparticipatedindiscussionsorreviewedanydocumentsrelatingtointernationalemissionstrading,jointimplementation,and/ortheCleanDevelopmentMechanism?Ifso,pleaseprovideacopyofalldrafts andanycommentsprovidedbyyouragency.X(XXX(Response:TheCEAhastakeninterestinthediscussionsoftheflexibilitymechanismsinthe I KyotoProtocol,andhasreviewedandcommentedonnumerousdraftsrelatedtointernationalemissionstrading,jointimplementationandthecleandevelopmentmechanism.Webelievethesesourcesofflexibilitywillreducethecosttothe U.S.ofmeetingtheKyototargets.#X(XXX(B#X(XXX(#X(XXX(D#[CEAismakingavailablealldocuments,comments,data,andanalysesthathavebeen $X" maintainedinCEAfilesthatinvolveclimatechangerelatedinteragencywork.]C.Dr.YellensTestimonybeforetheHouseCommerceCommitteeonMarch4,1998 &"% 15.PleaseprovideanyandallanalysesthatsupporttheAdministrationsconclusionthatimpactsontheU.S.economyofcomplyingwiththetermsoftheKyotoProtocolarelikelytobe modest. h+&* Response:Ourtestimonyconcluded thatthenetcostsofourpoliciestoreduceemissionsare likelytobesmall,assumingthose reductionsareundertakeninanefficientmannerandwearesuccessfulinsecuringmeaningfuldevelopingcountryparticipationaswellaseffectiveinternationaltrading,andtheCleanDevelopmentMechanisminfuturenegotiations.IntheTechnicalSupportDocumenttheanalysessupportingthisconclusionarepresented.15.Continued.Also,explainfullyhowtheAdministrationcanmakesuchaforecastresponsiblywhenasDr.Yellenstated, itisnotyetpossibletoprovideafullauthoritativeanalysisoftheKyotoProtocol.Amongotherthings,Dr.Yellennotedthatthereisstill muchthatwedonotknowbecausemuchhasbeenleftunresolvedbythistreaty(forexample,implementationissues,therulesandproceduresgoverninginternationalemissionstrading,jointimplementationprojects,andtheCleanDevelopmentMechanism,andfutureemissionsreductionobligations).Moreover,Dr.Yellenassertedthattoherknowledge, no[economic]modelwhetherusedinsidethegovernmentornothasyetbeensetuptoanalyzetheimplicationsoftheKyotoProtocol,sincethisagreementisonlyafewmonthsold..Response:Policydecisionsandpublicstatementsoftenneedtobemadebasedonthebest p informationavailableatthetime,eventhoughthorougheconomicanalysisofthescholarlysorttakeslonger.Aspreviouslystatedintestimony,theKyotoProtocolisaworkinprogress;itisincomplete.Thereremainsuncertaintyabouttheultimateregulationofinternationalpermittradingpursuanttothe KyotoProtocol,andthetimingandnatureofdevelopingcountryparticipation.However,thereshouldbenouncertaintyabouttheAdministrationsfirmcommitmenttoachieveeffectiveinternationalpermittrading,andmeaningfulparticipationbykeydevelopingcountries.TheAdministrationsconclusion,andthesupportingbutillustrativenumericalestimates,arebasedonourpoliciestoimplementtheKyotoProtocolcosteffectivelyaswellasontheProtocolitself.16.Pleaseprovideanyandallanalysesthatsupportthefollowingestimates:a.U.S.electricityrestructuring willofferapproximately$ 20billionincostsavings.Response:ThederivationofthisestimateisexplainedintheTech

nicalSupportDocumentinthe 0" sectionentitledelectricityrestructuring.b.EmissionstradingamongtheAnnexIcountries canreducethecosttotheUnitedStatesofachievingitstargetsfor20082012emissionsbyabouthalf.Response:PleaseseethesectiononinternationaltradingintheTechnicalSupportDocument. '#& c.EmissionstradingamongasubsetofAnnexIcountries(forexample,theUnitedStates,Australia,Canada,NewZealand,andRussia) canreducecostsbyanestimated6070percent. h+&* Response:ThisstatementisbasedonthesectiononinternationaltradingintheTechnical SupportDocument.Also,basedontheestimatespresentedinJanetYellenstestimony,pleaseexplainandfullydocumenthowmorelimitedtradingamongthissubsetofcountrieswouldproducegreatercostreductionsthanfromeithertradingamongallAnnexIcountriesortradingwiththefullparticipationofNonAnnexIcountriesResponse:UndermanyinternationaltradingscenariostheUnitedStatesisexpectedtobuy ` emissionspermitsoninternationalmarkets.Asabuyer,theUnitedStateswouldenjoylowerpermitprices,andlowercosts,thegreateristhesupplyofpermitsthatitstradingpartnersarewillingtosellforagivenprice.However,ifothersofitstradingpartnershaverelativelyhighabatementcosts,andsowouldpurchasepermitsoninternationalmarkets,thenthesepurchaseswouldreducethenetsupplyavailabletobesoldtotheU.S..ReductionsinthesupplyofpermitswouldraisethepriceandhencethecosttotheU.S.Inparticular,limitedtradingamongtheabovementionedsubsetofcountrieswouldproducegreatercostreductionsthaneithertradingamongallAnnexIcountriesortradingwiththefullparticipationofNonAnnexIcountriesbecausethissubsetexcludessomepotentialtradingpartnerswithrelativelyhighabatementcoststhatwouldotherwisebuypermitsoninternationalmarkets.Intuitively,ifwehadfewcompetitorsonthebuyingside,wewouldalmost havethemarkettoourselves.d.TheCleanDevelopmentMechanism mightshavecostsbyroughlyanother20to25percent.Response:TheCleanDevelopmentMechanismisincludedintheKyotoProtocol,althoughthe detailsabouthowitwouldworkhavestilltobenegotiatedwithpartiestotheProtocol.TheAdministrationspolicyisthatthedetailsoftheCDMshouldensurethatitbecomesacosteffectivewaytoallowdevelopedcountryfirmstogivefinancingandtechnicalassistanceforprojectstoloweremissionsandtoreceivecreditforthereductions.Ourbestprofessionaljudgment,basedondiscussionswithavarietyofinformedanalysts,isCDNcouldachieve20percentoftheemissionsreductionsavailableunderatargetandtradeapproach.Thestatementthatcostswouldfallbyroughlyanother20to25percentisbasedontheSGMmodelresultsgiventhisassumption,andisfurtherexplainedintheTechnicalSupportDocument.e.OverallcostswouldreachroughlyonetenthofonepercentofprojectedGDPin2010"(resourcecostsofachievingKyototargetsforemissionsreductionswereestimatedtobe$7to$12billionperyearin2008to2012).Response:TheforecastedchangesinGDPweretakenfromtheSGMmodeloutput.Pleasesee '#& pagesxxtoyyoftheattachedTechnicalSupportDocumentforabriefsummary.Also,pleaseexplainhowitispossiblethatcompliancewiththeKyotoProtocol,whichhasbeenprojectedbyindependenteconomiststobethemostexpensiveenvironmental h+&* undertakingever,couldcostlessthancompliancewiththerecentlyissuedU.S.airqualityrulesforparticulatematterandozone(thefinalRegulatoryImpactAnalysisforthoserulesestimatedcostsof$46billion).Response:Asmentionedinthetestimony,independenteconomistshavegenerallynotestimated ` coststakingintoaccountthespecificattributesoftheKyotoagreementandtheAdministrationspolicytoimplementit.Inparticulartheyhaveneglectedthecostsavingslikelytoresultfrominternationalpermittrading,fromtheCleanDevelopmentMechanismandmeaningfulparticipationbykeydevelopingcountries.Thisneglectraisestheircostestimates.ThereisnoparticularreasonwhythecostsoftheKyotoProtocolshouldhaveanyparticularrelationtothecostsoftherecentlypromulgatedairqualitystandards.Climatechangepolicymight,forexample,havethesidebenefitofimprovingourtermsoftradevisavisoilexportingcountries.WebelievethatcarefulestimatesofthecostsoftheKyotoProtocolandtheAdministrationsImplementationpolicywillbesubstantiallylessthan$46billionperyear,andindeedclosetotheillustrativenumberswehavepresentedearlier.f.Theassumptionthattherateofimprovementinenergyefficiency(AEEI)willbe1.0percentperyear(whichisgreaterthanthatassumedbytheEIA).Response:0` ThisnumberisonlyveryslightlyhigherthantheAEEIestimateoftheEnergy p InformationAgency.Theincrementcan beviewedasamodestallowancefortheeffectsofintensifiedresearchanddevelopment,tech nologydissemination,andcooperativegovernmentbusinesspartnerships.Wealsonotethat BattellesSGMmodelistypicallyrunwithadefaultvaluefortheAEEIof1.0.

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articular,pleasereconcilethisassumptionwiththestatementoftheCEAinits1998AnnualR eportthat [u]ntilanemissionscapandtradingsystemareinplace,however,theeconomicin centivetouse[technologiessupportedbytheAdministrationsbudget]maybelow.Response: Noreconciliationisneeded.Thecommentfromthe1998ERPimpliessimplythatin X theabse nceofacapandtradesystemthatwouldlowerthepriceofusingcarbonleantechnologiesrelat ivetocarbonrichtechnologies,theincentivestoadoptsuchcarbonleantechnologieswillb elessthaninaworldwiththecapandtradesysteminplace.Moreover,theAEEIrepresentsthea utonomousrateoftechnologicalimprovement,i.e.,theratethatwouldoccurintheabsenceo fpricechangesthatthecapandtradesystemmightleadto,duemerelytothegreateravailabil ityofnewtechnologies.Thusitsvalueisacommentontheextentofonestechnologicaloptimi sm,andnotaboutoptimismofprivatepartiestorespondtopriceincentives.IstheAdministr ationassumingthatsuchasystemwillbeputintoplaceintheshortrun?Response:No,theAdmi nistrationspositiononthetimingofacapandtradesystemhasnot |*%) changedsincelastf all.TheAdministrationthenmaintainedthatthesystemwouldbeestablished h+&* withthe benefitof10yearsofadditionalexperiencewithsimilarmarketbasedmechanisms.g.Theest imatedeffectonenergypriceswillrangefrom$14to$23pertonofcarbonequivalent.0Plea seseethesectionoftheTechnicalSupportDocumentthatdescribesresults.

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rgyintensivesectorssomeemploymentreductioncouldoccur,althoughgiventheverysmallp redictedchangeinenergyprices,impactsinmostsuchsectorsareapttobeminimalFurthermo re,alargenumberofjobswillbecreatedinothersectorsmanyofthemhightechjobspayinghig hwages.ResponseVerystandardeconomicanalysissaysthatinthelongrun,totalemployment is $

determinedbythesizeofthelaborforce,incentivestowork,andtheproductivityoflabor. Changesinpricessuchasresultfromdevelopmentsintechnology,trade,energymarkets,orm anyotherareastendtohavetheireffectsonthecompositionofemploymentacrosssectors,mo rethanontotalemployment.AsexplainedintestimonyandintheTechnicalSupportDocument, theenergypricechangesexpectedtoresultfromtheKyotoprotocolandtheAdministrationsi mplementationpoliciesundertheassumptionselsewhereidentified,arelikelytobemodest .Inparticular,thesepricechangesoverthenextdecadearelessthantheaverageofyeartoye arabsolutepricechangesobservedsince1960.Thusthereislittlereasontobelievetherewi llbelargechangesinemploymentevenintheenergyintensivesectors.Inthelessenergyinte nsivesectors,thereisnoreasontoexpectanydeclineinemploymentatall.Mosteconomicmod elswouldnotpredictchangesintheoveralllevelofemploymentresultingfromsuchsmalleme rgypricechanges10yearsinthefuture.TheU.S.hasastrongcompetitiveadvantageinavarie tyofhightechsectors.Recentinnovationsinbatterytechnology,andinfuelcellswereanno uncedbyU.S.companies.Theseinnovations,andfutureonesexpectedfromU.S.companies,wi llbeindemandworldwide.Thegrowthinassociatedproductionislikelytoleadtogrowthinhi ghwagejobsinthiscountry.I.Astoeachanalysis,pleaseindicatewhopreparedtheanalysis andproviderecordsofcommentsfromotherfederalagencies.Response:Alloftheanalysisfo rourtestimonyonclimatechangewaspreparedbyCEAstaff $D # underthedirectionoftheMe mbersoftheCouncil,withthecollaborationofstaffatseveralothergovernmentagencies.C EAstaffwhohaveworkedonclimatechange` JoeAldy` ZachCandelario` Danie lChang` KeithFuglie` RandallLutter h+&* ` AdeleMorris[CEAismakingav ailablealldocuments,comments,data,andanalysesthathavebeenmaintainedinCEAfilesth atinvolveclimatechangerelatedinteragencywork.]17.Pleaseprovideanyandallanalyses thatsupporttheAdministrationsestimatethatbenefitsrelatingtotrafficcongestion,hi ghwayaccidents,andairpollutionunrelatedtoclimatechange couldoffsetapproximately aquarteroftheresourcecostoftheclimatechangepolicy.ResponseThisanalysisissummari zedinthesectionoftheTechnicalSupportDocument L describingancillarybenefits.[C

EAismakingavailablealldocuments,comments,data,andanalysesthathavebeenmaintained inCEAfilesthatinvolveclimatechangerelatedinteragencywork.]Astoeachanalysis,plea seindicatewhopreparedtheanalysisandprovideallrecordsofcommentsfromotherfederala gencies.ResponseRandallLutteronourstaff,withtheassistanceofTreasurysOfficeofEco nomic H Policy,andEPAsOfficeofPolicyPlanningandEvaluationpreparedtheanalysis.18 a.Inhertestimony,Dr.Yellenstatedthat,inevaluatingthe likelyneteconomicimpactoft heKyotoProtocol,theAdministrationhas drawnuponabroadarrayofanalyticaltools,anda widerangeofmodelsoftheenergysectorandeconomyoverthenext25yearstoassessthevario uspossiblecostsandnonclimatebenefitsoftheAdministrationsemissionsreductionpolic y.PleasespecifyallofthemodelsandanalyticaltoolsthattheAdministrationhasusedandd escribeindetailtheirstrengthsandweaknesses.Response:` Asexplainedinthetestimo ny,theexistenceofmodelingdifficultiesmeansthat weshouldtreatanymodelresultswit hthecautionthatiswarrantednotthatweshouldabandonrigorouseconomicanalysis.Wehave employedabroadsetofeconomictoolstoanalyzethepolicyoptions.Suchtoolsincludemodel softheenergysectorandeconomyoverthenext25years,includingbutnotlimitedtotheresul tsoftheStanfordEnergyModelingForumexercises,theIPCCsreviewoftheeconomicandsocia ldimensionsofclimatechange,andthestafflevelInteragencyAnalyticalTeameffortlasty ear.Othertoolsincludesimplerelevantstatistics, metaanalysesofexistingmodels(suc hasthatundertakenbyRobertRepettoandDuncanAustinofResourcesfortheFuture),histori calandsectoralexamples,univariateandmultivariateregressionanalysis,simulations, Hotellingtypetheoreticalmodels,CEAstaffeconometricforecastsofemissionsindevelop ingcountries,stylizedmodelsofperfectcompetitionandmonopoly,basiceconomicreasoni ngandthevariousothersortsoftheoreticalandempiricaltoolsofanalysisthataboundinth escholarlyliterature.Drawingonthisbroadarrayofanalyticaltoolsallowedanintellige ntevaluationofthepolicyalternatives. h+&* Wehaveconsideredandevaluatedthefollow ingspecificlargeeconometricmodelsoftheeconomicsofclimatechangemitigation:Second GenerationModel,Gcubed,MERGE,andDice.Wehavealsobeenexposedtoresultsfrommanyothe rmodels,suchasGreen,DRI,MarkalMacro,Megabare,EPPA,andCETM/MRG.18.bAccordingtoth etestimony,theAdministrationhasreliedparticularlyontheSecondGenerationModelofBa ttelleLaboratoriesformanyofitsestimates.However,theIATreportindicatedthattheSGM model"focussesonlongtermtransitionsandmeasurestheeconomyin5yearintervals,"sotha titrisksracingpastshorttermtransitionissues,suchasGDPlossandimpactsonspecificin dustries.SpecifyalloftheAdministration'sestimatesthatwerederivedfromthismodel .ResponseTheAdministrationusedthismodel'sestimatesasoneofseveralinputsinits c alculationsoflikelypermitpricesandresourcecostsforthedifferenttradingscenarios. ThemethodssectionintheTechnicalSupportDocument.Informationofthemarginalabatemen tcostcurvesofnoncarbongreenhousegaseswasmissingfromtheSGMoutputandaddedtoreflec tprovisionsintheProtocol.Numericalestimatesofexpenditurechangesandancillarybene fitsusedestimatesoflikelypermitpricesoremissionsreductionsasinputs.Also,indic atewhymanyoftheAdministration'skeyestimateswerederivedfromthismodel.Eachmodelha sstrengthsandweaknesses;eachhasquestionstowhichitisbetterorworsesuitedtoanswer. Some,forexample,modeltheenergysectorindetail.Someallowforthefactthatacoalfiredp owerplantcannotcostlesslybeconvertedtoonethatrunsonnaturalgas.Somehaveenoughpol icydetailtodistinguishalternativewaysofredistributingrevenuesthatwouldresultife missionpermitsweretobeauctioned.Somearecapableofshowingshorttermmacroeconomicdi sequilibria.Someincludealongterm carboncyclemodelthatcankeeptrackoftheaccumulat ionofgreenhousegasconcentrationsintheatmosphereandtheirclimatologicaleffects.So mebreakdowntherestoftheworldintoregionsandsocanmodelinternationaltrade.Noonemod eldoeseverything,andthereforewemustnotrelyblindlyontheresultsofanyonemodelorset ofmodels.Professionaljudgementandeconomicintuitionarealsocrucial.TheSGMmodel,un likemanyeconomicmodelsofclimatechange,hasanexplicitmodelofemissionsreductionsin othercountries,andsoisexceptionallywellsuitedforestimatingemissionspermitprices giveninternationaltradeinpermits.Inaddition,ithasmodulesreflectingseveralmajord evelopingcountriesanddataonallotherdevelopingcountriesasagroup.Thusitiswellsuit edtoaddresstheeffectsofdevelopingcountryparticipationonpermitprices.Finally,the timelyavailabilityofsufficientinformationaboutavarietyofSGMmodelrunsmadeitsusep racticalbetweenthetimetheKyotoprotocolwasdevelopedinDecember h+&* 1997andourfir sttestimonyinMarch1998.Finally,pleaseidentifythecorrespondingestimatesderived fromeachmodelthattheAdministrationhasusedinassessingtheimpactsoftheKyotoProtoco l.Response:Thedevelopmentofcorrespondingestimatesisacomplicatedtechnicaltasktha tis L beyondtheabilitiesofoursmallstafftocompleteintimelymanner.Weexpectthatth eEnergyModelingForumwillcontinuetoproducecomparisonsofvariousclimatechangemodel s'forecastsoftheeffectsoftheKyotoProtocol.Althoughsomeofthesemodelshavenotyetin corporatedthe5nonCO2gasesdirectlyintotheirmodels,thesecomparisonsshouldprovidea fullcomparisonoftheSGMpredictionswiththoseofothermodels.19Whatarethe1990baselin e,theFiscalYear1997,1998and1999,data,andtheannualoutyearestimatesuntil2012forth efollowingoutcomeperformancemeasuresmentionedinDr.Yellen'stestimony:morbidityra tesforsomediseases,mortalityratesforsomecauses,monetarydamagesfromtemperaturein crease,consequencesfromsomecatastrophes,trafficcongestion,highwayaccidents,anda irpollutionunrelatedtoclimatechange.0TheTechnicalSupportDocumentprovidesbasel inedatafortrafficcongestion,highwayaccidents,andairpollutionunrelatedtoclimatec hange.Thesedataarefor2010,orfor1995,ifmorerecentdatadonotexist,andnopublished20 10forecastswereavailable.Forthesedatawehavenoinformationofoutcomeperformancemea suresfortheFiscalYearsrequested,orforyearbyyearestimatesthrough2012.

(#(# 20Why doestheAdministrationmaintainthattheU.S.acidrainprogramexperience"clearlydemons trateshowprogramslikeinternationalpermittrading,jointimplementationandtheCleanD evelopmentMechanismwillleadfirmstofindcheaperwaysofreducingemissionsthatcanlead tounexpectedlylowcosts"?0

(#(# 0Emissionstradingprograms,byprovidingcontinu ouseconomicincentivestoreduceemissionsfurther,generallyleadcoststobemuchlowerth anwouldbethecaseunderavarietyofmoreprescriptiveregulatoryapproaches.

(#(# Whydo estheAdministrationbelievethatitisappropriatetoextrapolatefromthatexperiencetot heglobalarena.0Thebasicprinciplethattherearegainsfromtheabilitytotradeisofqui tewideapplicability.Indeedthetextbooktheoryofgainsfromtradeisperhapsmostfamilia randwellestablishedattheinternationallevel.Economicincentivesgenerallyhavesimil areffectsindifferentcountriesandcultures:peopleeverywhereareinterestedinhigheri ncomes.Internationalpermitmarketswilllowercompliancecostsinallparticipatingcoun tries,becausetheyprovidefinancialincentivesforsourcestoreduceemissions.Theseinc entiveswillhavetheeffectofloweringthecostsofemissionscutsrelativeto h+&* whatwo uldbethecasewithoutanytradingofemissionspermits.

(#(# Won'ttheeffectivenessofth einternationalsystem,jointimplementation,andtheCleanDevelopmentMechanismdependo ndifferentfactors,suchastherulesandproceduresgoverningthesemechanisms,theextent ofparticipationbyothercountries,includingdevelopingcountries?0Yes.Theimportan ceofeffectivetradingrules,andrulesonjointimplementationandtheCDMisthereasontheA dministrationisaskingotherpartiestotheProtocolthattheysupportregulationsthatwil lleadtoeffectiveandsuccessfultrading,JIandCDM.

(#(# 21aInhertestimony,Dr.Yellen statedthatpartofdoingitsmart(i.e.,loweringthecostsofreducinggreenhousegasemissi ons)undertheKyotoProtocolmeans takingseriousandresponsiblestepsintheshortruntop repareustomeetourobligationsinthelongerterm.Sheindicatedthatthesestepsincludea$ 6.3billionprogramoftaxcutsandR&Dinvestments,industrybyindustryconsultationstopr epareemissionreductionplansinkeyindustrialsectors,andlegislationtorestructureth eelectricalindustry.UnderwhatauthorityistheAdministrationpursuingthisunilateral executivebranchcourseofactioninfurtheranceofthetreatysemissionsreductionstarget sandwithoutSenateRatification?

Response:The$6.3billionintaxcutsandR&Dinvestmentsisaproposalmadeto Congressas \ partoftheannualAdministrationbudgetpreparedundertheauthorityofthe_____.Theindustrybyindustryconsultationsdonotrequireexpresslegislativeauthoritybecausetheyare discussingonlyvoluntaryemissionscutsthatindustriesmightmake.Theindustriesinquestionaresufficientlyconcernedabouttheirrolesinfosteringclimatechangethattheybelievetheyshouldtakevoluntarymeasures.21b.IftheAdministrationisdelayingthesubmissionofthetreatytotheSenateuntilitobtainsmeaningfulparticipationbydevelopingcountries,doesn'tthatdecisionalsorequiretheAdministrationtodelayanyunilateralexecutivebranchactiontoaddressglobalwarminguntilthatcooperationisforthcoming.Response0

` TheAdministrationisnotembarkingonunilateralExecutiveBranchactionto $I! implementtheKyotoProtocolwithoutratification.Tothecontrary,stepstoensurecompliancewiththeProtocol'srequirementswillbeundertakenonlywiththefulladviceandconsentofthe Senate.However,theAdministrationispursuingavarietyofpoliciesthatmakegoodsenseevenindependentofconcernsaboutclimatechangeandthathavetheadditionaldesirablepropertyofreducinggreenhousegasconcentrations.ExamplesofsuchpoliciesincludetheCCTI,muchofwhichisanexpansionofexistingprograms,aswellasongoingeffortstoassessefficiencystandardsforhomeappliances.Thesepolicesallreduceenergy 0,%) consumption,andtherebyreducedependenceonforeignoilandemissionsofairpollutantsunrelatedtoclimate change,policygoalsthathaveenjoyedbipartisansupportformanyyears.Thefactthatthese policiesreducecarbonemissionsshouldalsobeasharedpolicygoal,becausein1992theRioTreatyadoptedbytheBushAdministrationandratifiedbytheSenaterequiredtheU.S.totakeunilateralvoluntarystepstoreturnitsemissionslevelsto1990levels.

` (#` (# c.Given thattheKyotoProtocolseekstoaddressaglobalissue,isn't[it]harmfultoU.S.intereststoproceedwithoutthefullparticipationofdevelopingcountries.Response:ThePresidenthassaidthathewillnotsubmitthetreatyforSenateratificationwithout 8 meaningfulparticipationbydevelopingcountries.Wedonotbelievethattheotheractions identifiedaboveareharmfultoU.S.interests.d.Besidesbeingunconstitutional,isn'tit alsoprematureandharmfultoU.S.intereststotakesuchunilateralactions,withoutratification,whentheAdministrationhascharacterizedtheProtocolasa"workinprogress"aProtocolthatisnotyetfullycompletenorreadyforthePresident'ssubmissiontotheSenate?Response:No.First,asexplainedabove,theseactionshaveindependentpolicymeritapartfrom

theirimplicationsforgreenhousegasemissions.TheAdministrationissubjecttoavarietyofpressuresfromothercountries.OneconcernoftenexpressediswethertheU.S.isseriousaboutreducingemissions.

