



The Goals

- Create a nonpartisan, fact-based, business-focused space for a national discussion on how climate risk affects the U.S. economy
- Provide *actionable* data for public and private sector decision-makers to incorporate climate risk into everyday activities

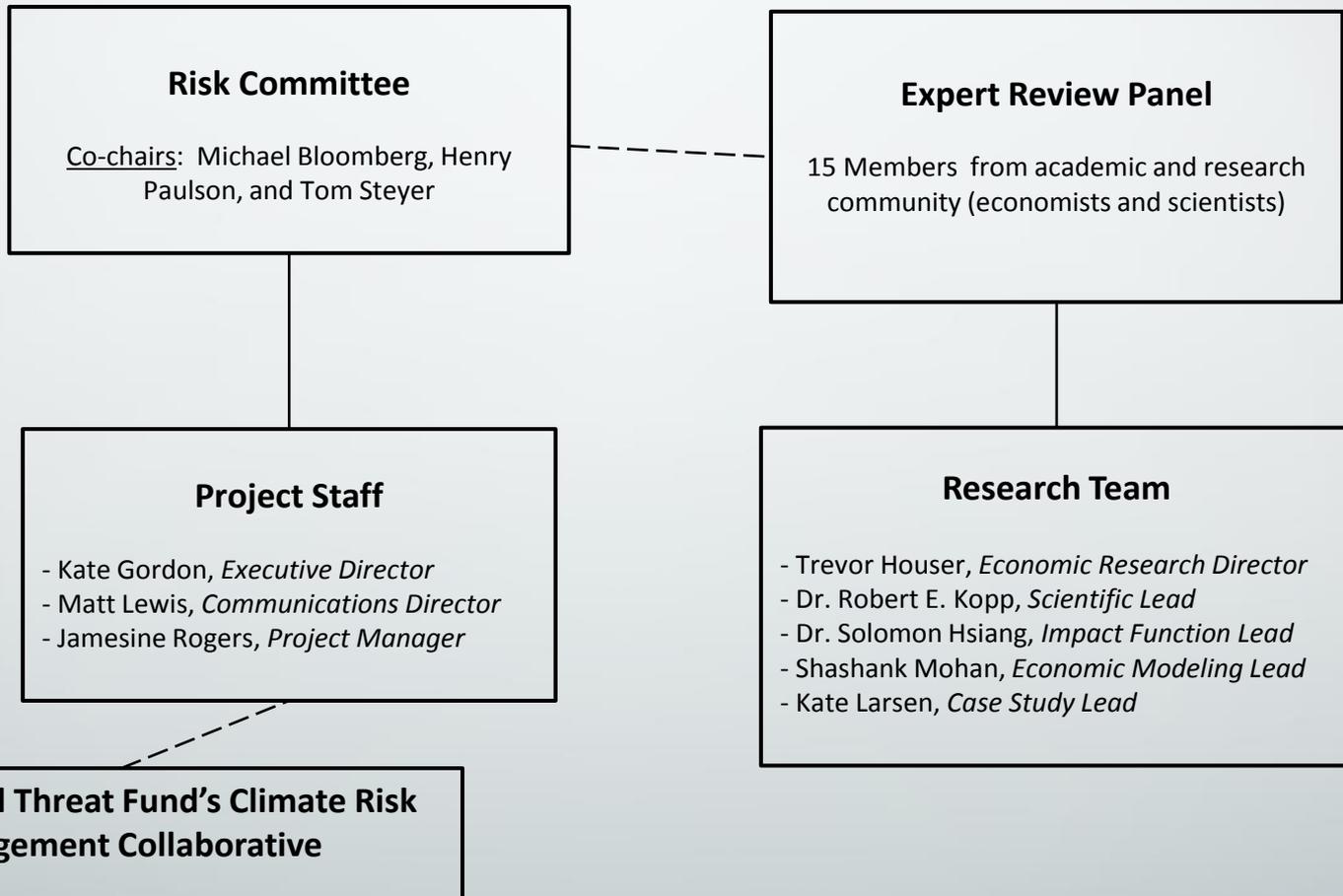
The Approach

- **Bipartisan** Risk Committee convened by co-chairs Paulson, Bloomberg and Steyer
- **Independent** risk assessment commissioned by Risk Committee
 - Rhodium Group research lead, RMS partner
- **Assess risk without dictating solutions**