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D.Cost/BenefitAnalysisoftheKyotoTreaty[sic]22aPleaseprovideanyandallanalysesthattheAdministrationoranyfederalagencyprepared(orhadprepared)orispreparing(orishavingprepared)ofthecostsandbenefitsofimposingontheU.S.thebindingtargetsandtimetablessetforthintheKyotoProtocolforreducinggreenhousegasemissions,takingintoaccou nttheglobalimplicationsofthewayinwhichthisagreementisstructured.Response:TheTechnicalSupportDocumentprovidesadditionaldetailedinformationaboutthe $l! economic analysisoftheKyotoProtocol.Akeyareathatwehavenotpursuedinouranalysis,however,isthebenefitsoftheProtocol.Thesebenefitsareexceptionallydifficulttoquantifybecauseclimatechangeraisestheriskoflargescaleirreversiblecatastrophiceventslikedisplacementofoceancurrents,andthereleaseofmethanefromthewarmingofArcticpermafrost.In addition,thequantificationofclimatechangebenefitsisquitedependentonthechoiceofdiscountrate,whichforperiodsaslongasacenturyisthesubjectofongoingprofessionaldebate.Moreimportantly,however,theKyotoProtocolisjustafirststepinaddressingclimate change.Furtherstepswillentailadditionalcutsinemissionsinyearsbeyond 0,%) 2012,anduncertaintyaboutthemagnitudeoftheseprecludesmeaningfulanalysisabouttheeffectsoftheKyotoagreementitselfonclimate.Alsopleaseanalyzeanddocumentthefollowing:22b.WhetherthebenefitsofimplementingthisProtocolarejustifiedbythecosts.Response:We havenotquantifiedthebenefitsofthisProtocolbecauseitisonlythefirststep t toward scontrollingcarbonconcentrationsintheatmosphere;emissionslimitsinyearsbeyond2012havenotbeenproposedornegotiated.Inaddition,estimatingthevalueofthesebenefitsin monetarytermsisexceptionallydifficultbecauseoftheircomplexityanduncertainty.Thereisalsodisagreementwithintheeconomicsprofessionabouthowtoaccountinbenefitcostanalysesforthefactthatclimatechangedamageswilloccurintherelativelydistantfuture. Notwithstandingtheseanalyticdifficultiesitisapparentthatclimatechangeifleftuncheckedwillposeasubstantialthreattoouronlyplanet.ThereforewebelievethatthebenefitsofthisProtocoljustifyitscosts,giventhatthesewillbemodestasaresultoftheflexibilityprovisionsthatareincludedintheProtocolandthosethatformanintegralpartoftheAdministrationsimplementationpolicies.22c.Evaluatetheeffectivenessofthisagreementbycomparingthemarginalabatementcostsofthemostplausiblealternativescenariosformeetingthe Kyototargets,giventhewayinwhichthisagreementisstructured,withthemarginal costsofotherreasonablealternativecomplianceschemes.Response:TheKyotoProtocolisa workinprogress,sothatthemostplausiblealternative p scenariosformeetingtheKyoto targetsaredifferentfromthosebasedonareadingoftheProtocolalone.Wehavesaidthatwewillnotsubmitthetreatyforratificationwithoutmeaningfulparticipationbykeydevelopingcountries.Suchparticipation,alongwitheffectiveinternationaltradingofpermitsamongAnnexIcountreiswilllowercostssubstantially.Theeffectofsuchparticipation,andoftradingamongAnnexIcountriesisoutlineintestimony,andinTablexxoftheTechnicalSupportDocument.22d.Withrespecttoeachscenariothatisanalyzed,identifytheassumptionsused,explainanyuncertaintiesconcerningtheassumptions,andexaminethesensitivityofneteffectstothedifferentcompliancestrategies,usingarangeofplausibleassumptionsaboutfutureeconomicdevelopmentandaboutfundamentalclimateprocesses.ResponsePleaseseethemethodssectionoftheTechnicalSupportDocument. l)#& 22e.EvaluatetheopportunitycostsofpursuingtheAdministrationsstrategyfortheabatementofgreenhousegasemissionsunderthetermsofthetreaty; 0,%) Response:AstheProtocolisaworkinprogressitsopportunitycostscannotbeevaluated d withoutalsoconsideringtheadditionalflexibility initsimplementationthatwillbeachievedastheresultofcontinuedU.S.effortsinongoing diplomaticdiscussions.TheopportunitycostsoftheProtocolandtheAdministrationspoliciestoimplementareextensivelydiscussedinpriortestimonybyDr.JanetYellen,andinthe TechnicalSupportDocument.and22f.Evaluatehowthebenefitsandburdensofcomplyingwith thistreatywouldbedistributedonthenationalandhouseholdlevels,describing,amongotherthings,thedisparateregionalandindustrialimpacts,andtheeffectsondifferentincomelevels.ResponseWedonothaveestimatesofthedistributionofimpactsacrossregionsorindustries, t withtheexceptionofsomeinformationonthecoalsector,whichisdiscussedbrieflyintheTechnicalSupprotdocument.23a.Inevaluatingalternativescenarios,please examinethefollowing.23b.Comparetheeconomicandenvironmentaleffectsofnotincludingdevelopingcountriesintheefforttoreduceglobalemissions(withthepotentialforbindingdevelopedcountriestoevengreaterobligations,withoutlimitingdevelopingcountriesatall)againsttheeffectsofaddressinggreenhousegasmitigationonaglobalscalebythei nternationalcommunity.ResponseClimatechangeisaglobalproblem,sopolicyapproachese ncompassingmore 4 countrieswilllikelybebothmoreeffectiveandmorecosteffectivetha napproachesinvolvingonlyafewcountries.Includingdevelopingcountrieswilllowercost sandpermitpricessubstantiallybecauseofthemanylowcostabatementopportunitiesinthe secountries.EstimatesfromtheBatelleLaboratorysSecondGenerationModel,whichareinl inewithothermodels

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suggestthatdevelopingcountryparticipationw

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lowerpermitpricesby25tonearly60percent
,
relativetoascenarioinwhichpermitsaretradedonlyamongAnnexIcountries.Thelowerestimatereflectsparticipationintheformofthe CleanDevelopmentMechanism,whilethehigher oneassumesthatdevelopingcountries
will
accepttargetsandtradepermitsinternationally.***

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RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:15-MAY-1998 13:22:12.00

SUBJECT: McIntosh questions

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

TEXT:
fyi.
---------------------- Forwarded by Joseph E. Aldy/CEA/EOP on 05/15/98
01:21 PM ---------------------------

Joseph E. Aldy
05/15/98 01:18:55 PM
Record Type: Record

To: Robert J. Tuccillo/OMB/EOP
cc: Jeffrey A. Frankel/CEA/EOP, Michele Jolin/CEA/EOP, Adele C.
Morris/CEA/EOP, Randall W. Lutter/CEA/EOP
Subject: McIntosh questions

Bob,

Could you run these questions through interagency review today? We would
like a deadline of 5:30pm. Randy or I need to talk to you about the
technical support document as well. Thanks,

Joe

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

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D80]MAIL470756438.126 to ASCII,
The following is a HEX DUMP:

Draft Answers to March 13 Questions To CEA
from Representative McIntosh
Chair of the House Subcommittee
on National Economic Growth, Natural Resources, and Regulatory Affairs

A. Budget Information and Performance Measures

1. Please provide a table with Fiscal Year (FY) 89-FY 99 historical budget authority for your agency for the various components of the President's "Climate Change Technology Initiative," including the previous "Climate Change Action Program/Plan" and any other new or previously authorized Research and Development (R&D) herein (except for the U.S. Global Change Research Program included in Question 3 below). For each component, please indicate each specific budget account, the specific legislative authority (including the specific statute, the section citation, and the language of the section) for the program, and a brief description of the program.

Response. The Council of Economic Advisers (CEA) has no historical budget authority for any component of the President's Climate Change Technology Initiative, the Climate Change Action Plan, or any other new or previously authorized R&D program.

2. In Section 2 ("Programmatic Details") of OMB's February 2, 1998 handout, "Climate Change Technology Initiative - 1999 Budget Briefing Materials," please provide the following information associated with each paragraph description in which your agency has been funded or is requesting funding: the associated funding in FY 97, FY 98, and FY 99. Also, for each paragraph, for the requested funding for FY99, please provide evidence of any accomplishments from the FY93-FY 97 funding, if any. Lastly, for each paragraph, and for each agency, please indicate any program performance measures for the requested funding and, for each such measure, please provide annual data for the 1990 base year and annual data for most recent three-year period for which data are available.

Response. The CEA has not been funded or requested funding for programs associated with the Climate Change Technology Initiative.

3. Please provide a table with FY89-FY99 historical budget authority for your agency for the various components of the "U.S. Global Change Research Program" which were or are devoted exclusively to climate change R&D. For each component, please indicate each specific budget account, the specific legislative authority (including the specific statute, the section citation, and the language of the section), and a brief description of the program.

- If funded in any of FY 93- FY97 please provide evidence of any accomplishments from these dollars. Also, for requested funding in FY99, please indicate any program performance measures for the requested funding, and, for each such measure, please provide data for the 1990 base year and annual data for the most recent three-year period for which data are available.

Response. The Council of Economic Advisers (CEA) has no authority for any component of the U.S. Global Change Research Program.

4. Please provide a table with FY89-FY99 historical budget authority for your agency for any other components of the Administration's climate change program (i.e., in addition to those included in answers to questions 1 and 2). For each component, please indicate each specific budget account, the specific legislative authority (including the specific statue, the section citation, and the language of the section), and a brief description of the program.

Response. The CEA has not had historical budget authority for any specific components of the Administration's climate change program. We do, however, devote normal staff time to participating in the Administration's climate change policy development process.

5. For the FY 99 request, please provide a table showing what part is funding to continue initiatives funded in FY 98 or prior years and what part is brand new activity. For each component, please indicate each specific budget account, the specific legislative authority (including the specific statue, the section citation, and the language of the section), and a brief description of the program. For each brand new activity, please indicate expected requested funding annually through FY03.

Response. The CEA did not make a climate change program-related FY99 request, has no prior and new initiatives, and anticipates none through FY03.

6. Please identify the full set of your agency-specific performance measures for the Administration's Climate Change proposal (besides those indicated in response to questions 2 and 3), including data for at least the 1990 base year, FY97, FY98, and FY99. Also, please identify how any of your agency-specific measures (including those in response to questions 2 and 3) relate to those for any other Federal agency. Lastly, please describe any interagency efforts to identify and relate the entire set of climate change performance measures, including which agencies are involved and the names of the agency representatives.

Response. The CEA has no agency-specific climate change performance measures, nor are we aware of specific interagency efforts to identify and relate such performance measures.

7. Please provide a table for FY 93- FY 97 identifying all assistance (including grants, cooperative agreements, and other transactions) and contract awards to non-profit and for-profit organizations for any climate change activity, including the date, amount of the award, name of the organization, purpose of the award, and a summary of any result(s) from the award. Please provide a copy of any final report from these awards.

Response. The CEA has made no grants or awards for FY 93- FY 97 any climate change activity. It did however, provide $xx to Dr. Michael Toman of Resources for the Future, for consulting services on a variety of environmental economic issues including climate change.

B. Economic, Policy and Legal Analyses

8. Since January 1993, has your agency participated in any interagency effort(s) relating to climate change in any of the following areas: (a) review of current legislation and/or the need for any new legislation; (b) review of current rules, and needed revisions to current rules, and/or any needed new rules; (c) production or review of any environmental data and/or analyses; (d) production or review of any cost-benefit data or analyses; and/or (e) production or review of any economic data and/or economic analysis? If so, please identify the interagency effort, its member agencies, its membership not only from your agency but also from other Federal agencies and/or any non-Federal parties, all drafts and analyses from the efforts(s) and any comments from your agency on any drafts.

Response. The CEA has participated in numerous interagency processes related to climate change policy since January 1993. Most of these processes have been quite informal and have involved a variety of interested Federal agencies, including the Office of Science and Technology Policy (OSTP), the Council on Environmental Quality (CEQ), the National Economic Council (NEC), the Department of Treasury, the Environmental Protection Agency (EPA), the Department of Energy (DOE), the Department of State, the Department of Commerce (DOC), the U.S. Agency for International Development (USAID), the Department of Agriculture (USDA), and in some cases the Department of Transportation (DOT) and the Department of Defense (DOD). Many of the interagency discussions have been co-chaired by State and CEQ, who would be the best sources of information as to the composition of the interagency efforts and the particular staff involved.

Almost all CEA economists are employed in temporary positions most often lasting one year, but anywhere from a few months to two or three years. None of the CEA economists now working on climate change was employed by CEA before 1996 so except for the most recent activities we cannot know for sure exactly which interagency efforts were conducted and joined by CEA staff.

Current CEA staff who have contributed to interagency work on climate change include:

Chair:	Dr. Janet Yellen
Member:	Dr. Jeffrey Frankel
Staff:	Joe Aldy
	Michele Jolin
	Randall Lutter
	Adele Morris

Other former CEA Members and Staff who may have worked on climate change while at CEA include:

former Chair Dr. Joe Stiglitz
former Member Dr. Alicia Munnell
former Staff:

- Howard Gruenspecht
- Sally Kane
- Alan Krupnick
- Mark Mazur
- Peter Orszag
- Ray Prince
- Jay Shogren
- Ray Squitieri
- Michael Toman
- Thomas Rhoads
- Cristian Santesteban

One notable, slightly more formalized, interagency effort to analyze climate change policy was the Interagency Analytical Team (IAT), which endeavored to evaluate alternative climate policies through a variety of modeling and other analytical exercises. CEA staff participated in the IAT effort.

Another process to which CEA contributed was the 1994 policy dialogue to recommend options for reducing greenhouse gas emissions from personal motor vehicles, an initiative known as "Car Talk." CEA provided analytical support to members of the Policy Dialogue Advisory Committee. The CEA has also been active on economic issues in which the Intergovernmental Panel on Climate Change (IPCC) and the National Science and Technology Council (NSTC) have been involved. While no current CEA staff serves as an author for IPCC publications, we understand that past staff have done so. Current CEA staff have also been involved in developing the Administration's electricity restructuring proposal. Randall Lutter has been our primary economist on that issue, although several of the staff listed above have taken part in the discussion. One component of the inter-agency discussions on electricity restructuring is the extent to which different policy options would reduce emissions of air pollutants, including greenhouse gas emissions.

White House Counsel has not yet made a determination concerning the document requests we have received. Our documents reflect internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover the documents include material that could influence ongoing negotiations.

9. Has your agency either prepared or reviewed any environmental, cost-benefit, and/or economic data and analyses relating to the White House Initiative on Global Climate Change? If so, please provide a copy of all data, analysis, and any comments by your agency.

Response: The CEA has analyzed the economic effects of the Kyoto Protocol and presented our results in Dr. Janet Yellen's March 5, 1998, testimony before the U.S. Senate Committee on Agriculture, Nutrition, and Forestry. [We also have prepared a supporting document available to the public, which explains in greater detail the analysis we undertook.] If the question is referring to the Climate Change Technology Initiative (CCTI) proposed by the President in for the FY 99 Budget, the CEA has relied on information from DOE, EPA, and others for assessments of those initiatives.

White House Counsel has not yet made a determination concerning the document requests we have received. Our documents reflect internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover the documents include material that could influence ongoing negotiations.

10. Did your agency comment on any of the draft testimony on climate change by Administration witnesses since the President's 1998 State-of-the-Union address? If so, please provide a copy of the draft testimony and any comments by your agency.

Response: CEA has reviewed and commented informally on numerous public statements by various officials regarding climate change policy. Formal written comments have been produced by this office only rarely, but we have more often informally made suggestions as to content or presentation.

White House Counsel has not yet made a determination concerning the document requests we have received. Our documents reflect internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover the documents include material that could influence ongoing negotiations.

11. Has your agency suggested any alternative policy options for climate change? If so, please provide a copy of all drafts and supporting analyses and any comments from other Federal agencies on your alternatives.

Response: The CEA has analyzed numerous alternative policy options for climate change and explored the advantages and disadvantages of various approaches. The CEA has made suggestions as to which policy options would lower the cost of emissions reductions, and many of our suggestions were included in the Kyoto Protocol. The Administration is also pursuing some policies, such as electricity restructuring and basic energy research, that we have advocated on economic grounds even independent of climate concerns.

White House Counsel has not yet made a determination concerning the document requests we have received. Our documents reflect internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover the documents include material that could influence ongoing negotiations.

12. Does your agency plan to revise any existing legislation or propose any new legislation

relating to climate change (including legislation that will have the effect of reducing greenhouse gas emissions whether or not that is the intended purpose of regulatory action)? If so, please identify and describe all such initiatives, including a timetable for their development and submission to Congress. Also, provide any and all legal analyses regarding the applicability and availability of existing legislation to implement the Kyoto Protocol and any comments from other Federal agencies on the analyses.

Response: The CEA is not planning to revise or propose any new legislative initiatives. We have not prepared any legal analyses of the applicability and availability of existing legislation to implement the Kyoto Protocol and have not commented to other Federal agencies on any such analyses.

13. Does your agency plan to revise any existing rules or propose any new rules relating to climate change (including regulatory actions that will have the effect of reducing greenhouse gas emissions whether or not that is the intended purpose of regulatory action)? If so, please identify and describe all such initiatives, including any cost-benefit analyses, and a timetable for their development and promulgation. Also, provide any and all analyses (prepared or considered) of the cumulative effect on the U.S. economy and/or energy system of all or any combination of regulations that were issued since 1992, that were proposed, and that are being developed that have or will have such effects.

Response: The CEA is not planning to revise or propose any new regulations relating to climate change. We have considered during its preparation and interagency review, the analysis of all Federal regulations prepared by the Office of Management and Budget last year in response to the Stevens Amendment, Section 645 of the Treasury, Postal Services and General Government Appropriations Act 1997 (P.L. 104-208). This analysis, dated September 30, 1997, is entitled "Report to Congress on the Costs and Benefits of Federal Regulations", and was forwarded to Congress last fall. We also have documents relating to various previously promulgated regulations that would have the effect of improving fuel economy.

White House Counsel has not yet made a determination concerning the document requests we have received. Our documents reflect internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover the documents include material that could influence ongoing negotiations.

14. Has your agency participated in discussions or reviewed any documents relating to international emissions trading, joint implementation, and/or the Clean Development Mechanism? If so, please provide a copy of all drafts and any comments provided by your agency.

Response: The CEA has taken interest in the discussions of the flexibility mechanisms in the Kyoto Protocol, and has reviewed and commented on numerous drafts related to international emissions trading, joint implementation and the clean development mechanism. We believe these sources of flexibility will reduce the cost to the U.S. of meeting the Kyoto targets.

[CEA is making available all documents, comments, data, and analyses that have been maintained in CEA files that involve climate change-related interagency work.]

C. Dr. Yellen's Testimony before the House Commerce Committee on March 4, 1998

15. Please provide any and all analyses that support the Administration's conclusion that impacts on the U.S. economy of complying with the terms of the Kyoto Protocol are likely to be "modest".

Response: Our testimony concluded that the net costs of our policies to reduce emissions are likely to be small, assuming those reductions are undertaken in an efficient manner and we are successful in securing meaningful developing country participation as well as effective international trading, and the Clean Development Mechanism in future negotiations. In the Technical Support Document the analyses supporting this conclusion are presented.

15. Continued. Also, explain fully how the Administration can make such a forecast responsibly when as Dr. Yellen stated, "it is not yet possible to provide a full authoritative analysis of the Kyoto Protocol." Among other things, Dr. Yellen noted that there is still "much that we do not know" because much has been left unresolved by this treaty (for example, implementation issues, the rules and procedures governing international emissions trading, joint implementation projects, and the Clean Development Mechanism, and future emissions reduction obligations). Moreover, Dr. Yellen asserted that to her knowledge, "no [economic] model --whether used inside the government or not --has yet been set up to analyze the implications of the Kyoto Protocol, since this agreement is only a few months old. ."

Response: Policy decisions and public statements often need to be made based on the best information available at the time, even though thorough economic analysis of the scholarly sort takes longer.

As previously stated in testimony, the Kyoto Protocol is a work in progress; it is incomplete. There remains uncertainty about the ultimate nature of international permit trading pursuant to the Kyoto Protocol, and the timing and nature of developing country participation. However, there should be no uncertainty about the Administration's firm commitment to achieve effective international permit trading, and meaningful participation by key developing countries. The Administration's conclusion, and the supporting but illustrative numerical estimates, are based on our policies to implement the Kyoto Protocol cost-effectively as well as on the Protocol itself.

16. Please provide any and all analyses that support the following estimates:

a. U.S. electricity restructuring "will offer approximately $20 billion in cost savings".

Response: The derivation of this estimate is explained in the Technical Support Document in the section entitled potential electricity restructuring cost-savings.

b. Emissions trading among the Annex I countries "can reduce the cost to the United States of achieving its targets for 2008-2012 emissions by about half."

Response: Please see the section on the effects of climate change policy on the U.S. in the Technical Support Document.

c. Emissions trading among a subset of Annex I countries (for example, the United States, Australia, Canada, New Zealand, and Russia) "can reduce costs by an estimated 60-70 percent."

Response: This statement is based on the section on the effects of climate change policy on the U.S. in the Technical Support Document.

Also, based on the estimates presented in Janet Yellen's testimony, please explain and fully document how more limited trading among this subset of countries would produce greater cost reductions than from either trading among all Annex I countries or trading with the full participation of Non-Annex I countries

Response: The market clearing price for greenhouse gas permits in an international trading system results from the supply and demand for internationally traded permits. If a country that is expected to be a seller decides not to sell, then the actual supply falls, and the permit price and associated costs increase. If a country that is expected to be a buyer decides not to buy, then demand falls, and the permit price and associated costs fall. In the case of trading under the Kyoto Protocol, both the U.S. and the European Union are projected by many economic models to be buyers. If the European Union decides not to participate in international trading, then the demand for permits on the international market would decline, and the permit price and costs would fall, thereby benefiting countries that continue to buy permits internationally.

d. The Clean Development Mechanism "might shave costs by roughly another 20 to 25 percent".

Response: The Clean Development Mechanism is included in the Kyoto Protocol, although the details about how it would work have still to be negotiated by the parties to the Protocol. The Administration's policy is that the details of the CDM should ensure that it becomes a cost-effective way to allow developed country firms to give financing and technical assistance for projects to lower emissions and to receive credit for the reductions. Our best professional judgment, based on discussions with a variety of informed analysts, is CDM could achieve 20 percent of the emissions reductions available under full global trading. The statement that costs would fall by roughly another 20 to 25 percent is based on the SGM results given this assumption, and is further explained in the Technical Support Document.

e. Overall costs "would reach roughly one-tenth of one percent of projected GDP in 2010" (resource costs of achieving Kyoto targets for emissions reductions were estimated to be $7 to $12 billion per year in 2008 to 2012).

Response: The forecasted changes in GDP were taken from the SGM model output. Please see the section on the effects of climate change policy on the U.S. in the attached Technical Support Document for a brief summary.

Also, please explain how it is possible that compliance with the Kyoto Protocol, which has been projected by independent economists to be the most expensive environmental undertaking ever, could cost less than compliance with the recently issued U.S. air quality rules for particulate matter and ozone (the final Regulatory Impact Analysis for those rules estimated costs of $46 billion).

Response: As mentioned in the testimony, independent economists have generally not estimated costs taking into account the specific attributes of the Kyoto agreement and the Administration's policy to implement it. In particular they have omitted the cost savings likely to result from international permit trading, from the Clean Development Mechanism, meaningful participation by key developing countries, trading across six categories of greenhouse gases, and the flexibility by including carbon sinks. This omission raises their cost estimates.

There is no particular reason why the costs of the Kyoto Protocol should have any particular relation to the costs of the recently promulgated air quality standards. Climate change policy might, for example, have the side-benefit of improving our terms of trade vis-a-vis oil-exporting countries. We believe that careful estimates of the costs of the Kyoto Protocol and the Administration's Implementation policy will be substantially less than $46 billion per year, and indeed close to the illustrative numbers we have presented earlier.

f. The assumption that the rate of improvement in energy efficiency (AEEI) will be 1.0 percent per year (which is greater than that assumed by the EIA).

Response: This number is only very slightly higher than the AEEI estimate of the Energy Information Agency. The increment can be viewed as a modest allowance for the effects of intensified research and development, technology dissemination, and cooperative government-business partnerships. We also note that Battelle's SGM model is typically run with a default value for the AEEI of 1.0.

In particular, please reconcile this assumption with the statement of the CEA in its 1998 Annual Report that "[u]ntil an emissions cap and trading system are in place, however, the economic incentive to use [technologies supported by the Administration's budget] may be low."

Response: No reconciliation is needed. The comment from the 1998 ERP implies simply that in the absence of a cap and trade system that would lower the price of using carbon-lean technologies relative to carbon-rich technologies, the incentives to adopt such carbon-lean technologies will be less than in a world with the target and trade system in place. Moreover, the AEEI represents the autonomous rate of technological improvement, i.e., the rate that would occur in the absence of price changes that the target and trade system might lead to, due merely to the greater availability of new technologies. Thus its value is a comment on the extent of one's technological optimism, and not about optimism of private parties to respond to price incentives.

Is the Administration assuming that such a system will be put into place in the short-run?

Response: No, the Administration's position on the timing of a target and trade system has not changed since last fall. The Administration then maintained that the system would be established with the benefit of 10 years of additional experience with similar market based mechanisms.

g. The estimated effect on energy prices will range from $14 to $23 per ton of carbon equivalent.

Please see the section of the Technical Support Document that describes the effects of climate change policy on the U.S.

h. "In energy-intensive sectors some employment reduction could occur, although given the very small predicted change in energy prices, impacts in most such sectors are apt to be minimal Furthermore, a large number of jobs will be created in other sectors -many of them high-tech jobs paying high wages."

Response Very standard economic analysis says that in the long run, total employment is determined by the size of the labor force, incentives to work, and the productivity of labor. Changes in prices -- such as result from developments in technology, trade, energy markets, or many other areas -- tend to have their effects on the composition of employment across sectors, more than on total employment.

As explained in testimony and in the Technical Support Document, the energy price changes expected to result from the Kyoto protocol and the Administration's implementation policies under the assumptions elsewhere identified, are likely to be modest. In particular, these price changes over the next decade are less than the average of year-to-year absolute price changes observed since 1960. Thus there is little reason to believe there will be large changes in employment even in the energy-intensive sectors. In the less energy-intensive sectors, there is no reason to expect any decline in employment at all. Most economic models would not predict changes in the overall level of employment resulting from such small energy price changes 10 years in the future.

The U.S. has a strong competitive advantage in a variety of high-tech sectors. Recent innovations in battery technology, and in fuel cells were announced by U.S. companies. These innovations, and future ones expected from U.S. companies, will be in demand world-wide. The growth in associated production is likely to lead to growth in high-wage jobs in this country.

I. As to each analysis, please indicate who prepared the analysis and provide records of comments from other federal agencies.

Response: All of the analysis for our testimony on climate change was prepared by CEA staff under the direction of the Members of the Council, with the collaboration of staff at several other government agencies. CEA staff who have worked on climate change

Joe Aldy
Zach Candelario
Daniel Chang
Keith Fuglie
Randall Lutter
Adele Morris

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17. Please provide any and all analyses that support the Administration's estimate that benefits relating to traffic congestion, highway accidents, and air pollution unrelated to climate change "could offset approximately a quarter of the resource cost of the climate change policy."

Response This analysis is summarized in the section of the Technical Support Document describing ancillary benefits.

White House Counsel has not yet made a determination concerning the document requests we have received. Our documents reflect internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover the documents include material that could influence ongoing negotiations.

As to each analysis, please indicate who prepared the analysis and provide all records of comments from other federal agencies.

Response Randall Lutter on our staff, with the assistance of Treasury's Office of Economic Policy, and EPA's Office of Policy Planning and Evaluation prepared the analysis.

18a. In her testimony, Dr. Yellen stated that, in evaluating the "likely net economic impact of the Kyoto Protocol," the Administration has "drawn upon a broad array of analytical tools", and a "wide range of models of the energy sector and economy over the next 25 years" to assess the various possible costs and non-climate benefits of the Administration's emissions reduction policy. Please specify all of the models and analytical tools that the Administration has used and describe in detail their strengths and weaknesses.

Response: As explained in the testimony, the existence of modeling difficulties means that we should treat any model results with the caution that is warranted -- not that we should abandon rigorous economic analysis. We have employed a broad set of economic tools to analyze the policy options. Such tools include models of the energy sector and economy over the next 25 years, including but not limited to the results of the Stanford Energy Modeling Forum exercises, the IPCC's review of the economic and social dimensions of climate change, and the staff-level Interagency Analytical Team effort last year. Other tools include simple relevant statistics, "meta-analyses" of existing models (such as that undertaken by Robert Repetto and Duncan Austin of Resources for the Future), historical and sectoral examples, univariate and multivariate regression analysis, simulations, Hotelling-type theoretical models, CEA staff econometric forecasts of emissions in developing countries, stylized models of perfect competition and monopoly, basic economic reasoning and the various other sorts of theoretical and empirical tools of analysis that abound in the scholarly literature. Drawing on this broad array of analytical tools allowed an intelligent evaluation of the policy alternatives.

We have considered and evaluated the following specific large econometric and computable general equilibrium models of the economics of climate change mitigation: Second Generation Model, G-cubed, MERGE, and DICE. We have also been exposed to results from many other models, such as GREEN, DRI, Markal Macro, Megabare, EPPA, FUND, MiniCAM, CETA, RIVM, and CETM/MRT.

18b. According to the testimony, the Administration has relied particularly on the Second Generation Model of Battelle Laboratories for many of its estimates. However, the IAT report indicated that the SGM model "focusses on long-term transitions and measures the economy in 5 year intervals," so that it risks racing past short-term transition issues, such as GDP loss and impacts on specific industries.

Specify all of the Administration's estimates that were derived from this model.

Response The Administration used this model's estimates as one of several inputs in its calculations of likely permit prices and resource costs for the different trading scenarios. Refer to the methodology section in the Technical Support Document. Information of the marginal abatement cost curves of non carbon greenhouse gases was missing from the SGM output and added to reflect provisions in the Protocol. Numerical estimates of expenditure changes and ancillary benefits used estimates of likely permit prices or emissions reductions as inputs.

Also, indicate why many of the Administration's key estimates were derived from this model.

Response: Each model has strengths and weaknesses; each has questions to which it is better or worse suited to answer. Some, for example, model the energy sector in detail. Some allow for the fact that a coal-fired power plant cannot costlessly be converted to one that runs on natural gas. Some have enough policy detail to distinguish alternative ways of redistributing revenues that would result if emission permits were to be auctioned. Some are capable of showing short-term macroeconomic disequilibria. Some include a long-term "carbon cycle" model that can keep track of the accumulation of greenhouse gas concentrations in the atmosphere and their climatological effects. Some break down the rest of the world into regions and so can model international trade. No one model does everything, and therefore we must not rely blindly on the results of any one model or set of models. Professional judgement and economic intuition are also crucial.