Project Structure

STRUCTURE FOR OVERALL INITIATIVE

STRUCTURE FOR ECONOMIC RISK ASSESSMENT



Risk Committee Members

CO-CHAIRS:

Michael Bloomberg, Hank Paulson, and Tom Steyer

NATIONAL SECURITY REPRESENTATIVES:

George Shultz

ECONOMIC/BUSINESS REPRESENTATIVES:

Bob Rubin

HEALTH REPRESENTATIVES:

Donna Shalala

Al Sommer

AGRICULTURAL REPRESENTATIVES:

Gregory Page

REGIONAL REPRESENTATIVES:

Henry Cisneros

Olympia Snowe

Expert Review Panel Members

- Kerry Emanuel (*MIT*)
- Karen Fisher-Vanden (*Penn State*)
- Katherine Hayhoe (*Texas Tech*)
- Douglas Holtz-Eakin (*AAF*)
- Larry Linden (*Linden Trust*)
- Robert Muir-Wood (*RMS*)
- Thomas Rutherford (*U of Wisconsin*)
- Sean Ringsted (*ACE Limited*)
- Gary Yohe (*Wesleyan*)
- Michael Greenstone (*MIT*)
- Geoffrey Heal (*Columbia*)
- Klaus Keller (*Penn State*)
- Linda Mearns (*NCAR*)
- Michael Oppenheimer (*Princeton*)
- Michael Spence (*Stanford*)
- Jonathan Samet (*USC*)

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- **Regional and sectoral** detail
 - Geographic granularity – regional, state, county
 - Energy, agriculture, coastal infrastructure – plus labor productivity, heat related mortality

Audience Research

Audience Research Summary

~400 surveys were conducted in late May, 2014 across three key financial audiences: Raters, Issuers and Investors

1. The vast majority of respondents believe climate change is occurring, and is likely to have an economic impact

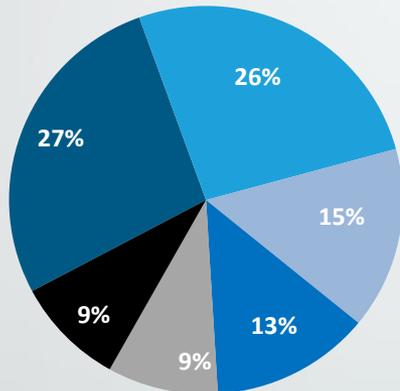
2. Climate change is considered in the risk models, however it is rated near the bottom of the list of risks measured in terms of importance

- Of the 15 types of risk measured, climate change ranks 12th on average; risks measured include:

- Business and credit risk
- Climate change risk
- Commodity price volatility risk
- Competitive risks
- Currency/exchange rate risk
- Economic and market risk
- Inflation/deflation risk
- Interest rate risk
- Legal risks
- Legislative, regulatory and tax risk
- Liquidity risk
- Natural disaster risk
- Political and social risk
- Reinvestment risk
- War and terrorism risk

Why Include Climate Change? - Investors

Q. What is the best argument for including climate change in financial risk assessment models?



- Climate change a convincing factor
- Climate change is a key economic/financial risk
- None/ don't know
- Market and environment reactions
- Responsibility/ duty
- Do not include climate change

Climate change a convincing factor (27%)

“Hurricane Sandy, Katrina and the other storms that have come in at the edge of the 'norm' curve during the last decade. The rapid melting of the ice caps. The sky in Shenzhen, China.”

Climate change is a key economic/financial risk (26%)

“Without including climate change, you are missing a major risk factor that is going to impact many different aspects of operations, both supply chain, future markets, stability in the global and domestic economy and more.”

Market and environmental reactions (13%)

“Regulations will force more expenses to try to curb it - Costs will be high for many and will dampen economic activity which is the point of these regulations.”

Responsibility/duty (9%)

“It is a major risk medium to long term and models should try to incorporate all risks.”

Do not include climate change (9%)

“We do not include climate change as a risk because it is an unproven theory not supported by scientific evidence. Most scientists and layman do NOT believe in anthropogenic global warming or climate change.”



Risk Assessment Findings

Key findings

The American economy faces an overwhelming number of risks from climate change, and the American business community needs to lead the way in helping reduce these risks.