The SGM model, unlike many economic models of climate change, has an explicit model of emissions reductions in other countries, and so is exceptionally well suited for estimating emissions permit prices given international trade in permits. In addition, it has modules reflecting several major developing countries and data on all other developing countries as a group. Thus it is well suited to address the effects of developing country participation on permit prices. Finally, the timely availability of sufficient information about a variety of SGM model runs made its use practical between the time the Kyoto protocol was developed in December 1997 and our first testimony in March 1998.

Finally, please identify the corresponding estimates derived from each model that the Administration has used in assessing the impacts of the Kyoto Protocol.

Response: The development of corresponding estimates is a complicated technical task that is beyond the abilities of our small staff to complete in timely manner. We expect that the Energy Modeling Forum will continue to produce comparisons of various climate change models' forecasts of the effects of the Kyoto Protocol. Although some of these models have not yet incorporated the 5 categories of non-CO2 gases directly into their models, these comparisons should provide a full comparison of the SGM predictions with those of other models.

19. What are the 1990 baseline, the Fiscal Year 1997, 1998 and 1999, data, and the annual outyear estimates until 2012 for the following outcome performance measures mentioned in Dr. Yellen's testimony: morbidity rates for some diseases, mortality rates for some causes, monetary damages from temperature increase, consequences from some catastrophes, traffic congestion, highway accidents, and air pollution unrelated to climate change.

> The Technical Support Document provides baseline data for traffic congestion, highway accidents, and air pollution unrelated to climate change. These data are for 2010, or for 1995, if more recent data do not exist, and no published 2010 forecasts were available. For these data we have no information of outcome performance measures for the Fiscal Years requested, or for year-by-year estimates through 2012.

20. Why does the Administration maintain that the U.S. acid rain program experience "clearly demonstrates how programs like international permit trading, joint implementation and the Clean Development Mechanism will lead firms to find cheaper ways of reducing emissions that can lead to unexpectedly low costs"?

> Emissions trading programs, by providing continuous economic incentives to reduce emissions further, generally lead costs to be much lower than would be the case under a variety of more prescriptive regulatory approaches.

Why does the Administration believe that it is appropriate to extrapolate from that experience to the global arena.

> The basic principle that there are gains from the ability to trade is of quite wide applicability. Indeed the textbook theory of gains from trade is perhaps most familiar and well-established at the international level. Economic incentives generally have similar effects in different countries and cultures: people everywhere are interested in higher incomes. International permit markets will lower compliance costs in all participating countries, because they provide financial incentives for sources to reduce emissions. These incentives will have the effect of lowering the costs of emissions cuts relative to what would be the case without any trading of emissions permits.

Won't the effectiveness of the international system, joint implementation, and the Clean Development Mechanism depend on different factors, such as the rules and procedures governing these mechanisms, the extent of participation by other countries, including developing countries?

> Yes. The importance of effective trading rules, and rules on joint implementation and the CDM is the reason the Administration is asking other parties to the Protocol that they support regulations that will lead to effective and successful trading, JI and CDM.

21a. In her testimony, Dr. Yellen stated that part of doing it smart (i.e., lowering the costs of reducing greenhouse gas emissions) under the Kyoto Protocol means "taking serious and responsible steps in the short-run to prepare us to meet our obligations in the longer-term." She indicated that these steps include a $6.3 billion program of tax cuts and R&D investments, industry-by-industry consultations to prepare emission reduction plans in key industrial sectors, and legislation to restructure the electrical industry. Under what authority is the Administration pursuing this unilateral executive branch course of action in furtherance of the treaty's emissions reductions targets and without Senate Ratification?

<u>Response:</u> The $6.3 billion in tax cuts and R&D investments is a proposal made to Congress as part of the annual Administration budget prepared under the authority of the _____. The

industry-by-industry consultations do not require express legislative authority because they are discussing only voluntary emissions cuts that industries might make. The industries in question are sufficiently concerned about their roles in fostering climate change that they believe they should take voluntary measures.
21b. If the Administration is delaying the submission of the treaty to the Senate until it obtains meaningful participation by developing countries, doesn't that decision also require the Administration to delay any unilateral executive branch action to address global warming until that cooperation is forthcoming.

Response: The Administration is not embarking on unilateral Executive Branch action to implement the Kyoto Protocol without ratification. To the contrary, steps to ensure compliance with the Protocol's requirements will be undertaken only with the full advice and consent of the Senate. However, the Administration is pursuing a variety of policies that make good sense even independent of concerns about climate change and that have the additional desirable property of reducing greenhouse gas concentrations. Examples of such policies include the CCTI. These polices all reduce energy consumption, and thereby reduce dependence on foreign oil and emissions of air pollutants unrelated to climate change, policy goals that have enjoyed bipartisan support for many years. The fact that these policies reduce carbon emissions should also be a shared policy goal, because in 1992 the Rio Treaty adopted by the Bush Administration and ratified by the Senate required the U.S. to take unilateral voluntary steps to return its emissions levels to 1990 levels.

c. Given that the Kyoto Protocol seeks to address a global issue, isn't [it] harmful to U.S. interests to proceed without the full participation of developing countries.

Response: The President has said that he will not submit the treaty for Senate ratification without meaningful participation by developing countries. We do not believe that the other actions identified above are harmful to U.S. interests.

d. Besides being unconstitutional, isn't it also premature and harmful to U.S. interests to take such unilateral actions, without ratification, when the Administration has characterized the Protocol as a "work in progress" a Protocol that is not yet fully complete nor ready for the President's submission to the Senate?

Response: No. First, as explained above, these actions have independent policy merit apart from their implications for greenhouse gas emissions. The Administration is subject to a variety of pressures from other countries. One concern often expressed is wether the U.S. is serious about reducing emissions.

D. Cost/Benefit Analysis of the Kyoto Treaty

22a. Please provide any and all analyses that the Administration or any federal agency prepared

(or had prepared) or is preparing (or is having prepared) of the costs and benefits of imposing on the U.S. the binding targets and timetables set forth in the Kyoto Protocol for reducing greenhouse gas emissions, taking into account the global implications of the way in which this agreement is structured.
Response: The Technical Support Document provides additional detailed information about the economic analysis of the Kyoto Protocol. A key area that we have not pursued in our analysis, however, is the climate benefits of the Protocol. These benefits are exceptionally difficult to quantify because climate change raises the risk of large-scale irreversible catastrophic events like displacement of ocean currents, and the release of methane from the warming of Arctic permafrost. In addition, the quantification of climate change benefits is quite dependent on the choice of discount rate, which for periods as long as a century is the subject of ongoing professional debate. More importantly, however, the Kyoto Protocol is just a first step in addressing climate change. Further steps will entail additional cuts in emissions in years beyond 2012, and uncertainty about the magnitude of these precludes meaningful analysis about the effects of the Kyoto agreement itself on climate.

Also please analyze and document the following:

22b. Whether the benefits of implementing this Protocol are justified by the costs.

Response: We have not quantified the benefits of this Protocol because it is only the first step towards controlling carbon concentrations in the atmosphere; emissions limits in years beyond 2012 have not been proposed or negotiated. In addition, estimating the value of these benefits in monetary terms is exceptionally difficult because of their complexity and uncertainty. There is also disagreement within the economics profession about how to account in benefit-cost analyses for the fact that climate change damages will occur in the relatively distant future.

Notwithstanding these analytic difficulties it is apparent that climate change if left unchecked will pose a substantial threat to climate on our only planet. Therefore we believe that the benefits of this Protocol justify its costs, given that these will be modest as a result of the flexibility provisions that are included in the Protocol and those that form an integral part of the Administration's implementation policies.

22c. Evaluate the effectiveness of this agreement by comparing the marginal abatement costs of the most plausible alternative scenarios for meeting the Kyoto targets, given the way in which this agreement is structured, with the marginal costs of other reasonable alternative compliance schemes.

Response: The Kyoto Protocol is a work in progress, so that the most plausible alternative scenarios for meeting the Kyoto targets are different from those based on a reading of the Protocol alone. The Administration has said that it will not submit the treaty for ratification without meaningful participation by key developing countries. Such participation, along with effective international trading of permits among Annex I countries would lower costs substantially. The effect of such participation, and of trading among Annex I countries is outlined in testimony, and described in detail in the results section of the Technical Support Document.

22d. With respect to each scenario that is analyzed, identify the assumptions used, explain any uncertainties concerning the assumptions, and examine the sensitivity of net effects to the different compliance strategies, using a range of plausible assumptions about future economic development and about fundamental climate processes.

Response: Please see the methodology section of the Technical Support Document.

22e. Evaluate the opportunity costs of pursuing the Administration's strategy for the abatement of greenhouse gas emissions under the terms of the treaty;

Response: As the Protocol is a work in progress its opportunity costs can not be evaluated without also considering the additional flexibility in its implementation that will be achieved as the result of continued U.S. efforts in ongoing diplomatic discussions. The opportunity costs of the Protocol and the Administration's policies to implement are extensively discussed in prior testimony by Dr. Janet Yellen, and in the Technical Support Document.

22f. Evaluate how the benefits and burdens of complying with this treaty would be distributed on the national and household levels, describing, among other things, the disparate regional and industrial impacts, and the effects on different income levels.

Response: We do not have estimates of the distribution of impacts across regions or industries, with the exception of some information on coal sector production, which is discussed briefly in the Technical Support Document.

23a. In evaluating alternative scenarios, please examine the following.

23b. Compare the economic and environmental effects of not including developing countries in the effort to reduce global emissions (with the potential for binding developed countries to even greater obligations, without limiting developing countries at all) against the effects of addressing greenhouse gas mitigation on a global scale by the international community.

Response: Climate change is a global problem, so policy approaches encompassing more countries will likely be both more effective and more cost-effective than approaches involving only a few countries. Including developing countries will lower costs and permit prices substantially because of the many low-cost abatement opportunities in these countries. Estimates from the Battelle Laboratory's Second Generation Model, which are in line with other models, suggest that developing country participation through the Clean Development Mechanism could lower costs by 20 to 25 percent, relative to scenarios in which permits are traded among all or a subset of Annex I countries. The model suggests that developing country participation through adopting emissions targets and participating in international permit markets could lower costs by nearly 60 percent.

23c. Compare the economic and environmental effects of complying with the timeframes set forth in the Kyoto Protocol with the effects of complying over longer time periods.

Response: We have conducted no analysis of the economic and environmental effects of complying with the Kyoto Protocol over periods longer than it specifies.

23d. Compare the impacts of reducing greenhouse gas emissions using international emissions trading, joint implementation, and the Clean Development Mechanism with the impacts of relying upon domestic emissions permit trading. In this regard evaluate alternative international trading scenarios: trading only among Annex I countries, trading that extends to a number of key developing countries, and trading in which all countries are fully participating.

Response: Please see the results section of the Technical Support Document.

24. With respect to any analysis provided, please identify and explain the basis for assumptions used regarding such factors as the rate of improvement in energy efficiency, the effectiveness of market incentives in increasing the market share of fuels that emit less carbon, and economic and demographic growth. Also, explain fully any assumptions on how emissions reductions will be achieved as, for example, through the early retirement of coal plants or nuclear plant life extensions.

Response: In developing the illustrative estimates using the SGM model we have used an autonomous energy efficiency index of 1.0, and baseline assumptions of the SGM model. Within this analysis, we have no particular information on the early retirement of coal plants or nuclear plant life extensions although information about the use of energy from these sectors is summarized in the Technical Support Document. Such use can change with differences in the intensity of use of existing capacity, as well as with retirement or life extensions of existing plants.

25. In considering the opportunity costs, evaluate the extent to which the Administration's climate change strategy will require the diversion of funds from savings and/or investments which would have provided other benefits, such as saving social security, or more funding for education, health care, etc.

Response: The resource costs that are described in Dr. Yellen's testimony reflect the opportunity cost as it is usually understood by economists. The apportionment of these costs to foregone spending, whether on apples and oranges or social security or education, is an unconventional analysis that we have not undertaken.

26. In assessing the impacts on the U.S. of complying with the Kyoto targets and timetables, please explain in detail the potential effects on the following indicators of economic performance: gross domestic product (GDP), per capita GDP, unemployment, income and real wages, trade competitiveness, and energy prices.

Response: The percentage changes in GDP (and per capita GDP) are outlined in prior testimony, and discussed in the results section of the Technical Support Document.

We believe that the employment effects of the Administration's policies to implement Kyoto will not have significant effects on aggregate employment. Over the next ten years, industry and workers will have ample time to adjust to the modest changes in energy prices that we anticipate under the conditions that we have outlined, and that in any event are small relative to the year-to-year changes in energy prices that have been observed since 1960.

We have not assessed the effect of Kyoto on income (except for GDP as a measure of income) and real wages.

Trade competitiveness, unlike the other listed indicators of economic performance, is not a measure that is easily quantified. The testimony, however, discusses the effects of Kyoto on U.S. trade competitiveness.

Percentage changes in energy prices are also discussed in prior testimony.

27. In assessing the benefits of complying with the Kyoto treaty, please evaluate fully the potential offsetting negative effects of exempting developing countries and of "carbon leakage".

Response: Exempting developing countries would amount to a hypothetical departure from the President's policy. The Kyoto Protocol establishes a Clean Development Mechanism whereby firms in Annex I countries such as the United States may undertake projects that reduce emissions in developing countries and receive credit for such reductions. CDM is likely to provide a broad range of cost savings to the U.S., and this conclusion is consistent with our interpretation of SGM model results that suggest that CDM would reduce resource costs by about 20 to 25 percent relative to scenarios in which there is permit trading either among all or a subset of Annex I countries.

28. President Clinton has suggested that the U.S. economy can continue to grow under this agreement. Please indicate at what rate the Administration expects that the economy will continue to grow during the next 10 to 20 years if the treaty is ratified and at what rate it is expected to grow if the treaty is not ratified.

Response: As shown in a figure on GDP in 2010 in the results section of the Technical Support Document, the effect on the GDP growth rate of the Kyoto Protocol and the Administration's implementation policies, given the assumptions that we have elsewhere described, is minimal relative to the anticipated growth in GDP between now and 2010. Under business as usual, the Second Generation Model projects U.S. GDP to grow 2.0859% annually between 1995 and 2010. With a permit price of $14/ton, SGM projects the annual growth rate to be 2.0851%, and under $23/ton, the annual growth rate is projected to be 2.0822%.

29. Have any of the cost-benefit analyses performed by the Administration or any agency been peer-reviewed?

Response: With the exception of the IAT report, and some of the studies by the National Labs, we are unaware of any peer-review of Administration estimates. It is not the policy of the CEA to submit its official analysis for peer review.

30. In connection with these cost-benefit analyses, fully explain how the baseline(s), against which costs and benefits were calculated, was determined.

Response: Please see the Technical Support Document.

31a. Please provide all records of written or oral comments from other agencies on each of the cost-benefit analyses that were performed.

Response: White House Counsel has not yet made a determination concerning the document requests we have received. Our documents reflect internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover the documents include material that could influence ongoing negotiations.

31b. Please provide all records of comments submitted by federal agencies on Dr Yellen's draft testimony about the economics of Kyoto for the hearing before the House Commerce Committee on March 4, 1998.

Response: White House Counsel has not yet made a determination concerning the document requests we have received. Our documents reflect internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover the documents include material that could influence ongoing negotiations.

32a. Given the significant economic costs projected by private sector studies, why did the Administration abandon a year and a half-long effort to develop cost estimates of the President's proposed policies to reduce greenhouse gas emissions?

Response: First, the significant costs projected by private sector studies do not derive from analyses of emissions reduction scenarios that include the whole range of flexible elements that comprise both the Kyoto Protocol and Administration policy. The Interagency Analytical Team work to which the question refers was a modeling effort that produced some useful lessons, but as we found from the peer reviewers' comments, it also suffered from some serious shortcomings. Thus, we are left with a set of parameters and relationships that influence estimates of the impacts. In our view, it is more productive to employ a broad set of economic tools to analyze policy options than to seek to develop a single definitive model.

32b. Please identify any and all private parties that are currently performing economic analyses of the Kyoto treaty or any aspect of it for the Administration. Describe their work and provide all products of their work in draft or final form.

Response: CEA has no list of parties doing economic analysis of the Kyoto Protocol or any aspect of it for the Administration. Several modelers have contracts or cooperative agreements with various agencies, but we have no contract or agreement with any of them to undertake specific analyses for us.

E. International Emissions Trading

33a. Even assuming that effective rules and procedures can be developed for an international emissions trading system and for joint implementation projects and that key developing countries agree to participate, isn't there a real risk that these mechanisms could effect an enormous transfer of wealth and jobs out of this country overseas, especially to the countries of the former Soviet Union, China, India, South Korea, Brazil, and Mexico (i.e. that this system would be essentially a foreign aid program)? Some studies have estimated that more than 50% of our reductions would have to be purchased from other countries.

Response: The Administration is committed to achieving as many cost-effective emissions reductions domestically as possible, and for example has proposed the Climate Change Technology Initiative to stimulate carbon-lean technology development and deployment. At the same time, our analysis does suggest that for the 2008-2012 time frame it makes sense for the U.S. to pursue low-cost emissions reductions abroad, as would happen with the full implementation of an international emissions trading program. The key point is that trading will be economically beneficial to U.S. firms. We expect the Annex B parties of the former Soviet Union and key developing countries will provide significant investment opportunities for U.S. firms to capture gains from emissions trading as those countries restructure and develop their economies. Developing countries will represent the greatest share of new energy, transportation, and building infrastructure investment worldwide in the coming decades, and U.S. firms can help provide clean technologies and financing that will build those economies and markets, help stave off disruptive climate effects, and allow U.S. firms to capitalize on their investments in environmentally superior products and processes.

Our analysis does not suggest that emissions trading will have a significant negative impact on U.S. employment. If anything, the lower costs associated with a comprehensive trading program will help protect American jobs.

33b. Please provide and document estimates of the percentage of U.S. emissions reductions that might have to be purchased from other countries to minimize the costs of reducing emissions and which countries likely would be the beneficiaries.

Response: Our analyses provide illustrative estimates of how emissions trading and other flexibility mechanisms can lower costs, but ascribing with precision the emissions reductions to any particular country is impossible. The trades and emissions reductions undertaken by U.S. firms will depend on a whole host of factors such as the costs (including transactions costs) of emissions reductions in participating countries, the extent to which emissions can be cost-effectively offset through sinks at home and abroad, the role of the six categories of gases, and the development and deployment of climate-friendly technology. Further, the "beneficiaries" of trading would include the United States, particularly U.S. firms, due to the greatly lowered costs of achieving our target.

White House Counsel has not yet made a determination concerning the document requests we have received. Our documents reflect internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover the documents include material that could influence ongoing negotiations.

34a. What real incentive do developing countries have to participate in the international emissions trading system, which would require them to commit to mandatory reductions, when they can transfer emissions reductions credits in connection with joint implementation projects and obtain financing through the Clean Development Mechanism?

Response: Developing countries would experience significant gains from trading in emissions permits. The economic and environmental rationales for a target and trade approach by developing countries include:

- Greater economic benefits to developing countries: With targets at or only slightly below BAU, emissions reductions in developing countries would produce many billions of dollars through the international sale of emission reductions achieved at lower cost than the world price.

- Greater cost savings to the U.S.: Participation by developing countries in international permit markets would greatly lower the costs to the U.S. of meeting its Kyoto target (as CEA testimony showed). In particular, costs would be lower than with trading among only Annex I countries.

- Greater environmental benefits: Developing country targets that are even only slightly below business as usual would lower global emissions relative to a world with only Annex I targets. Further, reducing carbon dioxide emissions generates ancillary air quality benefits through lower particulate matter, sulfur dioxide, and nitrogen oxides emissions.

- Target and trade yields greater benefits than CDM: While the Clean Development Mechanism will likely result in cost savings to the U.S. relative to a world with only Annex I trading, a system including effective target and trade of developing countries' emissions would yield much greater cost savings to the U.S. and greater gains to developing countries than CDM. Trading countries can employ a wide variety of measures to reduce emissions, and need not rely exclusively on project-based reductions. Nor do they always need to establish a baseline against which projects generate reductions. Like other trading parties, developing countries that agree to target and trade would need to follow the rules and guidelines for trading, but are otherwise free to pursue emissions reductions and sequestration in any and all sectors in the way they see fit. The advantage of trading is that they can be compensated for those reductions in a way in which voluntary measures cannot be, and the opportunities are more comprehensive than with CDM alone. Further, target and trade could achieve environmental benefits not achievable by pursuing CDM, which only redistributes emissions geographically.

- The principle of full participation: Other rationales include the long-run benefits of including developing countries into global negotiations, for example, as recognized by the Byrd-Hagel resolution. By establishing participation now, further commitments might be feasible in future periods.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Todd Stern (CN=Todd Stern/OU=WHO/O=EOP [WHO])

CREATION DATE/TIME:16-MAY-1998 08:49:00.00

SUBJECT: Stanford Energy Modelling Forum

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

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

CC: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
Just wanted to follow up on our brief conversation yesterday. As soon as we can get the written results of this latest EMF exercise, let me know. If their models show results with international trading that are close to ours or at least in the ball park -- e.g., ranging from $20-50/ton -- that could be extremely important. I would want to make sure we got that information out -- to the Hill, interested reporters, etc. tds

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:18-MAY-1998 08:38:59.00

SUBJECT: Thursday briefing on China

TO: Jon D. Haveman (CN=Jon D. Haveman/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
We are scheduled to brief the NSC, NEC, State etc. on Thursday on our China trip. Could you prepare some talking points for my use? Also, could I get copies of the various State Department cables summarizing our meetings? They were quite detailed and would be useful in preparation. Attached, also, is a revised version of the China speech. Thanks for all of the help.=================== ATTACHMENT 1 ===================
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D44]MAIL41491373J.126 to ASCII,
The following is a HEX DUMP:

Asia's Challenges

It is a pleasure to be here today. I hope we can spend most of our time this morning in free wheeling discussion of whatever topics you would like. Nevertheless, Mike suggested that I begin with a few remarks on any topic of my choice. A constant temptation for economists in the Administration is to crow about the state of the American economy, which is truly extraordinary. Who could have anticipated, even a few years ago, that we would now enjoy a 4.3% unemployment rate coupled with a 12 month increase in the CPI of just 1.4%? I would like to tell you that I have discovered a convincing explanation of the causes of this remarkable performance, but unfortunately, I have little that is original to offer to a group of experts like those assembled here.

Another topic I decided against discussing in depth is the budget outlook. We are now in the midst of preparing our mid session review and are discovering, once again, that we have underestimated the strength of the economy and the magnitude of tax revenues. But it would probably come as no surprise to those of you here that our MSR is likely to project larger surpluses than we anticipated even a few months ago in our FY 1999 budget. In February, we projected a small (-10) budget deficit; we are now projecting a surplus for 1998, with ever growing surpluses in future years--as far as the eye can see. These surpluses could easily amount to $1.5 trillion over the next decade under current policies. The challenge for the Administration and Congress going forward will be to use those surpluses wisely. Our own view--that not a penny of any surpluses should be touched for any purpose whatever until a solution for the Social Security shortfall has been secured--remains unchanged. We have a golden opportunity, if we can maintain fiscal discipline, to prepare our country for the problems that we know are on the horizon--to fix the leaky roof, in the President's words, while the sun is shining. And we remain determined to do just that.

Instead of discussing our domestic economic situation, I thought I might instead offer a few reflections relating to economic developments in Asia, especially China. This is a topic that is particularly on my mind because last Saturday I returned from a week long trip to China and Hong Kong during which I met with many senior economic officials in the Chinese government including China's new Premier, Zhu Rongji. This trip represents a continuation of an ongoing dialogue between the CEA and the Chinese State Development and Planning Commission and covered a number of topics that the President will discuss during his visit in June. This dialogue was initiated two years ago by the CEA as a reflection of our firm belief in the importance of actively engaging the Chinese in discussions of economic issues as they pursue an ambitious reform agenda. Since 1978, China has enoyed a period of unprecedented growth--probably the most rapid growth enjoyed by any country at any time in history--lifting 200 million people out of abject poverty. By some measures, the absolute size of China's economy is now second only to the US, and if recent growth rates continue, it will not be too long before China's economy will outweigh even the US. My meetings with Chinese leaders convinced me that China understands the responsibilities that go with membership in the community of leading nations and that dialogue and engagement are the best ways to speed China along the path toward policies the West would like to see.

Our visit made crystal clear the enormous challenges facing policymakers in China over the next few years. These challenges stem from the need to accomplish a major restructuring not only of the economic system but also of the government itself. Equally clear and impressive to me, however, was the resolve of the Chinese leadership to carry through with the reform program on an ambitious timetable.

In March of this year, Premier Zhu Rongji detailed Beijing's reform plans for the Chinese economy. A key goal is to substantially modernize and "corporatize" the largest state owned enterprises; before this can be done the social welfare system must be restructured, with responsibilities shifted to the market or local governments, so that state owned enterprises are freed of the obligation to supply housing, medical care and pensions to their workers; Second, there are plans for a total overhaul of the banking system; In the banking sector, the planned reforms include a transition from government directed lending to lending based on conventional commercial practices-- comparable to the practices of banks in the west. And third, there are plans to reorganize and downsize the government. The central government reorganization announced in March trims the number of central government ministries and state commissions from 40 to 29. Media reports indicate that several million workers, including white-collar workers, are likely to lose their jobs. These reforms are intended to create an institutional structure appropriate for a "socialist" market economy, to reduce government interference into enterprise management, to minimize opportunities for corruption, and to lower government costs. With respect to growth, a critical objective is to maintain growth at or above 8 percent per year--a goal that is considered essential to mitigate the unemployment that is certain to be associated with industrial and government restructuring.

The magnitude and ambitiousness of these economic reforms is staggering. Begun in 1978, the process of reform has served to encourage competitive, capitalistic behavior. The vast majority of the Chinese economic system has, however, remained largely centrally planned. The new round of reforms is designed to do away with central planning and to institute what is often referred to as a "socialist market economy" or, alternatively, a "market economy with Chinese features". My current read of this definition is that it implies a relatively free market system in which the government maintains a significant ownership role in much of the productive capacity. The heavy government regulation of the economy will be gradually, in the Chinese tradition, but significantly reduced.

Reform of the beleaguered banking system is a high priority and a technically challenging task. For the last 50 years, a system of directed lending has made the banking sector the primary conduit for funding the thousands of state owned enterprises. As a result, the banking sector is, from a western perspective, overloaded with non-performing loans -- the extent of non-performing loans is generally thought to be 20-25 percent of total bank lending -- and is ill equipped to carry out its current mandate to make lending decisions based on conventional commercial banking principles. Not only do bankers lack expertise, but also existing accounting systems are too primitive to provide adequate evidence concerning the risks associated with individual loans.

In January of this year, the extent of lending directed by the government was significantly reduced and banks were given wide discretion to lend on a commercial basis. (A bond issue has also been announced to recapitalize the system.) Although many observers anticipated that the bank managers would dramatically increase the volume of lending, quite the opposite occurred. During the first three months of this year, lending was much reduced relative to past levels. One hypothesis that I find fairly compelling, is that the loan officers had great difficulty in discerning good loans from bad loans and have taken a relatively conservative approach. This inability may arise from a lack of expertise -- as these banks not generally been engaged in commercial banking as we know it, and hence may simply not have known what criterion to employ, or how to employ them -- or it may be because the information provided by potential borrowers was simply insufficient for evaluating the risks associated with a particular loan -- particularly since many of the businesses applying for loans may not until recently have had profit maximization as their primary raison d'etre. [The scope for employing monetary policy to stimulate the economy is minimal given this situation.]

Reform of state owned enterprises may well present the most ambitious aspect of the program. These enterprises now account for just 40 percent of industrial output, but they are still the most important provider of better paying urban jobs. However, over 40 percent of these enterprises reported losses in 1997. The reform strategy has been described as "keep the large and let go of the small." In this approach, the central government focuses its support and supervision on a limited number, 512, of the largest enterprises. The remaining 90,000 smaller industrial enterprises will be reformed through a variety of means including mergers, bankruptcies, conversion into share-holding firms, leases, and sales, including sales to foreigners. A crucial goal of the reforms is to create a corporate system, with Western style corporate governance, in which managers are held responsible for the success of their firms and success is measured by the bottom line. At present, corrupt behavior, include asset stripping is likely prevalent and many loss making firms are borrowing from banks to cover wage payments. In addition, the provision of implicit unemployment insurance with lifetime employment, housing, health care and pension services have all placed a burden on Chinese manufacturing enterprises that is unparalleled in the west.

Some SOEs have already been put on the auction block for sale to domestic and foreign buyers. This process has met with limited success because of the significant baggage the enterprises carry. Although the terms of the sale are generally negotiable, some obligation to care for the current employees is often sought or imposed on the buyer. The implicit unemployment insurance that I mentioned earlier, for instance, is in fact a system in which the employee is not formally unemployed, but does not report to work and receives a reduced paycheck. The government is not interested in having these workers suddenly thrown into the throngs of the already growing pool of unemployed workers. This explains in part why a sale price of 1 Yuan has been rejected by some potential foreign investors.

The separation of the housing from the business sector will have implications for banks and the development of capital markets. As home ownership becomes more common, there will be a need for a well functioning mortgage market. The kernel of such a market is in place, but mortgage lending is not yet important for banks.

The interconnected nature of the Chinese system makes reform extraordinarily difficult. Reforming any single piece of system is nearly impossible because of the links among them. Perhaps the most difficult challenge facing the reformers is that of coping with widespread unemployment. The Chinese government reports unemployment at less than 4 percent but growing. According to unofficial sources, however, the unemployment rate in urban areas exceeds 9 percent. Much of the differential is accounted for by substantial unemployment among the "floating" populatiion--individuals residing in urban areas who are not official urban residents. As the reforms of government and state-owned enterprise are carried out, the unemployment problem will likely increase. During the next 3 years, enterprise reforms could yield up to 10 million layoffs, and government streamlining will cut at least another 4 million jobs. The 8% growth target is considered critical to cope with this disruption, and increasing migration from rural to urban areas. In recent years, China has grown faster than the 8 percent target, but growth has fallen steadily from 14.2 percent in 1992 to 8.8 percent last year.

The Asian Financial Crisis will increase the difficulty which China faces in attaining an 8% growth target. The primary impact of the crisis on the Chinese economy has been to appreciate the Renminbi, which is pegged to the dollar, relative to other currencies in the region, eroding China's competitive position in world markets relative to other Asian countries. The relative appreciation of the Renminbi is consistent with the drop off in export growth through the first 2 months of 1998. Export growth in the first quarter of 1997 exceeded 25 percent. In addition, it is feared that the crisis may reduce foreign direct investment flows from neighboring Asian countries. China has resisted the temptation, however, to devalue its currency, recognizing that a Chinese devaluation might further destablize the already shaky economies in the region. In order to support the 8% growth target, the Chinese instead plan to expand spending on infrastructure--transportation, communications and the environment--as well as housing development.

Although the Asian crisis diminishes China's short term growth prospects, the crisis may have had a salutary effect in other ways. For example, the Chinese have acquired a healthy skepticism of the Korean Chaebol system, although there remains an obvious element of East Asian style planning in China's reform plans, since the government has selected 512 large state owned enterprises for special treatment and attention. Even so, the woes of Korea have illustrated the importance of sound corporate governance principles and the importance of impartial enforcement of contracts and laws. The crisis has also illustrated the paramount importance of an open, transparent and honest financial system in which information is freely and widely available. And it has given new urgency and direction to efforts that were already underway to clean up and recapitalize the troubled banking industry.

At the same time, there is the possibility that the Chinese will slow the pace of reform in their external sectors because of the Asian Crisis, although membership in the WTO is a long-sought and highly prized objective. During our visit, we emphasized the importance of openness to trade as a complement to ongoing structural reforms and the Chinese understood and were receptive to the notion. At a fundamental level, the reforms being undertaken embrace the notion that competition is an important driving force behind growth and economic progress. And the logic of this view extends beyond the domestic market to the competition resulting from international trade and investment. In fact, Beijing need look only as far away as Hong Kong to see a role model.

Let me now spend a few minutes discussing the Asian crisis more generally and America's role in fostering a speedy resolution to it. I believe that the most important role that the United States can play, at least in the short run, is to serve as a locomotive for growth in the world economy. Given the likelihood of continued economic stagnation in Japan, American growth is particularly critical for Asia's recovery. For the United States to play this role, however, Americans will need to tolerate large and growing trade deficits. The U.S. trade balance has already been a victim of U.S. success: faster U.S. growth than in our trade partners, reflecting a strengthening of domestic investment even in excess of our our increased national savings, has increased our foreign borrowing and boosted the U.S. trade and current account deficits. The Asian crisis may manifest itself in a substantial further widening of the overall U.S. trade deficit. With the U.S. economy at full employment, external deficits should not be viewed as a source of job loss. And a trade deficit reflecting strong investment has very different economic implications than one reflecting an economy spending beyond our means--the situation in the 1980s. Nevertheless, a deteriorating trade balance can cause a political backlash even if aggregate economic conditons remain strong, as they are now.

The Administration intends to fight hard to keep the US from turning inward in response to such pressures. Moreover, we are committed to pressing Congress to provide the International Monetary Fund with the resources it needs to help stabilize the Asian economies and maintain an ability to intervene in response to any broadening of the crisis. Although reassuring signs of stability have emerged in some Asian countries, there clearly remains concern in the region and worldwide that the crisis is not over and that further disturbances are possible. Our discussions in Asia made it clear that many countries are looking to the United States for leadership and support. Along with embracing open markets and strong growth, the United States can provide this support by meeting its obligations to the IMF. Meeting these obligations is important because the IMF plays a vital role in protecting the world from the spread of financial contagion, and because, at least in my view, the situation in Asia would be a great deal worse without IMF intervention. Without that intervention we would likely have debt moratoria in a number of countries. We could also see a generalized withdrawal of capital from the developing world. The Asian crisis has reinforced the importance of disclosure and transparency, well regulated capital markets, and well supervised banks for countries that are active participants in the world's capital markets. However, capital flows to the developing world have served as an important force for economic growth. And our objective should be to make those markets work better so that their capacity to promote growth is enhanced and their capacity to transmit instability is minimized.

In my comments today, I have focused on two important opportunities to further our international strategy. First, the benefits and importance of a comprehensive dialogue with the Chinese were made apparent to our delegation. Senior level dialogue is crucial to forwarding our common agenda of promoting mutual economic growth and prosperity. Second, leadership by the United States is critical in promoting recovery in the Asian economies.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:18-MAY-1998 11:24:39.00

SUBJECT: revised Qs and As based on McIntosh's last hearing

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

CC: Randall W. Lutter (CN=Randall W. Lutter/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

CC: Adele C. Morris (CN=Adele C. Morris/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

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

TEXT:
Janet,

I have revised this set of Qs and As based on Jeff's suggestions. We will probably go through some of the questions in today's mock hearing.

Joe

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

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D29]MAIL47399473Q.126 to ASCII,
The following is a HEX DUMP:

Q1. Recent research by the respected economics firm WEFA indicates that implementing the Kyoto Protocol would result in higher U.S. energy costs, reduce U.S. living standards, and give developing countries -- such as Mexico, China, India, Korea, Brazil, and others -- a competitive advantage over the U.S. Why shouldn't we believe these results from the WEFA economic analysis?

A1. The WEFA analysis does not incorporate many of the Kyoto agreement's flexibility mechanisms. For example, the WEFA analysis excludes cost-effective opportunities to reduce emissions through international trading, the Clean Development Mechanism, and non-carbon dioxide greenhouse gas reductions. Further, the analysis does not account for the Administration's position on developing country participation. These flexibility measures were included in the Administration's analysis. 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 these cost-effective opportunities to reduce emissions. Doing it smart implies that we would take advantage of cost-effective options, and that is why the Administration was a strong advocate in Kyoto for flexibility measures, and we will continue to serve as an advocate in subsequent negotiations.

I should add that no one model result should serve as the "right" answer on the costs of complying with our commitment under the Kyoto Protocol. The Administration analysis serves as a powerful illustration of the virtues of flexibility measures. The cost-effectiveness of increasing flexibility in achieving environmental goals is robust across models. Indeed, the high costs associated the WEFA analysis -- in contrast with the Administration analysis, modeling results from Energy Modeling Forum exercises, the IPCC Working Group III 1995 assessment, OECD climate modeling results, and the Interagency Analytic Team report -- illustrate the importance of flexible, cost-effective implementation that is the cornerstone of the Administration's policy.

Q2. The Administration claims that the Kyoto Protocol will cost the U.S. $7 - $12 billion per year by 2010, while the WEFA economic analysis indicates that economic losses will be $300 billion per year. Why is the WEFA estimate 30 times greater than the Administration estimate?

A2. The WEFA analysis found very high costs because it does not account for the many flexibility measures in the Kyoto Protocol (see A1).

Q3. WEFA estimates more than 2.4 million job losses because of the Kyoto Protocol. The Administration claims very modest job losses, but neither you nor Dr. Ed Montgomery of the Department of Labor has presented an estimate. Do you consider 2.4 million "very modest"? What is the Administration's estimate? Why does your estimate differ so much from the WEFA estimate?

A3. 2.4 million jobs is not a modest decline. However, the WEFA analysis assumes that we achieve our emissions target without the benefit of many flexibility mechanisms that are a part of the Kyoto Protocol (see A1). Accounting for these flexibility mechanisms significantly decreases the costs of achieving our target, and the effect on employment -- just like the effect on energy prices -- would be quite modest. Although there may be job gains in some sectors and job losses in others, we do not anticipate any significant aggregate employment effect if we achieve the conditions we have discussed. The effects on energy prices do not occur over night -- they occur only 10 to 14 years in the future. Not only are these effects small relative to historical variations in energy prices, they would occur sufficiently far in the future to enable monetary policy to keep the economy operating at its potential. In energy-intensive sectors some employment reduction could occur, although given the very small predicted change in energy prices, impacts in most such sectors are apt to be minimal. Furthermore, a large number of jobs will be created in other sectors -- many of them high-tech jobs paying high wages.

Q4. WEFA estimates $265/ton permit prices by 2010, more than 10 times greater than the Administration estimates of $14 - $23/ton. Why the difference?

A4. The WEFA analysis found very high permit prices because it does not account for the many flexibility measures in the Kyoto Protocol (see A1).

Q5. WEFA estimates that permit prices will increase to $360/ton by 2020. What is the Administration estimate of permit prices for 2020?

A5. The Administration has not estimated permit prices beyond 2012 because emissions targets have not been set for commitment periods after the first period.

Q6. WEFA's analysis indicates that Kyoto would create a prolonged series of mini-shocks to the U.S. economy, similar to the oil shocks of the 1970s and early 1980s. Do you agree with this assessment? If not why not?

> A6. First, the WEFA analysis found very high energy prices because it does not account for the many flexibility measures in the Kyoto Protocol (see A1). Further, it should be recalled that the oil shocks of the 1970s were surprises -- businesses did not have an opportunity to plan for the sharp increases in relative energy prices. However, the Kyoto Protocol provides businesses with a decade-long window to plan before the first commitment period.

Q7. If in subsequent negotiations, the rules for international trading and CDM are cumbersome, and developing countries do not take on targets, would your economic assessment of climate policy change? Would it be more similar to WEFA's analysis?

> A7. The Administration's position is to secure rules for effective international trading and for an effective Clean Development Mechanism. Further, it is the Administration's position to secure meaningful participation by key developing countries. I'd rather not speculate on hypotheticals that do not conform to Administration policy.

Q8. WEFA estimates average GDP losses of about $2700 per household by 2010, much greater than the Administration's estimates. Why the large discrepancy?

> A8. The WEFA analysis found very high costs because it does not account for the many flexibility measures in the Kyoto Protocol (see A1).

Q9. WEFA estimates that food would be 9% more expensive, medical care costs 11% higher, and housing costs 21% higher under the Kyoto Protocol. What are the Administration estimates for these goods and services?

> A9. The WEFA analysis found very high costs because it does not account for the many flexibility measures in the Kyoto Protocol (see A1). The Administration has not conducted an analysis on the effects of specific sectors of the economy because of the substantial uncertainties forecasting that far into the future.

Q10. WEFA claims that U.S. exports would be relatively more expensive on the world market resulting in significantly lower real net exports. What is the Administration estimate of the change in net exports?

A10. The WEFA analysis found a reduction in net exports because it does not account for the many flexibility measures in the Kyoto Protocol (see A1). The Administration has not calculated a number representing the effects on net exports. By achieving broader participation in climate policy through the Administration's position on developing countries and securing effective international trading, the effects on trade should be modest. In fact, it is quite possible that the effect on net exports of goods and services would be positive.

Q11. WEFA indicates that chemicals, paper, textile and apparel, computer and electronic industries would all be significantly hurt by the implementation of the Kyoto Protocol. What are the Administration estimates on the effects of climate policy on these industries?

A11. The sector-specific impacts that the WEFA analysis found were heavily influenced by the fact that it does not account for the many flexibility measures in the Kyoto Protocol (see A1). The Administration has not calculated a number to represent the effects of climate policy on specific industries.

Q12. WEFA indicates that it did not assess international trading because it is only "conceptual" and that until the details -- such as principles, rules, verification, reporting, and accountability -- are addressed, it is not possible for trading to take place. Why then did the Administration include trading in its analysis?

A12. Article 17 of the Kyoto Protocol clearly states that Annex B countries have the right to trade emissions allowances. We assessed international trading because it is one of the key components of our flexible approach to implementing climate change policy. Conducting an economic analysis of trading before all the rules have been established is similar to assessing the economic effects of a bill or law before the regulations to implement the law have been drafted.

Q13. WEFA claims that the benefits of international trading could be limited because trading would only occur among Annex I countries. Why does the Administration claim that trading among Annex I could cut costs by more than half?

A13. Expanding a market lowers costs for all the participants in the market. Many of the Eastern European and Former Soviet Union countries in Annex I have higher energy-to-GNP ratios than the United States. For example, Russia is about 5 times less efficient, and Poland about 4 times less efficient than the U.S. Since these countries are less energy efficient than the United States, firms in those countries should find it relatively less expensive than firms in the U.S. to reduce greenhouse gas emissions by improving energy efficiency. The estimate that trading could cut costs by half holds even in the case when trading occurs only among Annex I countries. In addition, developing countries can adopt targets, join Annex B of the Protocol, and participate in trading, which would further reduce the costs of achieving our emissions target.

Q14. WEFA claims that international trading would require audits of all participating U.S. businesses and the U.S. government. Who would conduct these audits? Would a U.N. bureaucracy be created to audit our country?

A14. The Kyoto Protocol does not require audits for trading, or anything of that nature.

Q15. The Administration claims that climate policy will only cost the economy 1/10 of 1% of GDP, while the respected American Council for Capital Formation (ACCF) has sponsored research that indicates that the less stringent goal of 1990 by 2010 could range between 1% and 4% of GDP, and permit prices could range between \$200 - \$260/ton. Why the large differences?

A15. These studies found very high costs and permit prices because they do not account for the many flexibility measures in the Kyoto Protocol (see A1).

Q16. ACCF claims that the energy price increases associated with implementing Kyoto will "force" consumers to "make major changes in their lifestyles, including lowering their thermostats in winter, driving less, and reducing their use of air conditioning in summer." Is this true? If not, why not?

A16. This is not true. By accounting for the flexibility measures in the Protocol, the energy price increases will be modest. We expect that consumers will make small changes in response to energy prices, but not major lifestyle changes.

Q17. Research by ACCF indicates that implementing Kyoto would exacerbate income inequality in the U.S. In fact, the increase in income inequality would be twice that experienced between 1968-1978, and about 3/4 of the inequality increase occurring between 1979-1983. How can the Administration support an environmental policy that makes inequality much worse?

A17. The study you are referring to found significant effects on inequality because it does not account for all of the many flexibility measures in the Kyoto Protocol (see A1). Further, this finding about inequality is very sensitive to the model's "revenue recycling" mechanism. That is, in this study, it is assumed that carbon dioxide permits are auctioned, and the revenues from such an auction would be "recycled" or returned to consumers either through a reduction in personal income taxes or through a lump-sum redistribution. The reduction in income taxes results in inequality effects 5 times larger than the lump-sum redistribution. While this result is beneficial in informing us about the inequality effects of different revenue recycling approaches, it does not substantiate the claim that Kyoto would exacerbate inequality along the lines of what was experienced during the oil shocks.

Q18. ACCF reported a study that indicates that the "single most important factor contributing to the decline in carbon emissions" during 1974-1986 were reductions in per capita GDP. Will implementing the Kyoto Protocol require the U.S. to reduce its per capita GDP and force a decline in our standard of living?

A18. First, the U.S. did not experience a reduction in per capita GDP during these years; rather, the rate of growth slowed. Second, the oil shocks caused energy prices to shoot up causing stagflation and a decline in output in 1974 and 1980-82. The Administration intends to implement the Kyoto Protocol through a set of flexibility measures that will result in very modest effects on energy prices. By accounting for these measures, the effects on GDP would be negligible, so per capita GDP would not change substantially, and surely would not fall.

Q19. The recent economic analysis by DRI indicates that Eastern Europe and the Former Soviet Union will average 160 million tons of carbon per year below their emissions targets during the commitment period. Some observers have referred to this as "hot air", because the Russians may be able to sell emissions allowances without making any actual reductions in their emissions. What did the Administration assume about the projected magnitude of "hot air" when it conducted its analysis? Do you assume that the Russians can sell their hot air?

A19. The Administration used the estimates of carbon emissions from the Second Generation Model for Eastern Europe and the Former Soviet Union. The Kyoto Protocol does not preclude any country from selling any part of its emissions allowance, and indeed, through the EU bubble, it sanctions implicit exchanges of what has been referred to as "hot air" by allowing some EU countries to take less stringent targets while Germany reduces below its 1990 - 8% level by taking advantage of the decline in output in the former East Germany. Even though Russian output is still sufficiently depressed that current emissions are below 1990 levels, eventually Russian output will surpass 1990 levels; at that point sales of emissions permits will correspond to genuine reductions in emissions, not to "hot air". The Administration analysis assumes that all countries trade emissions allowances to minimize the costs of achieving their targets.

Q20. The DRI testimony states that the Administration analysis indicates that the U.S. will be able to purchase permits in an international market that would not include the European Union. Is this true -- will the Europeans actually avoid trading? Does the Administration intend to develop trading rules that excludes the Europeans?

A20. The Administration analysis included a range of permit prices and costs to reflect uncertainty regarding the participation of all Annex B countries in international trading. It is not the Administration's position to exclude any Annex B country or firms from any Annex B country from participating in international trading. The Administration's position to secure rules ensuring cost-effective emissions reductions to achieve our emissions target. It is true, however, that of the many scenarios we have looked at, one involves a hypothetical case in which the Europeans refrain from trading.

Q21. The DRI analysis claims that U.S. marginal abatement costs "are arguably significantly lower" than Europe's and Japan's. Does this mean the U.S. might not find it cost-effective to purchase emissions allowances abroad?

A21. We would not expect to be a net buyer of emissions allowances from Western Europe or Japan, but from other countries. Many of the Eastern European and Former Soviet Union countries in Annex I likely have lower marginal costs than the U.S. since they have higher energy-to-GNP ratios than the United States. For example, Russia is about 5 times less efficient, and Poland about 4 times less efficient than the U.S. Since these countries are less energy efficient than the United States, firms in those countries may find it relatively less expensive than firms in the U.S. to reduce greenhouse gas emissions by improving energy efficiency. In addition, developing countries can adopt targets, join Annex B of the Protocol, and participate in trading, which would further reduce the costs of achieving our emissions target.

Q22. The DRI testimony claims that the Administration analysis assumes that 85% of our required emissions reductions will be purchased from abroad. Does the Administration intend for the U.S. to buy that much from abroad? What would be the magnitude of wealth transfers to other countries if we buy that much? Do you agree with DRI's statement that "a large revenue stream would be diverted overseas?"

A22. The Administration does not intend for the firms to purchase any specific amount of emissions reductions abroad. Rather, the Administration intends to provide flexibility to the private sector so that emissions reductions can be achieved cost-effectively. If a private firm finds it cost-effective to achieve emissions reductions by purchasing emissions allowances from a firm in another country, we do not believe there should be restrictions on that behavior.

Q23. DRI states that tradable "permits are an implicit tax." Is the Administration's proposed domestic trading program a backdoor approach to tax American businesses? Is the international trading system a backdoor attempt at an international tax on our businesses?

A23. A tradable permit and a tax are not equivalent. A tradable permit system focuses on fixing quantities and leaves prices free to fluctuate, while a tax focuses on prices and allows quantities to adjust. An international trading system is not similar to an international tax on U.S. business because it reduces the price of emissions (and energy) to them, while a tax would increase it. A significant advantage of a tradable permit approach over the tax approach is that it allows for the opportunity to trade across countries and take advantage of low-cost reductions abroad, while a domestic tax approach does not provide this option.

Q24. DRI states that if permits are given, or "grandfathered" to businesses, consumer real incomes would fall while business profits would increase. Do you agree with this conclusion?

A24. It should be noted again that the DRI analyses do not fully account for all of the flexibility mechanisms in the Kyoto Protocol. The Administration analysis indicates that the effects of climate policy would be modest. As an illustration, we calculated through a model that annual household energy expenditures would increase by between $70 and $110 by 2010. However, the Administration's electricity restructuring proposal would result in cost-savings roughly equal to this amount, so the total effect on consumer incomes would be very small.

Q25. DRI stated that "the role of developing countries in the Protocol is still undefined. The impact on states producing traded goods could potentially be severe if developing countries would be allowed to use low-cost, high-polluting technologies and sell their products at lower cost in the U.S." Do you agree with this conclusion from DRI?

A25. When accounting for the flexibility mechanisms in the Kyoto Protocol and securing meaningful participation of developing countries, the costs of achieving our emissions target would be modest, and the effects on trade would be minor and not all negative. The Administration has and continues to advocate measures that will result in cost-effective emissions reductions and for global participation to address the risks of climate change.

The President has said that he will not submit the Protocol for ratification until we secure meaningful developing country participation. This should help allay concerns about competitiveness. But we think that the primary reasons for requiring developing country participation are best described as reducing the economic costs of meeting our targets and ensuring an improvement in global emissions.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:18-MAY-1998 14:17:21.00

SUBJECT: Oral Testimony-revised

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: Randall W. Lutter (CN=Randall W. Lutter/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

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

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D76]MAIL418416730.126 to ASCII,
The following is a HEX DUMP:

ORAL TESTIMONY OF DR. JANET YELLEN
CHAIR, COUNCIL OF ECONOMIC ADVISERS
BEFORE THE HOUSE SUBCOMMITTEE ON NATIONAL ECONOMIC GROWTH, NATURAL RESOURCES AND REGULATORY AFFAIRS
ON THE ECONOMICS OF THE KYOTO PROTOCOL
MAY 19, 1998

Thank you, Mr. Chairman. The President has said that we can work to avert the grave dangers of climate change, while at the same time maintaining the strength of our economy. I agree and am pleased to have this opportunity to appear before the Committee to elaborate on the Administration's views on these issues.

Effects of Climate Change

Before discussing the likely cost of U.S. efforts to avert climate change, it is important to recognize the costs and risks facing our nation should we fail to act. Current concentrations of greenhouse gases have reached levels well above those of preindustrial times. As a consequence, the Intergovernmental Panel on Climate Change 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. The IPCC reports that a doubling of carbon dioxide levels would lead to approximately 10,000 additional deaths per year for the current U.S. population from higher summer temperatures, even after netting out the effects of warmer winters and acclimatization. The IPCC also predicts sea level increases of about 20 inches by 2100, with greater increases in subsequent years. Despite the difficulties of deriving quantitative assessments of the damages from climate change, researchers have nonetheless developed monetary estimates of damages that prompt substantial concern, and range in the tens of billions of dollars per year for temperature changes projected to occur in the next century. If left uncontrolled, disruption of the Earth's climate may thus pose substantial costs in terms of harm to commerce and the environment alike. These costs--and they are significant--provide the primary motivation for actions to reduce greenhouse gas emissions. Moreover, these estimates do not, and cannot, accurately reflect the value of reducing the unknown risk of large-scale and potentially irreversible events with potentially catastrophic consequences. There is a strong argument for the Kyoto Protocol as a form of insurance against a serious environmental threat.

The Economic Costs

In taking action to reduce emissions, economic analysis suggests that two elements are absolutely essential: the effort must be flexible and market-based, to ensure that we reduce emissions in the most efficient way; and the effort must be global, for without global emissions reductions the effort would be ineffective. The nature of the climate change problem--that greenhouse gas emissions have the same effect on the climate regardless of how, where, and, within limits, when they occur--suggests three basic approaches to lower the cost of achieving given levels of environmental protection. We term these "when", "what", and "where" flexibility.

As a result of U.S. diplomatic efforts, all three forms of flexibility are broadly reflected in the Kyoto Protocol. The choice of a multi-year budget period, ending later than many countries proposed, with allowance for "banking" of emissions reductions, constitute key elements of "when flexibility." These provisions mitigate costs by permitting reductions at times when they are less rather than more costly. The inclusion of all six greenhouse gases and certain sink activities that promote removal of carbon from the atmosphere provide substantial "what flexibility". The U.S. succeeded in having the Kyoto Protocol stipulate that countries with binding targets are to reduce total greenhouse gas emissions by certain percentages, but the

Protocol does not require specific reductions for specific gases. Moreover, sinks can be used to offset emissions targets. The inclusion of international emissions trading among countries that take on binding targets, coupled with an agreement allowing industrial countries to receive emissions reduction credit for certified investments in "clean development" projects in the developing world, are the critical forms of "where" flexibility incorporated in the Kyoto Protocol. Although details of these provisions need to be finalized in negotiations in Buenos Aires later this year, we believe that these mechanisms can produce substantial reductions in the costs of attaining our environmental objectives.

Economic analysis also points to the need for a global solution to a problem which is global. Around 2015, under a continuation of business as usual, a majority of world emissions are projected to come from developing countries. Without developing country participation we cannot achieve adequate climate protection. In addition, developing country participation would permit relatively low-cost emissions reductions to be internationally recognized as a substitute for more expensive reductions in many industrial countries. The President has made clear that he will not submit the Kyoto Protocol to the Senate without meaningful participation from key developing countries (who are not included in Annex I).

Economic Effects

An economic analysis of climate change faces three broad categories of difficulties. First are the uncertainties that still remain over the terms of the ultimate treaty. Second are the inherent limitations of available models to analyze even short-term costs and benefits. And finally is the impossibility of putting a single monetary figure on the long-term benefits of climate change mitigation.

Mindful of the limitations of any single model as a tool for evaluating the economic impact of the Kyoto Protocol, we have employed a broad array of techniques to assess the various possible costs and non-climate benefits of the Administration's emissions reduction policy. Ignoring the benefits of mitigating climate change itself, our conclusion is that the net costs of our policies to reduce emissions are likely to be small if those reductions are undertaken in an efficient manner and we are successful in securing meaningful developing country participation as well as effective international trading and clean-development mechanisms in future negotiations. As I explain in my written testimony, this conclusion is not entirely dependent on, but is fully consistent with, formal model results. For example, given the factors, such as trading, just delineated, but excluding the benefits of acting and the impact of electricity restructuring, estimates derived using Battelle's Second Generation Model suggest that the resource costs of attaining the Kyoto targets for emission reductions might amount to just $7 to $12 billion per year in 2008 to 2012 -- or just 0.1 percent of projected GDP. That small net premium, in effect, purchases a partial insurance policy against a serious environmental threat.

A comprehensive economic evaluation of the Administration's climate change policies must also take into account the potential payoffs from the full package of proposed Administration climate change initiatives. As you know, the President's FY 1999 budget includes a $6.3 billion package of tax cuts and R&D over the next 5 years; this package makes good sense in terms of energy policy even ignoring any payoff for climate change. A second responsible step entails industry-by-industry consultations to prepare emission reduction plans in key industrial sectors. A final component of the President's climate change policy is his support for electricity restructuring in a manner that will offer approximately $20 billion in cost savings to electricity consumers, while offering modest reductions in greenhouse gas emissions.

I look forward to continuing to work with members of this Committee, as well as other interested parties, in further analyzing the Kyoto Protocol and evaluating the effects of reducing greenhouse gas emissions.