- **Coastal Communities & Infrastructure**
- **Energy**
- **Agriculture**
- **Heat-related mortality & Labor Productivity**

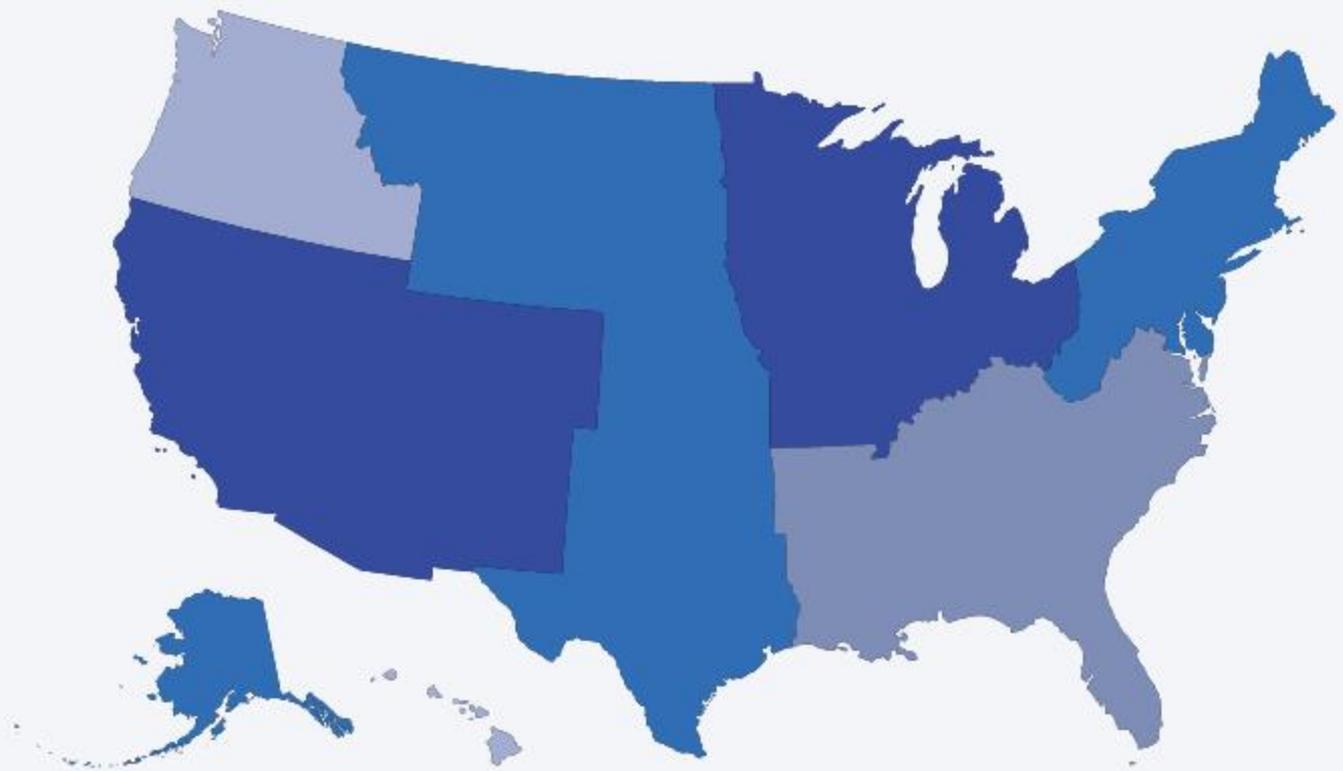
Climate change is our planet's way of charging compound interest. The longer we wait to pay down our climate debt, the more it will cost the American economy – and the harder it gets to adapt.

Our assessment found that, if we act immediately, we can still avoid most of the worst impacts, and significantly reduce the odds of costly, catastrophic climate outcomes – but only if we start changing our business and public policy decisions today.

This is why we are calling on American business leaders and investors to get in the game. America's businesses are capable of rising to the challenges of climate change, and must do so now. This is not a problem for another day. The investments we're making today – this week, this month, this year – will determine our economic future.

Presenting the Data

EXPLORE THE ECONOMIC RISKS OF CLIMATE CHANGE IN YOUR REGION



The Economic Risks of Climate Change

The U.S. faces significant economic risks from climate change. Because of its size and geographic diversity, these risks vary greatly between regions. To learn more about the risks, explore the map.

[EXPLORE THE REPORT](#)

Risky Business Report Released

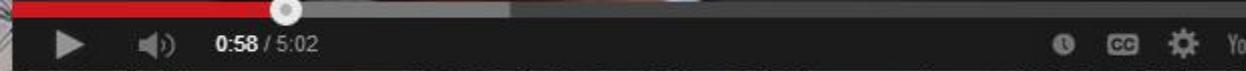
06.24.2014 |

The U.S. economy faces significant risks from unmitigated climate change. The Risky Business report presents a new approach to understanding these risks for key U.S. business sectors, and provides business leaders with a framework for measuring and mitigating their own exposure to climate risk.