I welcome your questions.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:18-MAY-1998 13:13:09.00

SUBJECT: revised oral statement

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

TEXT:
---------------------- Forwarded by Joseph E. Aldy/CEA/EOP on 05/18/98
01:12 PM ---------------------------

Lisa McNeilly <mcneilly_l @ btgcinema.com>
05/18/98 12:38:05 PM
Please respond to mcneilly_l@btgcinema.com
Record Type: Record

To: Joseph E. Aldy/CEA/EOP
cc:
Subject: revised oral statement

joe - here is the revised oral statement. Let me know what you all think.

- JYORAL.WPD

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

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D44]MAIL43947573I.126 to ASCII,
The following is a HEX DUMP:

ORAL TESTIMONY OF DR. JANET YELLEN
CHAIR, COUNCIL OF ECONOMIC ADVISERS
BEFORE THE SUBCOMMITTEE ON NATIONAL ECONOMIC GROWTH, NATURAL RESOURCES, AND REGULATORY AFFAIRS
U.S. HOUSE OF REPRESENTATIVES

MAY 19, 1998

Thank you, Mr. Chairman and Members of the Subcommittee for inviting me here to discuss climate change -- perhaps the key environmental challenge we face as we move into the 21st century. The President has said that we can work to avert the grave dangers of climate change, while at the same time maintaining the strength of our economy.

I agree and am pleased to have this opportunity to appear before the Committee to elaborate on the Administration's views on this issue. Today, I will attempt to identify key elements of the agreement and the Administration's policy that will ensure that reductions in global greenhouse gas emissions are consistent with continued strong economic growth.

Effects of Climate Change

The world's best scientists tell us that the problem of climate change is real. As a result of increased concentrations of greenhouse gases, scientists estimate that global temperatures will increase by between 2 to 6 degrees Fahrenheit in the next 100 years.

Climate changes on that scale would pose very serious threats to public health and the environment. For example, a doubling of carbon dioxide levels would lead to approximately 10,000 additional deaths per year for the current U.S. population from higher summer temperatures.

Despite the difficulties of deriving quantitative assessments of these threats, researchers estimate that damages will range in the tens of billions of dollars per year for temperature changes of this nature. If left uncontrolled, disruption of the Earth's climate will pose substantial costs in terms of harm to commerce and the environment alike. These threats are too serious to ignore.

Kyoto Protocol

The international agreement reached in Kyoto, Japan this past December is a crucial step forward in addressing global climate change. The Protocol would place binding limits on each industrial country's combined emissions of the six principal categories of greenhouse gases. Because this international effort is still in some respects a work-in-progress, it is not yet possible to provide a full authoritative analysis of it.

However, we do know that when taking action to reduce emissions, economic analysis suggests that two elements are absolutely essential: (1) the effort must be flexible and market-based, to ensure that we reduce emissions in the most efficient way; and (2) the effort must be global, for without global emissions reductions the effort would be ineffective.

As a result of U.S. diplomatic efforts, three forms of flexibility, which I call "when", "what" and "where" flexibility, are broadly reflected in the Kyoto Protocol. The choice of a multi-year budget period, with allowance for "banking" of emissions reductions, constitute key elements of "when flexibility." These provisions mitigate costs by permitting reductions at times when they are less rather than more costly.

The inclusion of all six greenhouse gases and certain sink activities provide substantial "what flexibility". The U.S. succeeded in having the Kyoto Protocol stipulate that countries with binding targets are to reduce total greenhouse gas emissions by certain percentages, but the Protocol does not require specific reductions for specific gases. Moreover, sinks that promote removal of carbon from the atmosphere can be used to offset emissions targets.

The "where flexibility" is embodied in the provision permitting international emissions trading among countries that take on binding targets and a separate provision permitting industrial countries to receive emissions reduction credit for certified investments in "clean development" projects in the developing world.

Although these provisions will need to be fleshed out over time beginning with negotiations in Buenos Aires later this year, we believe that these mechanisms can produce substantial reductions in the costs of attaining our environmental objectives.

As I said, climate change is a global problem requiring a global solution. Around 2030, under a continuation of business as usual, a majority of world emissions are projected to come from developing countries. Without developing country participation we cannot achieve adequate climate protection. In addition, developing country participation would permit relatively low-cost emissions reductions to be internationally recognized as a substitute for more expensive reductions in many industrial countries. The President has made clear that he will not submit the Kyoto Protocol to the Senate without meaningful participation from key developing countries.

Economic Effects

An economic analysis of climate change faces three broad categories of difficulties. First are the uncertainties that remain over the implementation details of the treaty. Second are the inherent limitations of available models to analyze even short-term costs and benefits. And finally the impossibility of putting a single monetary figure on the long-term benefits of climate change mitigation.

Mindful of the limitations of any single model as a tool for evaluating the economic impact of the Kyoto Protocol, we have employed a broad array of techniques to assess the various possible costs and non-climate benefits of the Administration's emissions reduction policy.

Our conclusion is that the net costs of our policies to address the threats of climate change are likely to be small. This conclusion ignores the benefits of mitigating climate change itself. It assumes that reductions are undertaken in an efficient manner, that we are successful in securing meaningful developing country participation and that we achieve effective implementation of international trading and clean-development mechanisms.

Estimates derived using Battelle's Second Generation Model suggest that the resource costs of attaining the Kyoto targets for emission reductions might amount to just $7 to $12 billion per year in 2008 to 2012. In terms of household costs, this works out to be around a 4 to 6 cents per gallon increase in gasoline and a rise of between 70 to 110 dollars per year for the average household's energy bill in 2010. That small net premium, in effect, purchases a partial insurance policy against a serious environmental threat.

A comprehensive economic evaluation of the Administration's climate change policies must also take into account the potential payoffs from the full package of proposed Administration climate change initiatives. As you know, the President has proposed a 6.3 billion dollar package of tax cuts and R&D investments over the next 5 years. This technology initiative will help us to build a stronger economy and a healthier environment. A second responsible step entails industry-by-industry consultations to prepare voluntary emission reduction plans in key industrial sectors. A final component of the President's climate change policy is his support for electricity restructuring in a manner that will offer approximately $20 billion in cost savings to electricity consumers, while offering modest reductions in greenhouse gas emissions.

Conclusion

Working together we can overcome the threat of climate change and maintain the strength of our economy. Whenever we act to heal our environment, there are those who say that it will hurt our economy. But today, our economy is the strongest in a generation and our environment is the cleanest in a generation. The President strongly believes that failing to take sensible action now would unfairly be shifting the consequences and the burdens of climate change to our children and grandchildren.

I will be happy to answer any questions you may have.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:18-MAY-1998 17:52:27.00

SUBJECT: Hearing Q&A

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

TEXT:
Attached.

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

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D6]MAIL42786773S.126 to ASCII,
The following is a HEX DUMP:

Q: The Subcommittee sent you a letter on March 13, 1998 asking for answers to questions about your testimony. It is now May 19. More than 2 months later and we still do not have answers. Why have we not gotten answers to these questions?

A: CEA staff have been working diligently to provide accurate and complete answers to all of your questions.

* As you know, **the CEA is a small agency**. We have 10 Senior Economists and 5 Junior Economist who are responsible for covering every area of the economy -- from Social Security to the budget forecast to the East Asian financial crisis to welfare reform to the environment. Out of the 15, three have been working on climate change issues almost exclusively since December. They have been working to analyze the impact of the Kyoto Protocol on our economy. They have been preparing my testimony before Congressional committees. They have been working in the various policy processes on Climate change.

* Moreover, **we have received requests for information from several other Committees**, including the House Commerce Committee, the Senate Agriculture Committee and the Senate Budget Committee. All of the requests take time and resources to answer. Our first priority was to answer the request of the Commerce Committee since I had testified in front of their Committee first. As for the rest of the requests, we are attempting to answer these requests as quickly as possible in the context of all of the other demands on out time.

Q: Your staff promised that we would have answers before the hearing. We have gotten nothing from your office. How do you explain that?

A: My staff has repeatedly told your staff that we would get answers to you as soon as possible. As I said, we have a small staff and an enormous number of responsibilities. Our staff has been working to try to provide you with the most accurate and complete information in response to your questions. We will get you complete answers as soon as we possibly can.

But, in fact:

* **We have provided you with answers to Section A of your request**. And, this is consistent with the responses of other Federal agencies. According to OMB, of the 23 Federal agencies that have received document requests from your Subcommittee, 22 of them have submitted only Section A in response to your request. We intend to provide you with the remainder of the answers to your request as soon as possible.

* **We have also provided your staff with documents that were in response to a request by the Commerce Committee's Chairman Schaefer**. Chairman Schaefer asked to see the documents that were used to prepare the economic analysis contained in my testimony. We also invited your staff to view those documents that White House

Counsel deemed to implicate confidentiality and foreign policy interests of the Executive Branch. Counsel attempted to accommodate Congress' legitimate oversight interest on this issue by inviting staff to come to Counsel's office to view these documents. Your staff was invited to view the documents, but apparently they were unable to make it to the OEOB before this hearing.

Q: Are you going to perform the new analysis that I asked for in my request?

A: Today, I presented the Clinton Administration's analysis of the economic effects of the Kyoto Protocol. We used a number of different tools in making this assessment. This was a time consuming and thorough effort.

I believe that to conduct additional analysis -- of the kind requested in your letter -- I would need additional resources to be dedicated to my office. Otherwise, I would have to pull staff from other important issues, such as monitoring the macroeconomy, the East Asian financial crisis or other areas that are within our statutory mandate.

Q: The following is a series of questions related to the documents that White House Counsel is holding...

A: The National Security Council and White House Counsel have determined that revealing the contents of these documents would be contrary to the national interest. To accomodate Congress' oversight interest, we have allowed Members of Congress and their staff to review the documents. But, public disclosure of the contents of the documents would not be in the national interest. For this reason, I urge you not to ask me questions in a public hearing that would reveal information in these documents.

Q: How is it contrary to the national interest? What is it in these documents that you are trying to hide?

A: We have nothing to hide. We have made all of the documents related to Schaefer's request available to Members or their staff. White House Counsel, after consulting with the NSC, made the determination that revealing the contents of these documents would be contrary to our national interest. These documents contain information that implicates the Executive Office of the President's interest in maintaining confidentiality in an ongoing policy process. Moreover, these documents contain information that could effect ongoing international negotiations.

Q: On March 4, you testified about Climate Change before the House Commerce Committee. At that time, the Chair of the Committee and several of the Members were clearly not pleased with your testimony. Your testimony presents a number of conclusions, but does not provide any of the underlying economic analysis. Now, looking at your testimony today, it looks identical to the March 4 testimony. Is it identical? And if so, why are you presenting this Committee with the same less-than-adequate information?

A: My testimony presents the Administration's assessment of the economic impact of the Kyoto Protocol. My testimony lays out clearly the methodology that was used and the assumptions the conclusions are based on. My testimony provides substantial detail about what we have assumed regarding the various elements of the Protocol, such as international trading, and Clean Development Mechanism and sinks.

I understand that the Chair of the Commerce Committee, Congressman Schaefer, was interested in seeing the materials that we used in developing our assessment, and he asked for these materials at the March 4 hearing. In response to this request, my staff pulled together the materials that were used in developing my testimony. Because we are part of the Executive Office of the President, we consulted with White House Counsel before submitting these documents to the Committee. White House Counsel concluded that some of these documents contained material that reflected internal deliberations and the White House's policy making process. The documents also included material that could influence the ongoing negotiations with foreign countries. For these reasons, Counsel decided that it would be appropriate to hold these documents for review by Congressional Members or their Staff to review. These documents have been made available for review by staff and Members. And, I have been informed that last week several staff people did review the documents.

Q: So, is the White House exerting Executive Privilege to protect these documents?

A: No. Like I said earlier, White House Counsel made a determination that some of the material in these documents reflects internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover, the documents also include material that could influence ongoing negotiations. For this reason, Counsel has sought to arrange a reasonable accommodation. Council is making available to Congress the information it needs to perform its oversight functions, while preserving the interests of the Executive Branch in the confidentiality essential to achieving U.S. foreign policy goals.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:18-MAY-1998 08:31:42.00

SUBJECT: Re: write-up of EMF conference

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

TEXT:
I would also like to see, as quickly as possible today, any handouts that you have from the conference concerning model results.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:18-MAY-1998 08:20:45.00

SUBJECT: Stanford Energy Modelling Forum

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

TO: Randall W. Lutter (CN=Randall W. Lutter/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:
---------------------- Forwarded by Janet L. Yellen/CEA/EOP on 05/18/98
08:20 AM ---------------------------

Todd Stern
05/16/98 08:46:13 AM
Record Type: Record

To: Janet L. Yellen/CEA/EOP
cc: Joseph E. Aldy/CEA/EOP, Michele Jolin/CEA/EOP
Subject: Stanford Energy Modelling Forum

Just wanted to follow up on our brief conversation yesterday. As soon as we can get the written results of this latest EMF exercise, let me know. If their models show results with international trading that are close to ours or at least in the ball park -- e.g., ranging from $20-50/ton -- that could be extremely important. I would want to make sure we got that information out -- to the Hill, interested reporters, etc. tds

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:18-MAY-1998 11:33:37.00

SUBJECT: Revised oral testimony

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

TO: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Randall W. Lutter (CN=Randall W. Lutter/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:
Attached is a somewhat shorter version of the oral testimony. It still
runs 9-10 minutes. Do you have suggestions for further shortening?=================== ATTACHMENT 1
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ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D75]MAIL42250573O.126 to ASCII,
The following is a HEX DUMP:

ORAL TESTIMONY OF DR. JANET YELLEN
CHAIR, COUNCIL OF ECONOMIC ADVISERS
BEFORE THE HOUSE SUBCOMMITTEE ON NATIONAL ECONOMIC GROWTH, NATURAL RESOURCES AND REGULATORY AFFAIRS
ON THE ECONOMICS OF THE KYOTO PROTOCOL
MAY 19, 1998

Thank you, Mr. Chairman. The President has said that we can work to avert the grave dangers of climate change, while at the same time maintaining the strength of our economy. I agree and am pleased to have this opportunity to appear before the Committee to elaborate on the Administration's views on these issues.

Effects of Climate Change

Before discussing the likely cost of U.S. efforts to avert climate change, it is important to recognize the costs and risks facing our nation should we fail to act. Current concentrations of carbon dioxide, methane, nitrous oxide, and the other so-called greenhouse gases have reached levels well above those of preindustrial times. As a result of the increased concentration of greenhouse gases, the Intergovernmental Panel on Climate Change 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. The IPCC reports that a doubling of carbon dioxide levels would lead to approximately 10,000 additional deaths per year for the current U.S. population from higher summer temperatures, even after netting out the effects of warmer winters and acclimatization. The IPCC also predicts sea level increases of about 20 inches by 2100, with greater increases in subsequent years. Despite the difficulties of deriving quantitative assessments of the damages from climate change, researchers have nonetheless developed monetary estimates of damages that prompt substantial concern, and range in the tens of billions of dollars per year for temperature changes projected to occur in the next century. If left uncontrolled, disruption of the Earth's climate may thus pose substantial costs in terms of harm to commerce and the environment alike. These costs--and they are significant--provide the primary motivation for actions to reduce greenhouse gas emissions. Moreover, these estimates do not, and cannot, accurately reflect the value of reducing the unknown risk of large-scale and potentially irreversible events with potentially catastrophic consequences. There is a strong argument for the Kyoto Protocol as a form of insurance against a serious environmental threat.

The Economic Costs

In taking action to reduce emissions, economic analysis suggests that two elements are absolutely essential: the effort must be flexible and market-based, to ensure that we reduce emissions in the most efficient way; and the effort must be global, for without global emissions reductions the effort would be ineffective. The nature of the climate change problem--that greenhouse gas emissions have the same effect on the climate regardless of how, where, and, within limits, when they occur--suggests three basic approaches to lower the cost of achieving given levels of environmental protection. We term these "when", "what", and "where" flexibility.

As a result of U.S. diplomatic efforts, all three forms of flexibility are broadly reflected in the Kyoto Protocol. The choice of a multi-year budget period, ending later than many countries proposed, with allowance for "banking" of emissions reductions, constitute key elements of "when flexibility." These provisions mitigate costs by permitting reductions at times when they are less rather than more costly. The inclusion of all six greenhouse gases and certain sink activities that promote removal of carbon from the atmosphere provide substantial "what flexibility". The U.S. succeeded in having the Kyoto Protocol stipulate that countries with binding targets are to reduce total greenhouse gas emissions by certain percentages, but the Protocol does not require specific reductions for specific gases. Moreover, sinks can be used to offset emissions targets. The inclusion of international emissions trading among countries that take on binding targets, coupled with an agreement allowing industrial countries to receive emissions reduction credit for certified investments in "clean development" projects in the developing world, are the critical forms of "where" flexibility incorporated in the Kyoto Protocol. Although details of these provisions need to be finalized in negotiations in Buenos Aires later this year, we believe that these mechanisms can produce substantial reductions in the costs of attaining our environmental objectives.

Economic analysis also points to the need for a global solution to a problem which is global. Around 2015, under a continuation of business as usual, a majority of world emissions are projected to come from developing countries. Without developing country participation we cannot achieve adequate climate protection. In addition, developing country participation would permit relatively low-cost emissions reductions to be internationally recognized as a substitute for more expensive reductions in many industrial countries. The President has made clear that he will not submit the Kyoto Protocol to the Senate without meaningful participation from key developing countries (who are not included in Annex I).

Economic Effects

An economic analysis of climate change faces three broad categories of difficulties. First are the uncertainties that still remain over the terms of the ultimate treaty. Second are the inherent limitations of available models to analyze even short-term costs and benefits. And finally is the impossibility of putting a single monetary figure on the long-term benefits of climate change mitigation.

Mindful of the limitations of any single model as a tool for evaluating the economic impact of the Kyoto Protocol, we have employed a broad array of techniques to assess the various possible costs and non-climate benefits of the Administration's emissions reduction policy. Ignoring the benefits of mitigating climate change itself, our conclusion is that the net costs of our policies to reduce emissions are likely to be small if those reductions are undertaken in an efficient manner and we are successful in securing meaningful developing country participation as well as effective international trading and clean-development mechanisms in future negotiations. As I explain in my written testimony, this conclusion is not entirely dependent on, but is fully consistent with, formal model results. For example, given the factors, such as trading, just delineated, but excluding the benefits of acting and the impact of electricity restructuring, estimates derived using Battelle's Second Generation Model suggest that the resource costs of attaining the Kyoto targets for emission reductions might amount to just $7 to $12 billion per year in 2008 to 2012 -- or just 0.1 percent of projected GDP. That small net premium, in effect, purchases a partial insurance policy against a serious environmental threat.

A comprehensive economic evaluation of the Administration's climate change policies must also take into account the potential payoffs from the full package of proposed Administration climate change initiatives. As you know, the President's FY 1999 budget includes a $6.3 billion package of tax cuts and R&D over the next 5 years; this package makes good sense in terms of energy policy ignoring any payoff for climate change. A second responsible step entails industry-by-industry consultations to prepare emission reduction plans in key industrial sectors. A final component of the President's climate change policy is his support for electricity restructuring in a manner that will offer approximately $20 billion in cost savings to electricity consumers, while offering modest reductions in greenhouse gas emissions.

I look forward to continuing to work with members of this Committee, as well as other interested parties, in further analyzing the Kyoto Protocol and evaluating the effects of reducing greenhouse gas emissions.

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:18-MAY-1998 12:02:02.00

SUBJECT: Atlanta speech

TO: Alice H. Williams (CN=Alice H. Williams/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
You could send the person the attached speech, indicating that my talk was
drawn from this material and it was not intended for general circulation.=================== ATTACHMENT
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RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:18-MAY-1998 17:12:37.00

SUBJECT: Q&A for hearing

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

TEXT:
Attached.

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

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D72]MAIL48544773E.126 to ASCII,
The following is a HEX DUMP:

Q: On March 4, you testified about Climate Change before the House Commerce Committee. At that time, the Chair of the Committee and several of the Members were clearly not pleased with your testimony. Your testimony presents a number of conclusions, but does not provide any of the underlying economic analysis. Now, looking at your testimony today, it looks identical to the March 4 testimony. Is it identical? And if so, why are you presenting this Committee with the same less-than-adequate information?

A: My testimony presents the Administration's assessment of the economic impact of the Kyoto Protocol. My testimony lays out clearly the methodology that was used and the assumptions the conclusions are based on. My testimony provides substantial detail about what we have assumed regarding the various elements of the Protocol, such as international trading, and Clean Development Mechanism and sinks.

I understand that the Chair of the Commerce Committee, Congressman Schaefer, was interested in seeing the materials that we used in developing our assessment, and he asked for these materials at the March 4 hearing. In response to this request, my staff pulled together the materials that were used in developing my testimony. Because we are part of the Executive Office of the President, we consulted with White House Counsel before submitting these documents to the Committee. White House Counsel concluded that some of these documents contained material that reflected internal deliberations and the White House's policy making process. The documents also included material that could influence the ongoing negotiations with foreign countries. For these reasons, Counsel decided that it would be appropriate to hold these documents for review by Congressional Members or their Staff to review. These documents have been made available for review by staff and Members. And, I have been informed that last week several staff people did review the documents.

Q: So, is the White House exerting Executive Privilege to protect these documents?

A: No. Like I said earlier, White House Counsel made a determination that some of the material in these documents reflects internal deliberations of the Executive Office of the President with regard to ongoing policies of the Administration. Moreover, the documents also include material that could influence ongoing negotiations. For this reason, Counsel has sought to arrange a reasonable accommodation. Council is making available to Congress the information it needs to perform its oversight functions, while preserving the interests of the Executive Branch in the confidentiality essential to achieving U.S. foreign policy goals.

Q: The Subcommittee sent you a letter on March 13, 1998 asking for answers to questions about your testimony. It is now May 19. More than 2 months later and we still do not have answers. Why have we not gotten answers to these questions?

A: CEA staff have been working diligently to provide accurate and complete answers to all of your questions.

* As you know, **the CEA is a small agency**. We have 10 Senior Economists and 5 Junior Economist who are responsible for covering every area of the economy -- from Social Security to the budget forecast to the East Asian financial crisis to welfare reform to the environment. Out of the 15, three have been working on climate change issues almost exclusively since December. They have been working to analyze the impact of the Kyoto Protocol on our economy. They have been preparing my testimony before Congressional commitees. They have been working in the various policy processes on Climate change. And they have been working on

* Moreover, **we have received resquests for information from other Committees**, including the House Commerce Committee, the Senate Agriculture Committee and the Senate Budget Committee. All of the requests take time and resources to answer. And we are attempting to answer these requests in the context of all of the other work that we need to do.

Q: Your staff promised that we would have answers before the hearing. We have gotten nothing from your office. How do you explain that?

A: My staff has repeatedly told your staff that we would get answers to you as soon as possible. As I said, we have a small staff and an enormous number of responsiblities. Our staff has been working to try to provide you with the most accurate and complete information in response to your questions. We will get you answers as soon as we possibly can.

In the mean time, we have provided your staff with documents that were in response to a request by the Commerce Committe's Chairman Schaefer. Chairman Schaefer asked to see the documents that were used to prepare the economic analysis contained in my testimony. We also invited your staff to view those documents that White House Counsel deemed to reflect confidentiality and foreign policy interests of the Executive Branch. Counsel attempted to accomodate Congress' legitimate oversight interest on this issue by inviting staff to come to Counsel's office to view these documents. Your staff was invited to view the documents. And she was unable to make it.

Q: Are you going to perform the new analysis that I asked for in my request?

A: Today, I presented the Clinton Administration's analysis of the economic effects of the Kyoto Protocol. We looked at a number of different tools in making this assessment. This was a time consuming and thorough effort.

I believe that conduct additional analysis -- of the kind requested in your letter -- I would need additional resources to be dedicated to my office. With our current staff levels and enourmous obligations, I believe we are unable to take on additional analysis requests. I would be happy to refer you to other economists who may be willing to take on these tasks.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:18-MAY-1998 17:00:28.00

SUBJECT: Revised oral testimony

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

TO: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

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

TO: Randall W. Lutter (CN=Randall W. Lutter/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:
The attached revised testimony puts our economic cost analysis at the beginning and the discussion of benefits at the end, as Jeff suggested, in case McIntosh cuts me off midstream. Does this work?

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:18-MAY-1998 17:32:05.00

SUBJECT: Re: Revised oral testimony

TO: Joseph E. Aldy (CN=Joseph E. Aldy/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.D75]MAIL49445773V.126 to ASCII,
The following is a HEX DUMP:

ORAL TESTIMONY OF DR. JANET YELLEN
CHAIR, COUNCIL OF ECONOMIC ADVISERS
BEFORE THE HOUSE SUBCOMMITTEE ON NATIONAL ECONOMIC GROWTH, NATURAL RESOURCES AND REGULATORY AFFAIRS
ON THE ECONOMICS OF THE KYOTO PROTOCOL
MAY 19, 1998

Thank you, Mr. Chairman and Members of the Subcommittee for inviting me here to discuss climate change -- perhaps the key environmental challenge we face as we move into the 21st century. The President has said that we can work to avert the grave dangers of climate change, while at the same time maintaining the strength of our economy. I am pleased to have this opportunity to elaborate on the Administration's views on these issues. In particular, I will attempt to identify key elements of the agreement and the Administration's policy that will ensure that reductions in global greenhouse gas emissions are consistet with continued strong economic growth.

The Economic Costs

In taking action to reduce emissions, economic analysis suggests that two elements are absolutely essential: the effort must be flexible and market-based, to ensure that we reduce emissions in the most efficient way; and the effort must be global, for without global emissions reductions the effort would be ineffective. The nature of the climate change problem--that greenhouse gas emissions have the same effect on the climate regardless of how, where, and, within limits, when they occur--suggests three basic approaches to lower the cost of achieving given levels of environmental protection. We term these "when", "what", and "where" flexibility.

As a result of U.S. diplomatic efforts, all three forms of flexibility are reflected in the Kyoto Protocol. The choice of a multi-year budget period, ending later than many countries proposed, with allowance for "banking" of emissions reductions, constitute key elements of "when flexibility." These provisions mitigate costs by permitting reductions at times when they are less rather than more costly. The inclusion of all six greenhouse gases and certain sink activities that promote removal of carbon from the atmosphere provide substantial "what flexibility". The U.S. succeeded in having the Kyoto Protocol stipulate that countries with binding targets are to reduce total greenhouse gas emissions by certain percentages, but the Protocol does not require specific reductions for specific gases. Moreover, sinks can be used to offset emissions targets. The inclusion of international emissions trading among countries that take on binding targets, coupled with an agreement allowing industrial countries to receive emissions reduction credit for certified investments in "clean development" projects in the developing world, are the critical forms of "where" flexibility incorporated in the Kyoto Protocol. Although details of these provisions need to be finalized in negotiations in Buenos Aires later this year, we believe that these mechanisms can produce substantial reductions in the costs of attaining our environmental objectives.

Economic analysis also points to the need for a global solution to a global problem. Around 2015, under a continuation of business as usual, a majority of world emissions are projected to come from developing countries. Without developing country participation we cannot achieve adequate climate protection. In addition, developing country participation would permit relatively low-cost emissions reductions to be internationally recognized as a substitute for more expensive reductions in many industrial countries. The President has made clear that he will not submit the Kyoto Protocol to the Senate without meaningful participation from key developing countries.

Economic Effects

In order to evaluate the economic impact of the Kyoto Protocol, and mindful of the limitations of any single model as a tool of analysis, we have employed a broad array of techniques to assess the various possible costs and non-climate benefits of the Administration's emissions reduction policy. Ignoring the benefits of mitigating climate change itself, our conclusion is that the net costs of our policies to reduce emissions are likely to be small if those reductions are undertaken in an efficient manner and we are successful in securing meaningful developing country participation as well as effective international trading and clean-development mechanisms in future negotiations. As I explain in my written testimony, this conclusion is not entirely dependent on, but is fully consistent with, formal model results. For example, given the factors, such as trading, just delineated, but excluding the benefits of acting and the impact of electricity restructuring, estimates derived using Battelle's Second Generation Model suggest that the resource costs of attaining the Kyoto targets for emission reductions might amount to just $7 to $12 billion per year in 2008 to 2012 -- or just 0.1 percent of projected GDP.

A comprehensive economic evaluation of the Administration's climate change policies must also take into account the potential payoffs from the full package of proposed Administration climate change initiatives. As you know, the President's FY 1999 budget includes a $6.3 billion package of tax cuts and R&D over the next 5 years; this package makes good sense in terms of energy policy even ignoring any payoff for climate change. A second responsible step entails industry-by-industry consultations to prepare emission reduction plans in key industrial sectors. A final component of the President's climate change policy is his support for electricity restructuring in a manner that will offer approximately $20 billion in cost savings to electricity consumers.

Effects of Climate Change

Although I have discussed the likely cost of U.S. efforts to avert climate change, it is important to recognize the costs and risks facing our nation should we fail to act. Current concentrations of greenhouse gases have reached levels well above those of preindustrial times. As a consequence, the Intergovernmental Panel on Climate Change 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. The IPCC reports that a doubling of carbon dioxide levels would lead to approximately 10,000 additional deaths per year for the current U.S. population from higher summer temperatures, even after netting out the effects of warmer winters and acclimatization. The IPCC also predicts sea level increases of about 20 inches by 2100, with greater increases in subsequent years. Despite the difficulties of deriving quantitative assessments of the damages from climate change, researchers have nonetheless developed monetary estimates of damages that prompt substantial concern, and range in the tens of billions of dollars per year for temperature changes projected to occur in the next century. If left uncontrolled, disruption of the Earth's climate may thus pose substantial costs in terms of harm to commerce and the environment alike. These costs--and they are significant--provide the primary motivation for actions to reduce greenhouse gas emissions. Moreover, these estimates do not, and cannot, accurately reflect the value of reducing the unknown risk of large-scale and potentially irreversible events with potentially catastrophic consequences. There is a strong argument for the Kyoto Protocol as a form of partial insurance against a serious environmental threat.

I look forward to continuing to work with members of this Committee, as well as other interested parties, in further analyzing the Kyoto Protocol and evaluating the effects of reducing greenhouse gas emissions.

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:19-MAY-1998 15:51:22.00

SUBJECT: Re: WEB article on EMF results

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

TEXT:
Many thanks. This is off to a very good start.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:19-MAY-1998 15:37:03.00

SUBJECT: WEB article on EMF results

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

TEXT:
I am passing the pen to Joe now.
JF=================== ATTACHMENT 1 ===================
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D65]MAIL40783683H.126 to ASCII,
The following is a HEX DUMP:

The First Models of Kyoto

Five months after an agreement to limit greenhouse gases was negotiated in Kyoto, economists who maintain large econometric models of climate change policy are incorporating the terms of the agreement into their estimates. The Energy Modeling Forum, the leading model comparison exercise, held its 16th meeting in Washington, D.C., May 14-15. The preliminary results presented tend generally to be consistent with the economic analysis that underlies Administration testimony to Congress regarding the likely economic effects of climate change policy. In particular, they show the importance of international trading, broad-based international participation, and other flexibility aspects that are part of the U.S. position.

A dearth of model results No model -- whether used inside the government or not -- was as of December set up precisely to analyze the parameters of the agreement that was reached in Kyoto. For example, no model was designed to assess sinks (afforestation, etc.), let alone all six gases covered by the agreement; attention had focused overwhelmingly on carbon dioxide. It can take years to incorporate changes in policy parameters into large econometric models When the Council of Economic Advisers was called by Congress to testify on the likely economic implications of climate change policy in March, some numbers were drawn from the Second Generation Model of Battelle Laboratories, because it seemed better positioned than most to analyze the role of international trade in emission permits. But the SGM results had to be integrated with cost analyses of the other gases by EPA in a relatively ad hoc manner. Furthermore, everyone was painfully aware that no single model can be relied on to answer with confidence the variety of important questions that are relevant.

EMF results The Energy Modeling Forum is coordinated from Stanford University. Of the __ models that participate, only a few have yet been able to produce results based on the specifics of the Kyoto Protocol. They are listed in the Table, alongside the estimates that underlie CEA economic analysis....

[TABLE]

The importance of trading...

The importance of developing country participation ...

Unfinished business...

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Aaron S. Edlin (CN=Aaron S. Edlin/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:19-MAY-1998 20:04:43.00

SUBJECT: draft

TO: Charles F. Stone (CN=Charles F. Stone/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: 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

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{\pntxtb (}{\pntxta)}}{*\pnseclvl9\pnlcrm\pnstart1\pnindent720\pnhang{\pntxtb
(}{\pntxta)}}\pard\plain \qc \f4\fs20 {\b\fs32\cf1 Causes and consequences of
mergers
\par }\pard {\f5

\par There is no single reason why firms merge. In general, though, when one fi
rm purchases another, the shareholders of the target firm must be paid a premiu
m over what their shares were trading for on the market before the
acquisition. Premiums are generally necessary regardless of whether payment is
made in cash or stock.
\par
\par Why should anyone be willing to pay more than the market value of the shar
es? In principle, the acquiring firm may know more about the target firm's valu
e than the market does. A more likely explanation is that the target firm's ass
ets are worth more in t
he hands of the acquiring firm. This could be the case if the merger allows the
acquiring firm to take advantage of economies of scale or scope or to eliminat
e poor management of the target firm. Altern
atively, the assets could be worth more because the merger eliminates competiti
on. Another class of explanation focuses on the possibility of a divergence in
interests: the manager of the acquiring firm may buy the target to serve her ow
n interests, ignor
ing the interests of shareholders (managerial rent-seeking). These general clas
ses of explanations are discussed and elaborated upon below.
\par
\par }{\b\fs24\cf1 Motivation #1: Shareholder gains through efficiencies.
\par }{\f5
\par }\pard {\f5 Studies of
mergers show that the combined equity value of the acquired company and the pur
chasing company rises from the merger. Assuming that the stock market is ration
al, this wealth must come from somewhere and efficiencies are a likely source.
In most cases, the
elimination of competition probably does not explain the rise in value. Some
of the shareholder value could come from employees, as layoffs sometimes follow
a merger (on average 2.5% of the target firm's labor force was laid off during
the '80s). When
the takeover is financed with debt, as was common during the '80s, some of the
wealth could also come from existing debt holders. However, this source is unli
kely when takeovers are financed with new issues of stock,
as is more common during the present merger wave.
\par }\pard {\f5
\par }\pard {\f5 The most likely sources of efficiency gains and of shareholder
gains are:
\par
\par {\pntext\pard\plain\b\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlbl
t\pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Reduce excess capacity.}{\f5\cf1
By reducing excess capacity, firms can cut costs and benefit shareholders. Th
is justification has been invoked in hospital mergers, defense mergers
, and banking mergers among others. If these cost savings are passed along in t
he form of lower prices, consumers can benefit as well. However, in some cases,
excess capacity before a merger may have been what kept prices low, because al
though excess capa
city suggests that average costs are high, marginal (incremental) costs may be
low.}{\b\f5
\par }\pard {\b\f5
\par {\pntext\pard\plain\f1\fs20\cf1 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvl
blt\pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Take advantage of economies of scale
/network externalities.}{\f5\cf1 }{\b\f5 }{\f5\cf1
Economies of scale can exist in purchasing, making strategic decisions, buildin

g computer software, and form
ing distribution or service networks. The hub and spoke networks of airlines in
volve an economy of scale. Running daily flights between San Jose, Houston, Mia
mi, and Buffalo, is considerably cheaper if one has a hub, say in Chicago: with
a hub, only eight
flights a day are required instead of 12 -- economies are increased even more
dramatically as more cities are added, because n cities can be connected using
a hub with only 2n flights
instead of the n(n-1) flights that would be necessary without a hub. These exam
ples are all on the cost side
: average costs fall as the number of customers rises. Scale economies also ari
se on the demand side: the value of some goods rises with market size. For exam
ple, the network of computer users who trade information means that the value o
f a computer progr
am is higher the more people use it.}{\b\f5 }{\f5\cf1 Some argue that the emer
ging global economy requires a certain minimum scale to compete effectively. }{
\f5 Some}{\f5\cf1 times, it is possible to gain the efficiencies of networks wi
thout mergers: fo
r example, airlines can form code sharing agreements, or banks can form recipro
cal agreements to eliminate ATM fees at foreign ATM machines.
\par }\pard {\f5\cf1
\par {\pntext\pard\plain\b\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlbl
t\pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5\cf1 Synergies/economies of scope.}{\f5
\cf1
Two different businesses may require similar expertise. Synergies also exist i
f a customer prefers one-stop shopping: for example, a corporate client may pre
fer to do its financial business with a bank that can make commercial loans and
also do investmen
t banking.}{\b\f5
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20\cf1 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvl
blt\pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Improve management. }{\f5\cf1 When a
better managed firm takes over a poorly manage
d one, economic performance is likely to improve. This is a type of synergy or
managerial economy of scale. When mergers are financed with debt, the debt pay
ments can be a form of commitment, forcing managers who would otherwise shirk t
o perform well. Un
like the '80s, most mergers today are financed by issuing stock, however.
\par }\pard {\f5\cf1
\par {\pntext\pard\plain\b\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlbl
t\pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Eliminate double markups}{\f5 .}{\f5\c
f1
A merger between a firm and its supplier can eliminate double markups -- the s
ituation where a supplier sells its product at a markup over cost, and the buy

er who resells the product or uses it to produce another product marks up this
price still further. Double markups cause economic inefficiency and high prices
. Sometimes, it is
possible to eliminate double markups with contractual solutions instead of merg
ers; such solutions can be problematic, however.}{\b\f5
\par }\pard {\f5
\par
\par Mergers may create inefficiencies as well. Disorganization and coordinatio
n failures are endemic to large organizations. Well-intentioned and hard-workin

g people often work at cross purposes. Also, large
firms may have more difficulties motivating their workers or managers than smal
l firms.
\par
\par In principal, in a large conglomerate, such as those that were typically f
ormed by mergers in the \lquote 60s and \lquote
70s, each business could be run on its own, and the central office might interf
ere only when that was advantageous. Some scholars have argued, howe
ver, that such selective intervention is impossible and that the central office
cannot help but to intervene and meddle even when doing so results in poor bus
iness decisions.
\par
\par Small organizations can be lithe and agile. If mergers create slow-moving
monoliths, they will probably be out-competed on the product market by new sma
ller organizations. One prominent example is IBM: after many years of dominanc
e in the mainframe mark
et in the '60s and '70s, IBM was unable to maintain dominance in the PC market
in the '80s. Even if a large inefficient firm is not out-competed on the produ
ct market, the large firm may invite another takeover similar to those seen in
the '80s, in
which the firm is broken up into smaller parts and sold off at a profit.
\par
\par
\par }{\b\f5 Studies of effect of mergers on subsequent firm performance:}{\b\f
104\fs28
\par }{\f5
\par Given these countervailing factors, are efficiencies generally realized?
The evidence on the subsequent performance of merged firms is mixed, and in man
y ways probably inapplicable to current mergers, b
ecause today's mergers tend to be in closely related industries or the same ind
ustry, whereas the mergers of the '60s and '70s tended to be conglomerate merge
rs.
\par
\par }{\b\f5 Stock market evidence}{\f5
. A study of the 13 leading manufacturing conglomerates (ranked by the number
of acquisitions) showed that these firms outperformed the market between 1965 a
nd 1983. However, these same firms underperformed relative to the market betwee
n 1968 and 1983. I
nterpreting such data is highly problematic, and not only because perform
ance depends upon the date from which one measures. Additionally, the question
is whether these firms had more or fewer acquisitions than the market expected,
and whether the market expected the acquisitions to be profitable. It could be
, for example, tha
t after 1968, acquisitions were still highly profitable and were expected to be
highly profitable, but that these conglomerates made fewer acquisitions than t
he market expected them to make. Recent evidence suggests that stock returns ma
y depend significa
nt
ly upon the type of acquisition. A study of a large sample of acquisitions duri
ng 1970-1989, suggests that firms that complete stock mergers earn significantl
y negative returns over what the market expects during the five-year period fol
lowing the acquisi
tion (-25 percent). In contrast, firms that complete cash tender offers earned
large unexpected positive returns (62 percent). It is anyone's guess whether t

his experience will be repeated with current mergers, which are primarily being
 financed with sto
ck. After all, this recent research is published and could be fully taken into
account by companies deciding whether to merge and shareholders deciding how mu
ch to pay for companies' stock.
\par
\par }{\b\f5 Accounting evidence}{\f5
. Accounting measures of performance suggest that acquired lines of business p
erformed worse after the mergers in the 1960s and 1970s. In contrast, a recent
study of the subsequent performance of the 50 largest mergers of the early 1980
s finds significan
t improvements in asset productivity subsequent
to the merger, particularly for firms with highly overlapping businesses. This
 difference may reflect the fact that mergers in the '60s and '70s tended to be
 conglomerate mergers. However, caution is required. As the authors of the stud
ies concede, accou
nting data are imperfect measures of economic performance. Additionally, it is
not clear whether this is a selection effect (indicative of the types of firms
 acquired) or whether profitability changes are caused by the mergers.}{\b\f5

\par }{\f5
\par }{\b\fs24\cf1 Motivation #2: Shareholder gains through the elimination of
competition.}{\b\f5
\par }{\f5
\par In principle, mergers may be motivated by a desire to eliminate competitio
n, gain market power, and raise prices and profits. Certainly, this was a stron
g motivation in the mergers to monopoly at the turn of the century in industrie
s such as tobacco and o
il. Market power may still be a significant factor in some cases. For example
, a study of 14 airline mer
gers in the mid-1980s finds that prices rose by an average of 10 percent more o
n routes where the merging airlines competed than on routes unaffected by merge
rs.
\par
\par However, evidence from stock price reactions to merger challenges suggests
 that reducing competition is not the motivation for most mergers. If a merger
 is anticompetitive, nonmerging firms in the industry benefit from reduced comp
etitive pressures, so t
he stock prices of nonmerging firms should increase in response to an anticompe
titive merger and decrease in response to the announcement of an antitrust chal
lenge. However, studies from the 1980s find that, on average, nonmerging firm
stocks do }{\i\f5
not}{\f5 fall, and may actually rise, with the announcement of merger challeng
es. This suggests that the elimination of competition is not a significant mot
ive for most mergers.
\par
\par One reason firms may not merge for anticompetitive reasons is the presence
 of antitrust enforcement designed to prevent anticompetitive mergers. The ant
itrust authorities keep a close
 watch on such mergers and challenge them when they can show in court that the
merger is likely to substantially lessen competition. Other agencies can someti
mes block particular types of mergers under a weaker standard. For example, the
 FCC can block mer
gers among telecommunications companies when they don't benefit the public inte

rest.
\par
\par
\par }{\b\fs24\cf1 Motivation #3: Managerial rent seeking at shareholders' expe
nse.
\par }{\f5\cf1
\par Managers have enormous discretion and do not necessarily act in shareholde
rs' interest. Part of the motivation for any merger could be managers pursuing
their own interests.}{\b\f5
\par
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Empire building}{\f5\cf1 . Managers may
acquire other firms simply so that they can run a larger firm to satisfy their
egos. }{\f5
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5\cf1 Entrenchment.}{\f5\cf1 Managers may
takeover other firms to increase their own job security.}{\b\f5\cf1 }{\f5\cf1

For example, as discussed above, a local telecommunications company might merg
e with a cable television provider out of fear that cable might become dominant
in Internet connection services and ultimately in Internet telephony. Merger
s motivated by}{
\f5
risk diversification may not be in shareholders interest because in publicly h
eld companies, shareholders are probably able to diversify risks more efficient
ly by selling some shares in one company and buying shares in other companies.
Nonetheless, such
mergers may preserve a manager's job because at least one company should prospe
r.
\par }\pard {\f5
\par
\par }{\b\fs24\cf1 Possible factors in present merger wave:
\par }{\f5
\par There is no single reason why so many firms are merging today. Each merger
has its to own explanations and often several explanations. Some of the preva
lent explanations today are:
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Adjusting to falling regulatory barriers
}{\f5
. Mergers have followed the removal of branching restrictions in banking and ow
nership restrictions in radio. For example, under the Riegle-Neil Act of 1994,
virtually full interstate branch banking became possible in June 1997. Banks ha
ve merged as restr
ictions have been removed, first intra-state restrictions and later interstate
restrictions. Banks are probably achieving efficient scale by merging. Absent o
ur history of regulation, the U.S. would probably not have so many small banks.

\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Technological change}{\f5
. Could rapid technological change motivate some mergers? Some mergers may be m
otivated by the widely touted, but still nascent, phenomenon of "convergence" i

n the information technology industry. For instance, as textbook publishers beg
in to supplement t
heir materials with multimedia software, they may acquire small software compan
ies. Cable television providers may combine with Internet service providers in
anticipation of the possibility that cable becomes the prevalent means to conne
c
t homes to the Internet. Also, to the extent that rapid technological change me
ans that it is unclear what technologies will be used in the near future, firms
may hedge their bets: this may explain why a local telecommunications company
might merge with a
cable television provider.
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Globalization}{\f5
. There is a common perception on Wall Street and elsewhere that the emergent g
lobal economy demands large scale to participate. A European and American firm
may combine to take advantage of the distribution networ
ks that each has on its own continent. Also, to the extent that European or Asi
an firms are more integrated in certain sectors such as the financial sector, U
.S. firms may find it necessary to integrate more to provide one-stop shopping
for foreign custom
ers who demand that.
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnstart1\pnindent720\pnhang{\pntxtb \'b7}}{\b\f5 High stock market}{\f5 .

Price-earnings ratios have increased to near-record levels during the current m
erger wave, and some economists feel that the market may be overvalued. Howeve
r, many economists and market participants feel that current stock prices are j
ustified.
Could high stock market prices explain the current merger wave? If a given man
ager knows her own stock to be overvalued then she will fund acquisitions with
stock, which has been the dominant funding source in the current merger wave.
But it is less clear that an overvalued stock market necessarily leads to gre
ater numbers of mergers, because if other firms are also overvalued then there
are fewer attractive targets to acquire.
\par }\pard {\f5
\par }\pard {\f5
\par }\pard {\b\fs28\cf1 Concentration Effects of Mergers
\par }\pard {\f5
\par }\pard {\f5\cf1 Although the U.S. is in the midst of a large merger wave,
concentration will not necessarily increase. Mergers do not necessarily increa
se concentration in any re
levant market. Merging firms may be in different businesses, non-competing regi
ons, or in supplier-buyer relationships. Even when the merger is among competit
ors, increasing global competition or domestic entry could be simultaneously dr
iving concentratio
n down.
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Non-competing regions}{\f5
. Many mergers in banking, telecommunications, and elsewhere do not increase co
ncentration in a relevant market because the firms serve different regions or m
arket segments. (e.g., Bell Atlantic and Nynex served different marke

ts, as described in the 1998 Economic Report of the President).
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Global Competition}{\f5
. Global competition is decreasing concentration by making relevant markets bro
ader. Mergers that would increase concentration significantly absent this globa
l competitiveness, don't necessarily do so today, as pointed out by the FTC cha
irman Robert Pitof
sky (New York Times, January 19 1998). Although there are no reliable measures
of the changes in the concentration of typical markets over time, it is easy t
o imagine that e
merging global markets are decreasing concentration at a faster rate than merge
rs increase concentration.
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Sell-offs/corporate divorces}{\f5
. Not all mergers last forever. "Bust-ups" were common in the late '80s, when a
firm was bought only to be sold off in pieces within a couple of years. Up to
40 percent of mergers in the '70s ended in divorces. However, it is unclear how
often spinoffs oc
cur when firms are in the same business -- we do now that the rate of sell-offs
was much higher, perhaps 60 percent, for mergers in the '70s when the asset ac
quisitions were unrelated.
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20\cf1 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvl
blt\pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Entry. }{\f5\cf1
Entry can sometimes offset concentration increases from mergers, particularly i
f the merging firms try to raise prices. The}{\i\f5\cf1 merger guidelines}{\f5
\cf1 required that entry be probable to be counted.
\par }\pard {\f5\cf1
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5\cf1 Vertical mergers}{\f5\cf1
. Mergers between a firm and its supplier do not increase concentration, becaus
e these firms are not competitors. So, for example, when a soft drink firm like
Pepsi buys a restaurant chain like California Pizza Kitchen, concentration d
oes not rise in either the restaurant or soft drink business, except in so far
as Pepsi owns other restaurant chains. Sometimes, however, such mergers may non
etheless raise antitrust concerns, such as when the merger causes a third firm
to be excluded fro
m a market.}{\f5
\par }\pard {\f5\cf1 }{\f5
\par Banking provides an excellent example of how mergers do not necessarily in
crease concentration. Although there have been a large number of bank mergers i
n the past 20 years, concentration measures for local banking deposits have rem
ained extre
mely stable: in metropolitan statistical areas, the average four-firm concentra
tion ratio has remained between 65 and 68 percent. One reason is that mergers h
ave often been between banks that serve different regions. To the extent that b
anks were serving
the same region and concentration initially increased, domestic and foreign ent
ry may have helped to offset such concentration increases.
\par }\pard {\f5
\par }{\f5\cf1 If a given merger nonetheless increases concentration in a marke
t, it may:}{\fs24\cf1

\par }{\f5
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Increase prices}{\f5 . Concentration inc
reases
market power. Firms can raise prices on their own, or in some cases successfull
y collude with other firms to raise prices. The extent to which prices increase
with concentration depends greatly upon the nature of competition and the pric
e sensitivity of d
emand in a given market. When products are differentiated, instead of homogeneo
us, a merger could raise prices significantly. This fact lead the Justice Depar
tment to force a restructuring in the recent merger of Continental Baking Co. a
nd Interstate Bake
ries Corp. after the Justice Department determined that the market for white br
ead was highly differentiated despite appearances.
\par }\pard {\f5
\par }\pard \li720 {\f5
Evidence from a variety of sources supports the view that increases in concentr
ation increase price. As mentioned previously, the increases in concentration
due to mid-1980s airline mergers led to average price increases of 10 percent o
n routes affected
by the mergers. According to a study of grocery stores in Vermont, prices are
about 2 percent higher in two-firm markets than
they are in markets with four stores of equal size. And a study of small-town
retail and professional service industries concludes that decreases in concentr
ation significantly increase the competitiveness of the market; most of the com
petitive gain come
s with the introduction of the second and third firm into the market.
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20\cf1 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvl
blt\pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Lower service. }{\f5\cf1
Just as firms may raise prices in a concentrated industry, they also may lower
quality. When a firm has fewer competitors, the calculus of comparing costs sav
ings from red
uced service on existing customers with revenue losses from customers who flee
to high service firms changes, and a firm may be much more apt to cut the quali
ty of service.
\par }\pard {\f5\cf1
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5\cf1 Decreased variety.}{\f5\cf1
Fewer firms may mean fewer products from which to choose. The cereal industry,
however, shows that this is not always the case.}{\f5
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Change the pace of innovation. }{\f5\cf
1
The effect of mergers on the rate of innovation is highly ambigous. Most econom
ists believe that competition drives innovation and concentration inhibits it.

Judge Learned Hand wrote: "Unchallenged economic power deadens initiative." The
British economist John Hicks wrote: "the best of all monopoly profits is a qui
et life." On the other hand, concentration could speed innovation.}{\b\f5 }{\f
5\cf1
A monopolist may in some cases invest more in research and development than wou
ld a competitive firm, because the monopolist can capture more of the returns t

o investments, worrying less about technological spill overs.}{\f5
\par }\pard {\f5
\par }\pard \li720 {\f5 Although there is less evidence on the effects of merge
rs on innov
ation than there is on the effects on price, studies of the effects of 1980s ta
keovers on R&D and other types of investment suggest that mergers may have litt
le impact on innovation. During the 1980s, takeover targets did little R&D to
begin with and the
re were no noticeable R&D cuts after takeovers. Furthermore, except for highly
 leveraged transactions there is not much evidence that takeovers resulted in l
arge capital spending cuts.}{\f5\cf1
\par }\pard {\f5
\par {\pntext\pard\plain\f1\fs20 \'b7\tab}}\pard \fi-720\li720{*\pn \pnlvlblt\
pnf1\pnindent720 {\pntxtb \'b7}}{\b\f5 Raise regulatory concerns. }{\i\f5 One
issue is benchmarking}{\f5 . Having multipl
e competitors can help regulators benchmark costs, using the cost gain of one f
irm as a measure of what another could accomplish. Also, if one company makes a
 claim that something is impossible (such as having a telephone number be porta
ble when a custome
r switches local phone companies), this claim can be falsified if another compa
ny is successful. }{\i\f5 Another issue is cross-subsidization}{\f5
. In some cases a merged and regulated firm may be able to profit by some form
of cross subsidization. For example, if a lon
g distance carrier and local telephone carrier merge, the merged firm might be
able to shift some long distance costs into the local rate base. A}{\i\f5 thir
d regulatory issue is safety and soundness}{\f5 . Bigger banks create
bigger problems when they fail.
\par }\pard {\f5
\par }\pard {\f5 \tab
\par }}================= END ATTACHMENT 1 =================

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:20-MAY-1998 16:36:40.00

SUBJECT: WEB article on EMF results

TO: Charles F. Stone (CN=Charles F. Stone/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
---------------------- Forwarded by Janet L. Yellen/CEA/EOP on 05/20/98
04:35 PM ---------------------------

Jeffrey A. Frankel
05/19/98 03:37:16 PM
Record Type: Record

To: Janet L. Yellen/CEA/EOP
cc:
Subject: WEB article on EMF results

I am passing the pen to Joe now.
JF

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

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D65]MAIL426786932.126 to ASCII,
The following is a HEX DUMP:

The First Models of Kyoto

Five months after an agreement to limit greenhouse gases was negotiated in Kyoto, economists who maintain large econometric models of climate change policy are incorporating the terms of the agreement into their estimates. The Energy Modeling Forum, the leading model comparison exercise, held its 16th meeting in Washington, D.C., May 14-15. The preliminary results presented tend generally to be consistent with the economic analysis that underlies Administration testimony to Congress regarding the likely economic effects of climate change policy. In particular, they show the importance of international trading, broad-based international participation, and other flexibility aspects that are part of the U.S. position.

A dearth of model results No model -- whether used inside the government or not -- was as of December set up precisely to analyze the parameters of the agreement that was reached in Kyoto. For example, no model was designed to assess sinks (afforestation, etc.), let alone all six gases covered by the agreement; attention had focused overwhelmingly on carbon dioxide. It can take years to incorporate changes in policy parameters into large econometric models When the Council of Economic Advisers was called by Congress to testify on the likely economic implications of climate change policy in March, some numbers were drawn from the Second Generation Model of Battelle Laboratories, because it seemed better positioned than most to analyze the role of international trade in emission permits. But the SGM results had to be integrated with cost analyses of the other gases by EPA in a relatively ad hoc manner. Furthermore, everyone was painfully aware that no single model can be relied on to answer with confidence the variety of important questions that are relevant.

EMF results The Energy Modeling Forum is coordinated from Stanford University. Of the __ models that participate, only a few have yet been able to produce results based on the specifics of the Kyoto Protocol. They are listed in the Table, alongside the estimates that underlie CEA economic analysis....

[TABLE]

The importance of trading...

The importance of developing country participation ...

Unfinished business...

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:20-MAY-1998 15:05:20.00

SUBJECT: coal

TO: Michele Jolin (CN=Michele Jolin/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.D88]MAIL453726935.126 to ASCII,
The following is a HEX DUMP:

COAL

What will happen to the coal industry in the United States under your scenario?

- Remember we don't have a binding agreement at this point and won't until the Senate ratifies a treaty. A permit system would not be put into place for a decade under POTUS' proposal, so we are talking about impacts a decade away.

- Coal has the highest carbon content per unit of energy among fossil fuels and is a major source of greenhouse gas emissions, so any strategy to reduce greenhouse gas emissions is very likely to impact the coal industry. It is the industry in the United States that is most likely to see an impact from the policy. Indeed, coal prices will be most sensitive to pricing of carbon emissions permits once such a system is in place.

- The coal industry begins from a situation in which, due to rapid productivity growth, employment has been declining notwithstanding output growth. Even without a GHG emissions plan, national coal employment was projected to fall substantially. We are, therefore, concerned about the industry and its workers.

- Even so, we should not exaggerate the impact of this policy on coal. For example, using the SGM model to gauge possible impacts of a carbon permit price in the $14-$23 range suggests a possible reduction in coal use of 7% to 13% below BAU in 2010. The price of coal would rise by $7 - $13 per ton. However, coal use might still grow between now and 2010. So the impact could be to reduce, even substantially, growth in coal output, but not to lower coal use absolutely in the United States. Recall, that the U.S. will be expected to attain a fraction of its commitment through international emissions reductions. This and other flexibility mechanisms have been central to our approach.

- The President is fully committed to helping workers adversely affected by climate change policies.

- Having said that, it would be wrong to write coal out of our energy future because there is the possibility of increasing the energy efficiency of coal and also, ultimately, of developing techniques to sequester the CO2 emissions from coal. The President's climate change initiative seeks to develop lower-carbon coal combustion technology that offers the possibility of much lower carbon emissions than existing technologies and sequestration techniques. The DOE Office of Fossil Energy's program, Vision 21, has the goal of developing a power system that is highly efficient, produces no appreciable air pollutants and has no net carbon dioxide emissions (due to sequestration). (Technologies for CO2 capture and sequestration are being deployed today. In Norway, for example, Statoil is using state of the art technology to sequester CO2 from production of natural gas in saline aquifers under the North Sea. These and more economical methods could be applied to coal systems. In addition, the goal is a system that produces power at a cost that is competitive with natural gas. The PCAST report indicates that this is very ambitious but has some chance of being realized and is an appropriate target for DOE.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:20-MAY-1998 16:42:00.00

SUBJECT:

TO: Charles F. Stone (CN=Charles F. Stone/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.D65]MAIL492096932.126 to ASCII,
The following is a HEX DUMP:

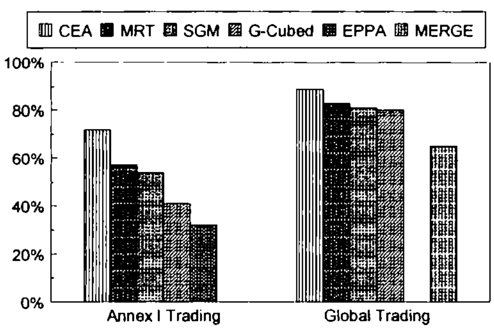
The First Models of Kyoto

Five months after an agreement to limit greenhouse gases was negotiated in Kyoto, economists who maintain large econometric models of climate change policy are incorporating the terms of the agreement into their estimates. The Energy Modeling Forum (EMF), the leading model comparison exercise, held a meeting in Washington, D.C., May 14-15. The preliminary results presented tend generally to be consistent with the economic analysis that underlies Administration testimony to Congress regarding the likely economic effects of climate change policy. In particular, they show the importance of international trading, broad-based international participation, and other flexibility aspects that are part of the U.S. position.

A dearth of model results. Models -- those used inside the government as well as outside -- were not as of December set up precisely to analyze the parameters of the agreement that was reached in Kyoto. For example, no model was designed to assess carbon sinks (afforestation, etc.), let alone all six categories of greenhouse gases covered by the agreement; attention had previously focused overwhelmingly on carbon dioxide. It can take years to incorporate changes in policy parameters into large econometric models When Congress called on the Council of Economic Advisers to testify on the likely economic implications of climate change policy in March, some numbers were drawn from the Second Generation Model (SGM) of Battelle Laboratory, because it seemed better positioned than most to analyze the role of international trade in emission permits. But the SGM results had to be integrated with cost analyses of non-carbon dioxide greenhouse gases by EPA in a relatively ad hoc manner. Furthermore, everyone was painfully aware that no single model can be relied on to answer with confidence the variety of important questions that are relevant.

Model	Modeling Team
SGM	Edmonds et al (Battelle Laboratory)
MERGE	Manne and Richels (Stanford and Electric Power Research Institute)
MRT	Montgomery and Rutherford (Charles River Associates and University of Colorado)
EPPA	Jacoby (Massachusetts Institute of Technology)
G-Cubed	Shackleton (Environmental Protection Agency)

EMF results. The Energy Modeling Forum is coordinated from Stanford University. Of the __ models that participate, only five have yet been able to produce results based on the specifics of the Kyoto Protocol (see table). These models are capable of assessing the long-run impacts of reducing carbon dioxide emissions on energy consumption, energy prices, and the economy as a whole.



Reductions in the Permit Price through trading.

The importance of trading. All five of these models can account for international trading of emissions allowances, as called for in the Kyoto Protocol. Four of the EMF models illustrate the possible reductions in permit prices available with Annex I trading that are comparable to the early CEA estimate (see figure). Since permit prices directly affect energy prices, substantial reductions in permit prices imply much smaller increases in energy prices than under a no trading scenario. It should also be noted that the MERGE model assessed the effects of a constraint on the amount any country could purchase from abroad (no more than 33% of emissions reductions from abroad), and found that it resulted in a U.S. permit price nearly 5 times greater than the Annex I trading permit price.

The importance of developing country participation. In addition to the benefits of emissions trading among Annex I countries, the model results indicate that further cost-savings may be available from developing countries that adopt emissions targets and participate in trading. Indeed, three EMF models and the CEA analysis found that global trading reduces the U.S. permit price by more than 80% relative to a "no trading" scenario.

Unfinished business. The EMF results presented last week are preliminary, and many modelers have yet to weight in. The modelers are still grappling with some of the key flexibility mechanisms in the Kyoto agreement. First, the opportunities to account for carbon sequestration (sinks) in achieving emissions targets need to be better understood and incorporated into the analyses. Some modelers experimented with rough estimates of potential sinks for a set of countries, and found that carbon sinks could lower permit prices and compliance costs. Second, the cost-effective reduction opportunities associated with non-carbon dioxide greenhouse gases require additional research. (These opportunities may explain why the CEA estimates in the graph show reductions that are a bit greater than those from the EMF models.) This effort will likely involve calculation of emissions reductions costs for methane, nitrous oxide, sulfur hexfluoride, and HFCs and PFCs (many of which are substitutes for CFCs) and assessing the possible benefits of trading across greenhouse gases. Third, several modelers indicated that if a small set of countries are net sellers, such as Russia and the Ukraine, then they may be able to act like a cartel and drive up the permit price on the emissions market. Further research is necessary to assess the potential for such an outcome. The Energy Modeling Forum anticipates that more refined results on the economic effects of the Kyoto Protocol will be presented at its next meeting this August.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Jeffrey A. Frankel (CN=Jeffrey A. Frankel/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:20-MAY-1998 12:22:34.00

SUBJECT: EMF article for WEB

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

TO: Joseph E. Aldy (CN=Joseph E. Aldy/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

CC: Adele C. Morris (CN=Adele C. Morris/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

CC: Randall W. Lutter (CN=Randall W. Lutter/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
Janet, here is the current version.
(Joe: I have entered a few more changes in this draft.)
The last paragaraph will have to be cut some, I think.=================== ATTACHMENT 1
===================
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D74]MAIL42281593S.126 to ASCII,
The following is a HEX DUMP:

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EPPA	Jacoby (Massachusetts Institute of Technology)
G-Cubed	Shackleton (Environmental Protection Agency)

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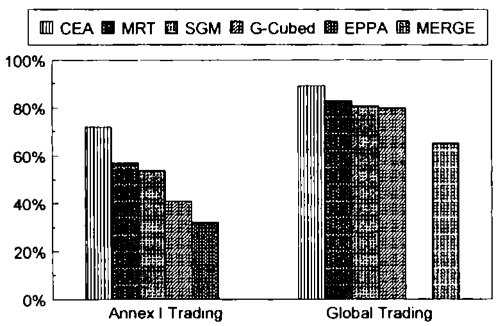

Reductions in the Permit Price through trading.

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RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:20-MAY-1998 18:43:25.00

SUBJECT: Indonesia

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

TEXT:
Lael says that the Indonesia meetings are exclusively about foreign policy so you may not be interested in investing any time. I asked her to let me know if there are Indonesia meetings that have economics on the agenda. She said she will. Do you want me to do anything else? Do you want me to call Steinberg's office and get you invited to these meetings?
Let me know.
Thanks
---------------------- Forwarded by Michele Jolin/CEA/EOP on 05/20/98 06:40 PM ---------------------------

Lael Brainard
05/20/98 06:21:01 PM
Record Type: Record

To: Michele Jolin/CEA/EOP
cc:
Subject: Re: Janet and Indonesia

NSC held a Deputies meeting today with our participation. At the moment, focus is exclusively foreign policy so I don't know how much time Janet would want to invest. But if she does want to get involved, you should call Steinberg's office & ask them to include her.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:21-MAY-1998 10:04:33.00

SUBJECT: Mergers Mtg on Wed

TO: Aaron S. Edlin (CN=Aaron S. Edlin/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: Charles F. Stone (CN=Charles F. Stone/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

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

CC: Alice H. Williams (CN=Alice H. Williams/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
Dorothy Robyn said that Janet should bring Jeff, Chad and Aaron to the Mergers Mtg on Wed. She said that the invitation will come as Janet +1... but that CEA should be sure to bring the whole team. Alice, let me know if you run into any problems on that front. Thanks.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Joseph J. Minarik (CN=Joseph J. Minarik/OU=OMB/O=EOP [OMB])

CREATION DATE/TIME:22-MAY-1998 11:34:40.00

SUBJECT: MSR Summary

TO: Steven N. Braun (CN=Steven N. Braun/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:
These are the summary pages of the MSR, incorporating comments from CEA, Treasury, and NEC. I will get you a copy of the economic assumptions pages, incorporating CEA comments. We expect to send the economic assumptions pages around again very soon.=================== ATTACHMENT 1
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EXECUTIVE SUMMARY

After five consecutive years of declining deficits, the Federal budget is about to pass another milestone. In fiscal year 1998, marking the sixth consecutive year of improved fiscal balance, and the longest such series in history, the Federal budget will achieve its first surplus in 29 years.

The Administration projects that the surplus for 1998 will be $39 billion, the largest surplus in dollar terms in all of U.S. history, and the largest as a percentage of GDP since 1957. Furthermore, the Administration's projections indicate that this budget surplus could grow over the next four years to $148 billion by fiscal year 2002 — part of what would be the longest and largest (by any yardstick) sustained debt reduction in our history.

These results are unprecedented, and are the fruits of years of fiscal prudence, conservative economic forecasting, and unwavering discipline — which in turn generated the economic strength of the last five years. Last year's budget agreement is now putting the finishing touches on the President's effort to restore the Nation's fiscal health, begun in 1993, by bringing the era of exploding deficits to an end.

In his first budget, submitted in the Administration's first days in 1993, President Clinton confronted the then-record deficit with a program of budget savings of $505 billion over five years — more than half of which came from spending cuts. The President, with the support of the Congress, saw the plan through to enactment — despite dire predictions that this budget would send the economy into recession, destroy jobs, raise interest rates, and ultimately undermine our fiscal health.

The facts tell another story — a story of a virtuous cycle in which deficit reduction caused interest rates to fall, and investment to boom, leading to an unprecedented combination of sustained growth and falling inflation. Some authorities have proclaimed today's economy as the best ever.

Since 1993, spending levels have come in consistently below what this Administration projected. In other words, we have achieved the spending cuts that the President proposed, and more besides. In fact, actual Federal outlays as a percentage of GDP have declined in every year of this Administration. Indeed, actual outlays have constituted a smaller share of the GDP in ***every*** year for which this Administration submitted a budget than they were in ***any*** year under the two preceding Administrations. There is no doubt that this Administration has controlled the size of Government more effectively than its predecessors.

While Government spending cuts have contributed substantially to deficit reduction, strong revenue growth in the last few years has helped enormously, and has occurred without an excessive tax burden. Tax revenues have grown in substantial part because of the unprecedented strength of the economy, caused by the President's 1993 program.

Typical taxpayers are clearly better off as a result. Real wages are growing for the first time in a quarter of a century, the unemployment rate is at its lowest since 1970, and the Federal income and payroll tax burden on the median family is at its lowest in more than 20 years. The stock market has leaped to record levels. And at the same time, the lowest interest rates since the 1960s have helped families to buy new homes and other durables more cheaply.

In 1993, the President pledged to cut the deficit in half by 1998; in fact, he eliminated it entirely. Then, in 1997, the President pledged to balance the budget by 2002; in fact, he was able to meet and surpass that goal this year.

This fact means that the President's call in his State of the Union address to save Social Security First has become even more timely. We have solved the structural deficit, and thereby built the necessary groundwork to eliminate the generational deficit that remains. Six years ago, the most sanguine observer would have expected the Federal Government today would still be grappling with a serious budget deficit. Instead, we now can — if we so choose — address the watershed issue of Social Security soundness in a timely fashion, and from a position of fiscal strength.

Thus, we must maintain the President's course to save Social Security First, and defer any discussions of using any of the budget surplus for any other purpose until we have saved Social Security for the next century. We must not set our budget and our economy back by another quarter of a century through the fiscal improvidence of dissipating the first budget surplus in so many years.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Charles F. Stone (CN=Charles F. Stone/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:26-MAY-1998 18:08:50.00

SUBJECT:

TO: Janet L. Yellen (CN=Janet L. Yellen/OU=CEA/O=EOP @ EOP [CEA])
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Mergers: Causes and Consequences
Council of Economic Advisers
May 22, 1998

I. Overview

The economic analysis of mergers, takeovers, and divestitures focuses on the motives of corporate managers and the private and social consequences of the decisions they make in deploying the assets they control.

- One major strand of analysis looks at managers' efforts to maximize the value of their firms. Mergers are undertaken when managers believe that combining two companies' assets will boost profitability (and hence stock market value). This can occur because the combined company is expected to achieve greater efficiency (lower costs) or because the combined company is expected to enjoy enhanced market power (higher prices) or other advantages that do not reflect improved operating efficiency (such as tax advantages).

- A different strand of analysis recognizes that managers' interests and shareholders' interests may diverge. Managers may pursue mergers because they expect to derive personal benefits, irrespective of the impact on shareholders.

- In either case, the evaluation of mergers from a public policy perspective does not focus on whether mergers turn out to be profitable but how they affect economic efficiency and other public policy objectives.

This memo analyzes the three main motives for mergers in greater detail and assesses possible explanations for the current merger wave. It then analyzes the consequences of mergers.

II. Motives for Mergers

1. Shareholder gains through efficiencies.

The main reason managers give for undertaking mergers is to increase efficiency. And studies of mergers show that, on average, the combined equity value of the acquired company and the purchasing company rises as a result of the merger. Ways in which mergers can increase efficiency include the following:

- <u>Reductions in excess capacity</u>. This justification has been invoked in hospital mergers, defense mergers, and banking mergers among others. If these cost savings are passed along in the form of lower prices, consumers can benefit as well. However, in some cases, excess capacity before a merger may have been what kept prices low.

- Economies of scale/network externalities. Economies of scale can exist in purchasing, making strategic decisions, building computer software, and forming distribution or service networks. An example is the hub and spoke networks of airlines. Running daily flights between San Jose, Houston, Miami, and Buffalo, is considerably cheaper if one has a hub, say in Chicago: with a hub, only eight flights a day are required instead of 12—economies are increased even more dramatically as more cities are added.

  Scale economies also arise on the demand side: the value of some goods rises with market size. For example, the network of computer users who trade information means that the value of a computer program is higher the more people use it.

  Mergers, however, are not the only way to achieve network efficiencies. For example, airlines can form code sharing agreements, or banks can form reciprocal agreements to eliminate ATM fees at foreign ATM machines.

- Synergies/economies of scope. Two different businesses may require similar expertise. Synergies also exist if a customer prefers one-stop shopping: for example, a corporate client may prefer dealing with a bank that can make commercial loans and do investment banking.

- Management improvements. When a better-managed firm takes over a poorly managed one, economic performance is likely to improve. Thus, in the market for corporate control, takeovers (or the threat of takeovers) can serve as a disciplining device for managers. When mergers are financed with debt, the debt payments can be a form of commitment, providing a greater incentive for managers to perform well. Unlike the 1980s, however, most mergers today are financed by issuing stock.

- Eliminating double markups. A vertical merger between a firm and its supplier can eliminate double markups—in which a supplier sells its product at a markup over cost, and the buyer who resells the product or uses it to produce another product marks up this price still further. Double markups cause economic inefficiency and high prices. Sometimes, it is possible to eliminate double markups with contractual solutions instead of mergers; such solutions can be problematic, however.

Even if mergers do not affect market power (as discussed in the next section), an increase in the value of stock arising from a merger does not always represent an efficiency gain. Sometimes shareholder gains comes at the expense of other claimants.

- Employees. Layoffs sometimes follow a merger (on average 2.5 percent of the target firm's labor force was laid off during the 1980s).

- Debt holders. When a takeover is financed with debt (as was common during the 1980s, some of the increase in stock value could also come at the expense of existing debt holders, whose claim may be devalued by the merger

- <u>Government revenue</u>. Historically, mergers sometimes provided tax advantages. Before the repeal of the General Utilities doctrine in the Tax Reform Act of 1986, an acquiring firm could get a stepped-up basis that could be depreciated or amortized (saving taxes) without the target corporation owing taxes on the capital gain. After 1986, this loophole was closed and corporations could no longer have their cake and eat it too in this way. Taxes could still be saved by using net operating loss carryover's (NOL's), but this tax savings was also largely eliminated, first by congressional action and later by the Treasury's Goldome regulations finalized in 1991.

Mergers do not inevitably produce more efficient companies; they may create inefficiencies as well.

- Disorganization and coordination failures are endemic to large organizations. Well-intentioned and hard-working people often work at cross purposes. Also, large firms may have more difficulties motivating their workers or managers than small firms.

- In principal, in a large conglomerate, such as those that were typically formed by mergers in the 1960s and 1970s, each business could be run on its own, and the central office might interfere only when that was advantageous. Some scholars have argued, however, that such selective intervention is impossible and that the central office cannot help intervening and meddling even when doing so results in poor business decisions.

- Small organizations can be lithe and agile. If mergers create slow-moving monoliths, they will probably be out-competed on the product market by new smaller organizations. One prominent example is IBM: after many years of dominance in the mainframe market in the 1960s and 1970s, IBM was unable to maintain dominance in the PC market in the 1980s. Even if a large inefficient firm is not out-competed on the product market, the large firm may invite another takeover similar to those seen in the 1980s, in which the firm is broken up into smaller parts and sold off at a profit.

Given these countervailing factors, are efficiencies generally realized? The evidence on the subsequent performance of merged firms is mixed, and much of the evidence from earlier merger waves may be of dubious value in assessing current mergers. Today's mergers tend to be in closely related industries or the same industry, whereas the mergers of the 1960s and 1970s tended to be conglomerate mergers. The following are some illustrative findings:

- A study of the 13 leading manufacturing conglomerates (ranked by the number of acquisitions) showed that these firms outperformed the market between 1965 and 1983 but that the gains were concentrated in the first few years. These same firms underperformed relative to the market between 1968 and 1983.

- A study of a large sample of acquisitions during 1970-1989, found that when an acquiring company used its own stock to take over another company, subsequent performance of the merged firm was substantially below market expectations. By contrast, companies that issued debt to make a cash takeover substantially outperformed expectations. One interpretation is that managers who used stock had reason to think that their companies were overvalued.

- Accounting measures of performance suggest that acquired lines of business performed worse after the mergers in the 1960s and 1970s. A recent study of the subsequent performance of the 50 largest mergers of the early 1980s, by contrast, finds significant improvements in asset productivity subsequent to the merger, particularly for firms with highly overlapping businesses. This difference may reflect the fact that mergers in the 1960s and 1970s tended to be conglomerate mergers. Also, accounting data are imperfect measures of economic performance and these results should be judged with caution.

2. *Shareholder gains through the elimination of competition.*

In principle, mergers may be motivated by a desire to eliminate competition, gain market power, and raise prices and profits.

- Certainly, this was a strong motivation in the mergers to monopoly at the turn of the century in industries such as tobacco and oil. Market power may still be a significant factor in some cases. For example, a study of 14 airline mergers in the mid-1980s finds that prices rose by an average of 10 percent more on routes where the merging airlines competed than on routes unaffected by mergers.

- Evidence from stock price reactions to merger challenges suggests, however, that reducing competition is not the motivation for most mergers. If a merger is anticompetitive, nonmerging firms in the industry benefit from reduced competitive pressures, so the stock prices of nonmerging firms should increase in response to an anticompetitive merger and decrease in response to the announcement of an antitrust challenge. Yet studies from the 1980s find that, on average, nonmerging firm stocks do *not* fall, and may actually rise, with the announcement of merger challenges.

- One reason firms may not merge for anticompetitive reasons is the presence of antitrust enforcement designed to prevent anticompetitive mergers. The antitrust authorities keep a close watch on such mergers and challenge them when they can show in court that the merger is likely to substantially lessen competition. Other agencies can sometimes block particular types of mergers under a weaker standard. For example, the FCC can block mergers among telecommunications companies when they do not benefit the public interest.

3. *Managerial self-interest*

Managers have enormous discretion and do not necessarily act in shareholders' interest. Part of the motivation for any merger could be managers pursuing their own interests.

- <u>Empire building</u>. Managers may acquire other firms simply so that they can run a larger firm to satisfy their egos. Also, to the extent that managerial salaries increase with increasing firm size, managers may have a personal incentive to create a larger firm.

- Entrenchment. Managers may take over other firms to increase their salary or job security. For example, as discussed above, a local telecommunications company might merge with a cable television provider out of fear that cable might become dominant in Internet connection services and ultimately in Internet telephony. Mergers motivated by risk diversification may not be in shareholders interest because in publicly held companies, shareholders are probably able to diversify risks more efficiently by selling some shares in one company and buying shares in other companies. Nonetheless, such mergers may preserve a manager's job because at least one company should prosper.

4. Possible Factors in the Current Merger Wave

There is no single reason why so many firms are merging today. Each merger has its own explanation and often several explanations. Some of the prevalent explanations today include:

- Adjusting to falling regulatory barriers. Mergers have followed the removal of branching restrictions in banking and ownership restrictions in radio. For example, under the Riegle-Neil Act of 1994, virtually full interstate branch banking became possible in June 1997. Banks have merged as restrictions have been removed, first intra-state restrictions and later interstate restrictions. Banks are probably achieving efficient scale by merging. Absent our history of regulation, the U.S. banking industry would probably have far fewer small banks and look more like the banking system in most other countries.

  Mergers in the telecommunications industry are also tied to the breakup of AT&T and to the deregulation and market-opening steps that followed the Telecommunications Act of 1996.

- Technological change. Some mergers may be motivated by the widely touted, but still nascent, phenomenon of "convergence" in the information technology industry. For instance, as textbook publishers begin to supplement their materials with multimedia software, they may acquire small software companies. Cable television providers may combine with Internet service providers in anticipation of the possibility that cable becomes the prevalent means to connect homes to the Internet. Also, to the extent that rapid technological change means that it is unclear what technologies will be used in the near future, firms may hedge their bets: this may explain why a local telecommunications company might merge with a cable television provider.

- Globalization. The emergent global economy may demand large scale to participate. A European and American firm may combine to take advantage of the distribution networks that each has on its own continent. Also, to the extent that European or Asian firms are more integrated in certain sectors such as the financial sector, U.S. firms may find it necessary to integrate more to provide one-stop shopping for foreign customers who demand that.

- High stock market. Price-earnings ratios have increased to near-record levels during the current merger wave, and some economists feel that the market may be overvalued. Could high stock market prices explain the current merger wave? If a given manager knows her own stock to be overvalued then she will fund acquisitions with stock, which has been the dominant funding source in the current merger wave. But an overvalued stock market does not necessarily lead to more mergers, because if other firms are also overvalued then there are fewer attractive targets to acquire.

III. Concentration Effects of Mergers

Although the U.S. is in the midst of a large merger wave, concentration will not necessarily increase. Mergers do not necessarily increase concentration in any well-defined market. Merging firms may be in different businesses, non-competing regions, or in supplier-buyer relationships. Even when the merger is among competitors, increasing global competition or domestic entry could be simultaneously driving concentration down.

- Non-competing regions. Many mergers in banking, telecommunications, and elsewhere do not increase concentration in a relevant market because the firms serve different regions or market segments. However, even in such cases, a merger may increase concentration in the future if it precludes future competition. The FCC emphasized this factor, for example, in its August 14, 1997 Order on the NYNEX-Bell Atlantic merger to justify the FCC's demand that Bell Atlantic make various market opening concessions.

- Global competition. Global competition is decreasing concentration by making relevant markets broader. Mergers that would increase concentration significantly absent this global competitiveness, do not necessarily do so today. Although there are no reliable measures of the changes in the concentration of typical markets over time, it is easy to imagine that emerging global markets are decreasing concentration at a faster rate than mergers increase concentration.

- Sell-offs/corporate divorces. Not all mergers last forever. "Bust-ups" were common in the late 1980s, when a firm was bought only to be sold off in pieces within a couple of years. Up to 40 percent of mergers in the 1970s ended in divorces. However, it is unclear how often spinoffs occur when firms are in the same business—we do know that the rate of sell-offs was much higher, perhaps 60 percent, for mergers in the 1970s when the asset acquisitions were unrelated.

- Entry. Entry of new firms into the market can sometimes offset concentration increases from mergers, particularly if the merging firms try to raise prices. The *merger guidelines* required that entry be probable to be counted.

- Vertical mergers. Mergers between a firm and its supplier do not increase concentration, because these firms are not competitors. So, for example, when a soft drink firm like Pepsi buys a restaurant chain like California Pizza Kitchen, concentration does not rise in either the restaurant or soft drink business, except in so far as Pepsi owns other restaurant chains. Sometimes, however, such mergers may nonetheless raise antitrust concerns, such as when the merger causes a third firm to be excluded from a market.

Banking provides an excellent example of how mergers do not necessarily increase concentration. Although there have been a large number of bank mergers in the past 20 years, concentration measures for local banking deposits have remained extremely stable: in metropolitan statistical areas, the average four-firm concentration ratio has remained between 65 and 68 percent. One major reason is that mergers have often been between banks that serve different regions. To the extent that banks were serving the same region and concentration initially increased, domestic and foreign entry may have helped to offset such concentration increases.

In those cases where a merger does increase concentration in the relevant market, possible effects are:

- Higher prices. Concentration increases market power. Firms can raise prices on their own, or in some cases successfully collude with other firms to raise prices. The extent to which prices increase with concentration depends greatly upon the nature of competition and the price sensitivity of demand in a given market. When products are differentiated, instead of homogeneous, a merger could raise prices significantly. This danger led the Justice Department to force a restructuring in the recent merger of Continental Baking Co. and Interstate Bakeries Corp. after the Justice Department determined that the market for white bread was highly differentiated despite appearances.

  Evidence from a variety of sources supports the view that increases in concentration increase price. As mentioned previously, the increases in concentration due to mid-1980s airline mergers led to average price increases of 10 percent on routes affected by the mergers. According to a study of grocery stores in Vermont, prices are about 2 percent higher in two-firm markets than they are in markets with four stores of equal size. And a study of small-town retail and professional service industries concludes that decreases in concentration significantly increase the competitiveness of the market; most of the competitive gain comes with the introduction of the second and third firm into the market.

- Lower service. Just as firms may raise prices in a concentrated industry, they also may lower quality. When a firm has fewer competitors, the calculus of comparing costs savings from reduced service on existing customers with revenue losses from customers who flee to high service firms changes, and a firm may be much more apt to cut the quality of service.

- Less variety. Fewer firms may mean fewer products from which to choose. The cereal industry, however, shows that this is not always the case.

- A different pace of innovation. The effect of mergers on the rate of innovation is highly ambiguous. Most economists believe that competition drives innovation and concentration inhibits it. Judge Learned Hand wrote: "Unchallenged economic power deadens initiative." The British economist John Hicks wrote: "the best of all monopoly profits is a quiet life." On the other hand, concentration could speed innovation. A monopolist may in some cases invest more in research and development than would a competitive firm, because the monopolist can capture more of the returns to investments, worrying less about the benefits to others of the technological spill overs.

Evidence on the effects of mergers on innovation is limited, but one study of acquisitions in the 1980s suggests that current mergers may have little impact on innovation. This study finds small, marginally significant declines in R&D intensity following acquisitions, but concludes that the declines were due to the associated increases in leverage rather than to the acquisitions themselves.

- New regulatory concerns.

  - *Benchmarking.* Having multiple competitors can help regulators benchmark costs, using the cost gain of one firm as a measure of what another could accomplish. Also, if one company makes a claim that something is impossible (such as having a telephone number be portable when a customer switches local phone companies), this claim can be falsified if another company is successful.

  - *Cross-subsidization.* In some cases a merged and regulated firm may be able to profit by some form of cross subsidization. For example, if a long distance carrier and local telephone carrier merge, the merged firm might be able to shift some long distance costs into the local rate base.

  - *Safety and soundness.* Bigger banks create bigger problems when they fail.

Mergers: Law and Enforcement since 1950
Council of Economic Advisers
May 22, 1998

Enforcement philosophy and merger law itself have changed considerably since 1950. Historically, most merger enforcement is public: private suits are rare in large part because rivals generally benefit from the anti-competitive mergers that the law bans.

I. The Big is bad era.

The Celler-Kefauver Amendments of 1950 modified the Clayton Act, expanding the coverage of section 7 to include all mergers, regardless of whether they involved an asset or stock purchase. This change ushered in a more restrictive era in merger law. The Supreme Court condemned every merger that came before it during the 1960s. This included the Brown Shoe decision, which held illegal the vertical acquisition by a manufacturer with a 4 percent market share of a distributor which had a market share of only 1 1/2 percent. Later, in 1968, in the Von's Grocery case, the Court blocked the merger of two grocery chains in Los Angeles that each controlled only 4 percent of the market. And not surprisingly, competitors seldom merged during the 1970s. Even some of the conglomerate mergers that were then so common met with challenges from the Nixon administration's antitrust division. Most economists today view the fears of concentration during this era as extreme.

II. The Reagan years.

Merger enforcement during the Reagan years was consciously more lax. The 1982 merger guidelines issued by the antitrust division made clear that the division would only oppose mergers that increased concentration among competitors significantly more than would have been required to raise concerns under the 1968 guidelines. These guidelines sought to insure that mergers were only blocked when concentration increases made it plausible that prices might rise significantly, and when there were no offsetting factors such as entry or efficiencies that would keep prices low. Relatively few cases were brought during these years, despite the fact that there were a significant number of mergers involving firms that did overlapping business.

III. Post Reagan.

Enforcement philosophy became more interventionist during the Bush and still more so during the Clinton Administration. The number of merger challenges has risen and both the Justice Department and the FTC have challenged mergers such as Continental Baking Co. /Interstate Bakeries Corp. and Staples/Office Depot, that would probably have gone unchallenged during the Reagan years. Judicial philosophies may have moved in the opposite direction, however, which may explain why the federal enforcement agencies now lose a majority of their contested merger cases. Their losses testify to their aggressiveness and to the constraints posed by current law.

Mergers Discussion 5-27-98

The CEA material consists of three memos.

1. The first is a one-pager that discusses how antitrust policy has evolved since 1950. The bottom line is that today's antitrust authorities take a harder look at mergers than was the case during the 1980s, when almost all mergers went unchallenged. However, we are far from the "big is bad" policy of the 1950s-1970s, when almost all mergers were opposed. Today, mergers are opposed when analysis suggests that they will hurt competition, but the government frequently loses in court under prevailing judicial interpretations of the antitrust laws.

2. The second memo (actually, the third in your packet) provides some facts on merger trends and economic concentration.

   - One question this memo addresses is: Are we in the midst of an unprecedented merger boom? Certainly, the number of mergers and the dollar value of announced deals is very high. Almost $1 trillion worth of deals were announced in 1997 and the final tally for 1998 could be even higher. Expressed relative to the size of the economy, we would have to go back to the great merger wave at the turn of the last century to find a comparable level of merger activity. However, when the level of activity is expressed relative to the market value of U.S. companies, the level of merger activity was higher in the 1980s. Thus, the run up in stock prices in the past few years is one reason why current merger activity is so large relative to the size of the economy.

   - A second question that naturally arises is: What does this merger activity mean for the economy? Here the memo provides some facts about the importance of large firms in the economy and some sketchy information about trends in aggregate concentration. I think it is fair to say that economists have found little reason to think that broad economic indicators like the rate of economic growth, inflation, or unemployment are much affected by changes in merger activity or the share of aggregate economic activity accounted for by the largest 100 or 200 firms (so-called aggregate concentration)—at least on the order of those that have typically been observed in the U.S. The main impact of mergers is on competitive conditions in specific markets.

   - That said, let me briefly mention some findings in the "facts" memo:

     - On aggregate concentration, we were able to get data from the FTC on the share of assets held by the top 50, 100, 150, and 200 non-financial corporations between 1958 and 1988. These show a decline in aggregate concentration between the mid-1970s and the mid-1980s. A somewhat longer series on aggregate concentration in manufacturing shows modestly increasing concentration between the mid-1970s and the mid-1980s and a modest decline by 1993.

- On the question of whether U.S. markets are, on average, becoming more competitive or more concentrated, we found no reliable comprehensive study. This is mainly because of the care and effort needed to define the relevant market in every particular case. The Commerce Department provides valuable information every 5 years in its economic censuses, but its industry concentration ratios need to be interpreted cautiously.

  - For example, industries are classified by similarity of production process; hence glass containers and plastic containers are treated as separate industries even though they may be close substitutes in many uses (a monopoly in glass containers would be of little value if users could turn to plastic when the price went up).

  - Also, concentration ratios are reported for the U.S. national market. They understate the amount of competition in industries where imports are important (like automobiles) and they overstate it when markets are local or regional (like cement or newspapers).

3. So with this evidence in mind, let me turn to the memo on the causes and consequences of mergers.

- Let's begin with motives. The main reason managers give for undertaking mergers is to increase efficiency. And studies show that, on average, the combined equity value of the acquired company and the purchasing company rises as a result of the merger. However, an increase in shareholder value can arise for reasons other than greater efficiency—such as increased market power and the ability to increase profits by raising prices. Also, mergers can sometimes create inefficiencies (the merger of the Union Pacific and Southern Pacific railroads in 1995 is widely seen as a disaster). And the separation of ownership from control in the modern corporation means that mergers may serve the interests of managers more than shareholders (e.g., empire building, increased salary associated with running a larger firm).

- There are numerous ways that mergers can contribute to economic efficiency. One is by reducing excess capacity (this justification has been invoked in hospital, defense, and banking mergers). Another is by achieving economies of scale or network externalities (the hub and spoke network of airlines is one example). Most mergers probably are undertaken with the expectation of achieving efficiencies, though the outcomes may sometimes be disappointing.

- In principle, mergers can also be undertaken to increase market power. However, statistical evidence suggests this is not the main motive for most mergers, perhaps reflecting the presence of antitrust monitoring and enforcement.

- There is no single reason why so many firms are merging today. The following are some of the prevailing explanations:

    - Adjusting to falling regulatory barriers. Mergers have followed the removal of branching restrictions in banking and ownership restrictions in radio. Banks are probably achieving efficient scale by merging. Absent our history of regulation, the U.S. banking industry would probably have far fewer small banks and look more like the banking system in most other countries.

      Mergers in the telecommunications industry are also tied to the breakup of AT&T and to the deregulation and market-opening steps that followed the Telecommunications Act of 1996.

    - Technological change. Some mergers may be motivated by the widely touted, but still nascent, phenomenon of "convergence" in the information technology industry. For instance, as textbook publishers begin to supplement their materials with multimedia software, they may acquire small software companies. To the extent that rapid technological change means that it is unclear what technologies will be used in the near future, firms may hedge their bets: this may explain why a local telecommunications company might merge with a cable television provider.

    - Globalization. The emergent global economy may demand large scale to participate. A European and American firm may combine to take advantage of the distribution networks that each has on its own continent. Also, to the extent that European or Asian firms are more integrated in certain sectors such as the financial sector, U.S. firms may find it necessary to integrate more to provide one-stop shopping for foreign customers who demand that.

    - High stock market. Price-earnings ratios have increased to near-record levels during the current merger wave, and some economists feel that the market may be overvalued. This may make it attractive to fund an acquisition with stock (the dominant funding source in the current merger wave) But an overvalued stock market does not necessarily lead to more mergers, because if other firms are also overvalued then there are fewer attractive targets to acquire.

- As mentioned earlier, the main issue in evaluating the consequences of mergers would seem to be the impact on particular markets. Here it is important to note that mergers do not necessarily increase concentration in any well-defined market. Merging firms may be in different businesses, non-competing regions, or in supplier-buyer relationships. Even when the merger is among competitors, increasing global competition or domestic entry could be simultaneously reducing concentration. Currently the antitrust authorities seem willing to challenge mergers with obvious anticompetitive effects.

4. To wrap up, the United States is currently in the midst of its fifth major merger wave in the past hundred years. Industries that are particularly prone to mergers include

telecommunications, banking, and financial services. These are sectors in which the regulatory environment has been changing rapidly, opening up new opportunities and challenges. This merger wave is taking place in a strong stock market, and stock rather than cash is the preferred medium for making opposition. Many of the prominent mergers are neither purely horizontal (in general large horizontal mergers would raise antitrust issues) nor purely conglomerate. Rather, they represent market extension mergers like SBC-Ameritech (companies in the same industry that serve different and currently non-competing markets) or mergers seeking "synergy," like Travelers-CitiCorp, which presumably expects to achieve "economies of scope" in offering a full line of financial services.

In summary, the United States is in the midst of its fifth major merger wave in a hundred years. Industries with the largest dollar value of deals in

Mergers, Concentration, and Market Power: Some Facts
Council of Economic Advisers
May 22, 1998

I. Overview

The United States is in the midst of its fifth major merger wave in a hundred years. The magnitude and volume of recent transactions have raised anew issues of the dominance of large firms over economic activity and the concentration of economic activity in particular markets. This memo first provides a historical perspective on the current merger wave. It then addresses two of the issues raised by heightened merger activity: the extent to which aggregate economic activity in the U.S. economy is concentrated in a relatively few large corporations and the extent to which particular markets are dominated by one or a few sellers.

II. The Current Merger Wave in Historical Perspective

By almost any measure the merger boom of 1997-98 is substantial. Exhibit 1 provides a sample of recent mergers.

- The largest deal announced so far is the $70 billion Travelers Group-CitiCorp merger, but the $62 billion SBC-Ameritech and the $60 billion Bank America-Nation's Bank merger are also huge in dollar terms. (The total value of all deals announced in 1992—a year of especially low activity—was only $150 billion.)

Comment [COMMENT1]: A1: New York Times May 17, 1998

- The value of all deals announced in 1997 ($957 billion) was equivalent to about 12 percent of GDP, and activity so far in 1998 suggests another record year by this measure (Exhibit 2, upper panel). The last time merger activity was this large a share of GDP was during the Great Merger Wave at the beginning of this century.

- So far this merger wave is smaller than the wave in the 1980s when mergers are expressed as a percentage of the total market value of U.S. companies (Exhibit 2, lower panel). The run up in stock prices in the past few years is one reason why the current merger wave is such a large share of GDP.

The current merger boom is the fifth in the past century.

- The Great Merger Wave of 1887-1904 represented the culmination of the trust movement. It was a time when numerous small and mid-sized firms were consolidated into single dominant firms in a number of industries, including Standard Oil and U.S. Steel. One estimate is that this merger wave encompassed at least 15 percent of all plants and employees in manufacturing at the turn of the century. An estimated 75 percent of merger-related firm disappearances occurred as a result of mergers involving at least five firms, and about a quarter involved 10 or more firms at a time. Merger activity declined sharply during 1903 and 1904 at the same time as a severe recession and the

Northern Securities case, which established a legal precedent for prohibiting market-dominating mergers under the antitrust laws.

- The merger movement of the 1920s saw the consolidation of many electric and gas utilities and manufacturing and minerals mergers that created a relatively strong number two firm in a number of industries (such as Bethlehem Steel).

- The 1960s conglomerate wave may have represented a deflection of the "urge to merge" away from horizontal (same-industry) mergers due to stronger antitrust enforcement. The constant-dollar value of mergers in manufacturing and minerals surpassed the prior peak attained in 1899. The 1960s boom was also fueled by a strong stock market and financial innovation (such as convertible preferred stocks and debentures). This merger wave ended with a decline in stock prices that was especially severe for companies that had aggressively pursued conglomerate mergers.

- The 1980s saw another boom in merger activity, but this time it began in a depressed stock market in which stock prices were low relative to the cost of building new capacity, and it was cheaper to expand by takeover. The 1980s boom was also marked by an explosion of hostile takeovers and financial innovation (such as junk bonds and leveraged buyouts). The 1980s wave was unique in the prevalence of cash purchases (as opposed to acquisition through stock). Finally, the antitrust environment was more permissive and companies became more willing to attempt horizontal mergers.

- The current merger wave appears to be a reversion to earlier patterns in some ways: it is taking place in a strong stock market, and stock rather than cash is the preferred medium for making acquisitions. Many of the prominent mergers are neither purely horizontal (in general large horizontal mergers would raise antitrust issues) nor purely conglomerate. Rather they represent market extension mergers like SBC-Ameritech (companies in the same industry that serve different and currently non-competing markets) or mergers seeking "synergy," like Travelers-Citicorp, which presumably expects to achieve "economies of scope" in offering a full line of financial services.

Industries with the largest dollar value of deals in 1997 were telecommunications; commercial banking; investment firms, dealers, and exchanges; hotels and casinos; and business services. Telecommunications and banking and finance continue to be important in 1998. These are sectors in which the regulatory environment has been changing rapidly, opening up new opportunities and challenges, and in which managerial and technological innovations may be particularly important.

III. Aggregate Concentration

A second perspective from which to view the current merger wave is the importance of large firms in the economy. Statistics of Income data from the IRS show that there are a large number of corporations but that a relatively small number account for most corporate activity.

- In 1994 there were about 4.3 million incorporated business enterprises operating in the United States, most of them relatively small (Exhibit 3). About 7,000 corporations (0.2 percent of the total number) had assets of $250 million or more.

- These large corporations held $19.5 trillion of the $23.4 trillion in assets in the corporate sector (83 percent) and their receipts of $7.2 trillion represented 54 percent of the $13.4 trillion aggregate corporate receipts. (Aggregate corporate receipts are larger than GDP because of double counting—steel sold to automobile producers shows up as sales by steel manufacturers, but it is also reflected in the price of automobiles.)

Companies at the top of the Fortune 500 are extremely large.

- General Motors topped the 1998 list with revenues of $178 billion and assets of $229 billion (about 1.5 percent of total corporate revenues and about 1 percent of total corporate assets). Three other firms (Ford, Exxon, and Wal-Mart) had revenues in excess of $100 billion.

- Fannie Mae topped the list of Fortune 500 companies ranked by assets, with $392 billion of assets. Five other companies (Travelers Group, Chase Manhattan Corp., Citicorp, General Electric, and Morgan Stanley Dean Witter Discover) had assets in excess of $300 billion. (The merger of Travelers and Citicorp would move CitiGroup to the top by a wide margin).

- Wal-Mart Stores is by far the largest employer among the Fortune 500, with 825,000 employees. General Motors is second with 608,000 employees, and Ford and United Parcel each have employment in excess of 300,000.

Little research has been done recently on trends in aggregate concentration (the share of total assets or some other measure of size accounted for by the largest 50, 100, 150, or 200 companies). No official, long, consistent data series are currently maintained, but the available evidence does not suggest any alarming trend in aggregate concentration.

- Aggregate concentration in assets generally focuses on nonfinancial corporations, or, more narrowly, manufacturing. Most of the assets in the banking and finance sectors are financial assets that are easier to amass and manage than the physical assets that predominate in other sectors. Also, the bulk of the assets in the financial sector represent claims against the physical assets of nonfinancial corporations.

- Federal Trade Commission estimates of the concentration of assets in the nonfinancial sector show relative stability from the late 1950s to the early 1970s and a modest decline from then until 1988, the last year for which calculations have been made (exhibit 4, upper panel). In 1988 about 19 percent of the assets of nonfinancial corporations were held by the top 50 firms; 32 percent were held by the top 200 firms.

- Data for manufacturing are probably the most reliable. FTC data show a modest increase in the share of manufacturing assets accounted for by the top 100 and top 200 firms between the mid-1970s and the mid-1980s and a modest decline by 1993 (exhibit 4, lower panel). The top 100 manufacturers held 48 percent of manufacturing assets in 1993; the top 200 firms held 60 percent of the assets.

Mainstream economic theory provides little reason to think that the kinds of changes in aggregate concentration observed in the U.S. economy should have much to do with economic performance. Nor is the current merger wave likely to produce radical changes in aggregate concentration.

IV. Concentration in Particular Markets

Large size is not the same as monopoly power. For example, an ice cream vendor at the beach on a hot day probably has more market power than many multi-billion dollar companies in competitive industries (such as Gateway with less than 5 percent of the PC market). Thus, questions about whether market concentration is a problem tend to focus on particular markets rather than on the economy as a whole. As with aggregate concentration, little research has been done recently on trends in the proportion of markets that are relatively concentrated or relatively unconcentrated.

The Bureau of the Census publishes information about concentration (the share of the market accounted for by the largest 4, 8 and 20 firms) for a large number of industries as part of its quinquennial economic censuses (the latest data available are for 1992). However, these industry concentration ratios need to be interpreted with considerable caution. Two major concerns are:

- Industries are classified by similarity of production process. Hence, glass containers and plastic containers are treated as separate industries even though they may be close substitutes in many uses (a monopoly in glass containers would be of little value if users could turn to plastic when the price went up.)

- Industry concentration ratios are reported for the U.S. national market. Such concentration ratios understate the degree of competition when imports are important (automobiles) and they overstate it when markets are local or regional (cement or newspapers).

When the antitrust authorities look at a merger they put considerable effort into defining the appropriate market and its characteristics. For example, when the FTC successfully challenged the merger of Staples and Office Depot, they used statistical analysis to show that even though these firms controlled a very small share of the retail market for office products, they had substantial market power. The relevant market turned out to be "the sale of consumable office supplies through office superstores."

Because such careful analysis is more likely to be done for particular industries (often as a result of an antitrust investigation), there is no reliable comprehensive study of whether markets in the U.S. are generally becoming more concentrated or more competitive. One academic analyst has suggested however, that dominant firms account for less than 3 percent of GDP.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Steven N. Braun (CN=Steven N. Braun/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:26-MAY-1998 09:32:44.00

SUBJECT: Draft Press Statement for MSR

TO: Alice H. Williams (CN=Alice H. Williams/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Sandra F. Daigle (CN=Sandra F. Daigle/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:
==================== ATTACHMENT 1 ====================
ATT CREATION TIME/DATE: 0 00:00:00.00

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D30]MAIL465453546.126 to ASCII,
The following is a HEX DUMP:

FOR IMMEDIATE RELEASE
FRIDAY, MAY 22, 1998

CONTACT: MICHELE JOLIN
CHIEF OF STAFF
(202) 395-5084

STATEMENT OF JANET L. YELLEN
CHAIR, COUNCIL OF ECONOMIC ADVISERS
ON THE ECONOMIC ASSUMPTIONS OF THE MID-SESSION REVIEW

My role today is to tell you about the budget's economic assumptions. For the past 5½ years, this Administration has built a record of credible economic assumptions. The Administration's economic forecasting team was committed to ensuring that our budget balancing efforts would be based on realistic assumptions about the economy's performance--not on rosy scenarios. The assumptions in this year's budget are similarly credible and are consistent with the views of a consensus of economic forecasters.

The economy's performance over the past two years has been extraordinary. Real GDP growth averaged 3.8 percent over the past 8 quarters--the highest growth rate in nine years. The unemployment rate has been below 5 percent for the last 10 months. Over 3 million jobs were created just this past year. And all this has been accomplished while inflation has declined to its lowest level in over 30 years.

Although growth has exceeded our expections in recent years, we believe that it would not be prudent for budgetary purposes to count on a continuation of growth at its recent extraordinary pace. Looking ahead, our economic assumptions are hard-headed and pragmatic. We are projecting real GDP to continue to grow--but at a slower 2 percent annual rate over the next 3 years. At the same time, the unemployment rate is projected to edge up about about two tenths of a percentage point per year. Inflation, as measured by the CPI, is assumed to edge up slightly over the next three years. After 2001, real GDP growth is projected to resume its assumed trend growth rate of 2.4 percent, and the unemployment rate stabilizes at 5.4 percent.

Our economic projections are very similar to those in the budget we released last February. The differences stem largely from integrating the better-than-expected economic performance during the past 2 quarters. Compared with where we thought we would be, the level of output is now higher--while unemployment, inflation, and long-term interest rates are lower.

The shift to more moderate growth assumed in this budget recognizes that, by mainstream assumptions, growth has exceeded the pace that can be maintained on a sustained basis without an eventual tendency for upward inflationary pressure. It is important to note that our assumed real growth rates are not the *best* that the Administration believes the economy can achieve--the outcome could be better.

Let me conclude by saying that the growth-oriented economic policies enacted by this Administration have clearly paid off. The Administration's 1993 deficit reduction plan helped create the climate for the current strong economic performance, and our economy is the strongest in a generation. We have provided a solid foundation for sustained economic growth and rising living standards for all Americans--evident in the recent 2.9 percent increase in real wages, the largest increase in 25 years.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:27-MAY-1998 13:16:59.00

SUBJECT: Small Business Comm Hearing

TO: Adele C. Morris (CN=Adele C. Morris/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: Randall W. Lutter (CN=Randall W. Lutter/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TO: Joseph E. Aldy (CN=Joseph E. Aldy/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:
As you know, Janet has been invited to testify before the House Small Business Committee on Thursday, June 4 at 10 AM. She will be on a panel alone. After her testimony, there will be 2 more panels: one with small business owners and the other with economists. I told the Committee staffer that Janet would be giving the same testimony that she has given before other House Committees. He is ok with that. But said that Janet is likely to get asked a specific question about small business from one of the Members during the Q&A part of the hearing. So, someone should prepare a Q&A on that issue. Any volunteers? Also, I'll ask Alice to schedule a mock-hearing for Wed afternoon for an hour or so.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Todd Stern (CN=Todd Stern/OU=WHO/O=EOP [WHO])

CREATION DATE/TIME:27-MAY-1998 09:13:21.00

SUBJECT: restrictions on trading

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

TO: Joseph E. Aldy (CN=Joseph E. Aldy/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:
The Bonn meeting begins next Monday. To the extent that we could furnish our State Department negotiators with a good argument as to why putting a restriction on trading (e.g., at least 50% of reductions must come from domestic action) would be problematic (no good way to do it, cause major inefficiencies in system, cause worldwide price of permits to be much higher, etc.), it would be helpful. This is the paper we were talking about in my office last week, and I'd love to give our negotiators some additional arguments to bolster our "no restrictions" policy. Paper would be for their use, not for distribution at this time. tds

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Steven N. Braun (CN=Steven N. Braun/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:28-MAY-1998 17:44:43.00

SUBJECT: Vacation plans & OFHEO duties

TO: Rebecca M. Blank (CN=Rebecca M. Blank/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

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

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

TEXT:

I have 37 days of annual leave and I would like to use up some of them them between June 18th and June 26th. I am not flexible on the date because this is one of only 2 weeks during the summer when all of my family will be together. There are 2 minor releases during this period (the 2nd revision of 98:Q1 GDP and Advanced durables for May).

I have been volunteered to be on the expert committee to evaluate OFHEO's (Office of Federal Housing Enterprise Oversight) new risk-based capital standards for Fannie Mae and Freddie Mac. I am told this will require the equivalent of about 3 full-time weeks over the summer. I like working on projects about which I know little, but I want you to know that this looks like a major time commitment.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:28-MAY-1998 10:24:27.00

SUBJECT: POTUS letter to Cong Kuscinich

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

TEXT:
Todd included in his weekly report to the POTUS on CLimate change a paragraph on your hearing and the fact that Congressman Kusinich was a supporter. POTUS wrote back saying that he wanted to send him a thank you note. The draft is below. Do you have anything you want to add? Seems kind of dry as it is written. Do you have anything more personal that we could suggest they include?
Thanks
Michele
---------------------- Forwarded by Michele Jolin/CEA/EOP on 05/28/98 10:21 AM ---------------------------

Peter D. Greenberger
05/28/98 08:58:51 AM
Record Type: Record

To: Michele Jolin/CEA/EOP
cc:
Subject: Re: POTUS letter to Cong Kuscinich

Here is the draft with Roger's revisions. let me know what you think.
thanks.

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

TEXT:
Unable to convert ARMS_EXT:[ATTACH.D91]MAIL444342848.126 to ASCII,
The following is a HEX DUMP:

Dear Dennis:

Thank you for your strong support of the Administration, and our efforts to join the nations of the world in signing the Kyoto Protocol. I appreciate your help.

More than 35 countries have signed the treaty, including Canada, Australia, Japan, and every member of the European Union. I believe that climate change is one of the great challenges that we face as we move into the 21st century. The Kyoto Protocol is an important first step toward meeting this challenge.

Thanks, again, for your support. I look forward to working closely with you on this issue.

Sincerely,

Withdrawal/Redaction Marker
Clinton Library

DOCUMENT NO. AND TYPE	SUBJECT/TITLE	DATE	RESTRICTION
001. email	Michele Jolin to Jeffrey A. Frankel, Rebecca M. Blank, and Janet L. Yellen at 14:41:17.00. Subject: Update on Staffing issues. (partial) (1 page)	05/28/1998	b(6)

COLLECTION:

Clinton Presidential Records
Automated Records Management System [Email]
CEA ([Yellen])
OA/Box Number: 950000

FOLDER TITLE:

[05/15/1998 - 05/28/1998]

2013-0723-F
ab1278

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

- P1 National Security Classified Information [(a)(1) of the PRA]
- P2 Relating to the appointment to Federal office [(a)(2) of the PRA]
- P3 Release would violate a Federal statute [(a)(3) of the PRA]
- P4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
- P5 Release would disclose confidential advice between the President and his advisors, or between such advisors [a)(5) of the PRA]
- P6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Personal record misfile defined in accordance with 44 U.S.C. 2201(3).

RR. Document will be reviewed upon request.

Freedom of Information Act - [5 U.S.C. 552(b)]

- b(1) National security classified information [(b)(1) of the FOIA]
- b(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
- b(3) Release would violate a Federal statute [(b)(3) of the FOIA]
- b(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
- b(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
- b(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
- b(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
- b(9) Release would disclose geological or geophysical information concerning wells [(b)(9) of the FOIA]

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

CREATOR: Michele Jolin (CN=Michele Jolin/OU=CEA/O=EOP [CEA])

CREATION DATE/TIME:28-MAY-1998 14:41:17.00

SUBJECT: Update on Staffing issues

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

TO: Rebecca M. Blank (CN=Rebecca M. Blank/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:
I wanted to give you an update on some of the staff issues we discussed last week.

1. Edlin/Shelanski: I left a message for Howard suggesting that it may be helpful for him to start sooner than Aug 1 since mergers is likely to be a hot topic. I explained that Chad will be working mergers too, but that it could be useful for him to start sooner so that he can be here from the beginning of this working group. I'll let you know what I hear.

[redacted] (b)(6)

3. Chris Carroll: Chris will not be able to stay longer than June 29. But he said that Doug Elmendorf has already begun sitting in on working groups and is getting a sense of what needs to be done on Social Security. Also, Chris suggested the Elmendorf may be willing to be on call during the month of July and come in whenever there is a meeting or need for him to do some discreet project. Chris also offered to come in or consult by phone on occasion. Would you like me to talk to Elmendorf about being on call during July to deal with Social Security?

4. Robert Schoeni: He is planning to start on July 1.

5. Steve Polasky: I talked to him about starting a little earlier. He is considering it and plans to call me back by the end of this week. Randy could probably stay an extra couple of weeks if Polasky can't come early.

6. Michael Kosoff: I left a message asking him to consider starting earlier.

7. Nora Gordon: I left a message asking her to consider starting on July1 rather than July 6.

8. Andy Feldman: Originally we had him down for starting on July 13 but he said he was considering starting on July 20 because of other prjects. He said he will consider starting a little earlier so there can be some overlap with some of the RAs and so that he can work on the fact-book. He is going to think about it and call back.

9. Ray Guiteras: He is going to start a little early so that there is overlap with the departing RAs.

RECORD TYPE: PRESIDENTIAL (NOTES MAIL)

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

CREATION DATE/TIME:28-MAY-1998 11:45:35.00

SUBJECT: Re: trading

TO: Randall W. Lutter (CN=Randall W. Lutter/OU=CEA/O=EOP @ EOP [CEA])
READ:UNKNOWN

TEXT:
Interesting article--I had also heard at the OECD that positions in the EU toward trading might be changing in a more favorable direction.