[Read More »](#)



Michael R. Bloomberg
Philanthropist, Entrepreneur, 108th Mayor of New York City



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Climate Change Poses Serious Risks to U.S. Health Care System

07.08.2014 | Institute of Medicine

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Risky Business Report Press Conference Video

06.18.2014 |

Henry M. Paulson, Jr., Michael R. Bloomberg, Thomas P. Steyer, and the members of the Risk Committee released the report on June 24 at the Palace Hotel in New York City. Watch

SIGN UP FOR UPDATES ON RISKY BUSINESS

(Optional)



EXECUTIVE SUMMARY

Executive Summary
Introduction
Understanding Risk
Results
The Regions
Next Steps
Conclusion

“Damages from storms, flooding, and heat waves are already costing local economies billions of dollars—we saw that firsthand in New York City with Hurricane Sandy. With the oceans rising and the climate changing, the Risky Business report details the costs of inaction in ways that are easy to understand in dollars and cents—and impossible to ignore.

— Risky Business Project Co-Chair Michael R. Bloomberg¹

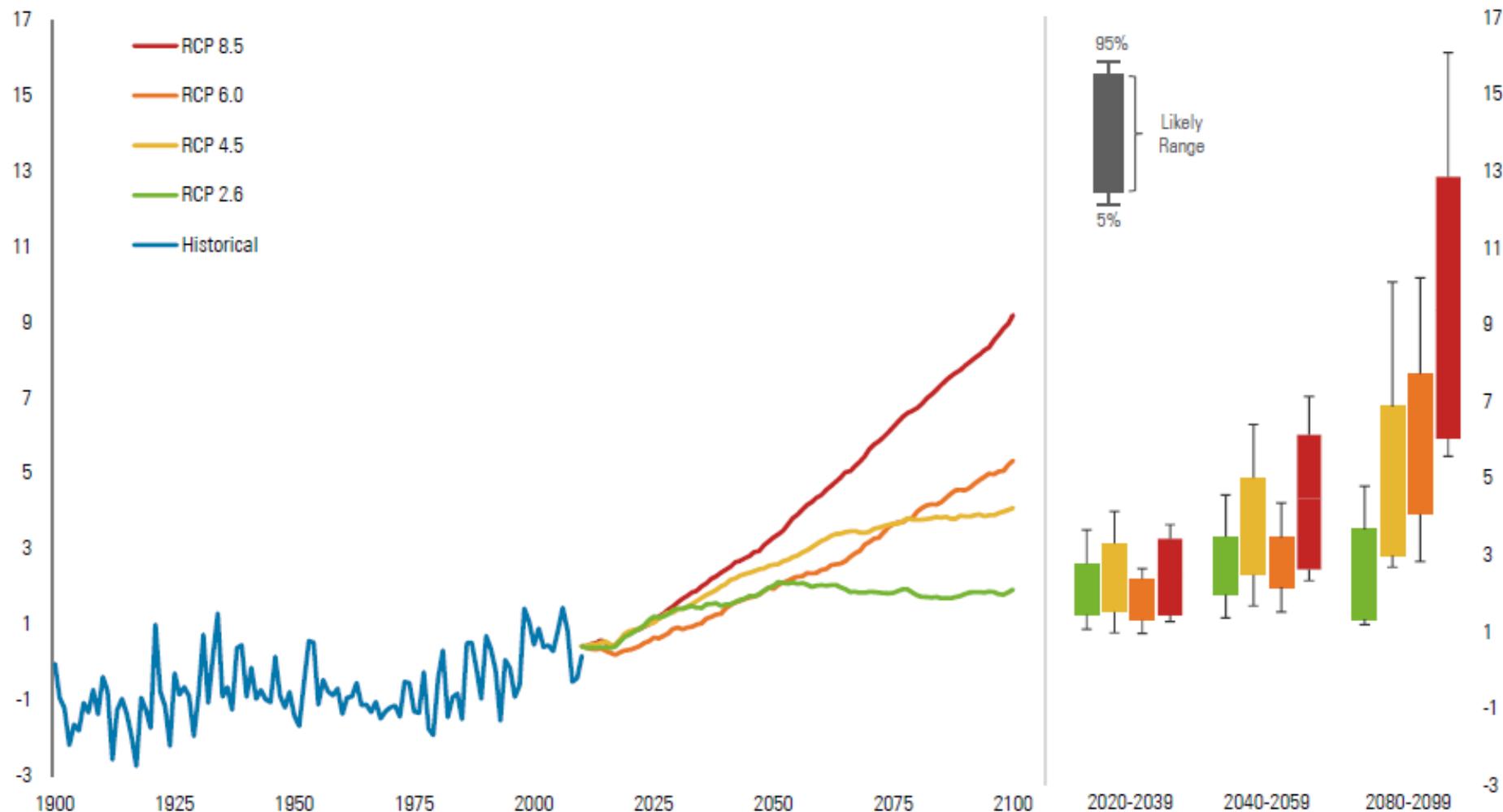
Understanding Climate Risk



Human society is structured around "normal" weather, with some days hotter than average and some colder. At the distant "tails" are extreme events, catastrophic weather. Climate change shifts the entire distribution curve right. Old extremes become the new normal, new extremes emerge, and the process continues until we take action.

US average temperature projections

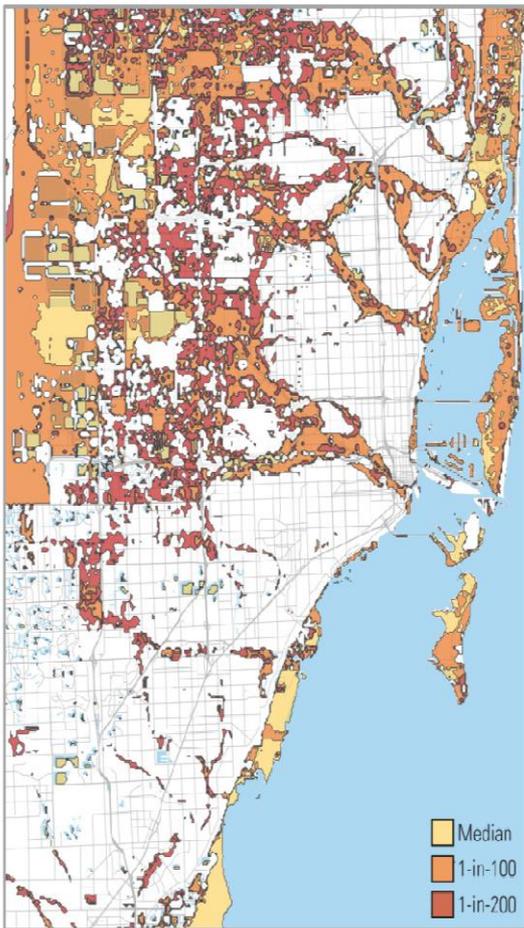
Degrees Fahrenheit relative to 1981-2010 averages, median projections (left side) and confidence intervals (right side)



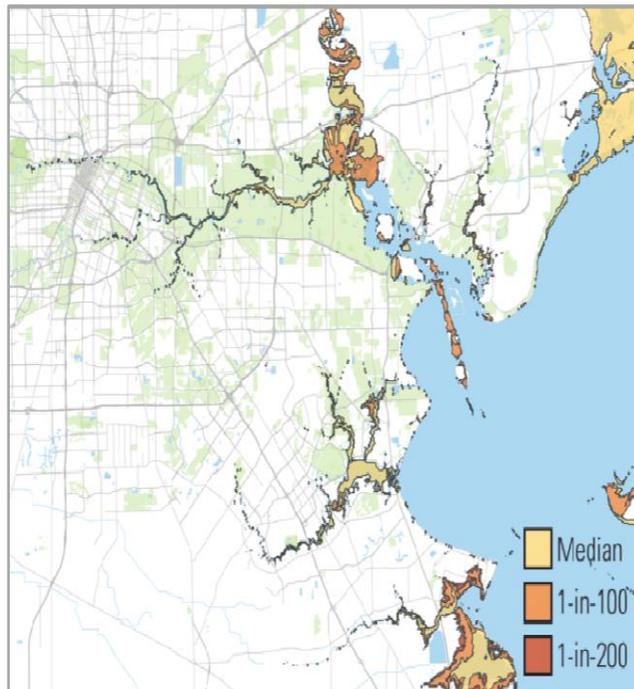
Inundation risk

Projected sea level rise, 2100

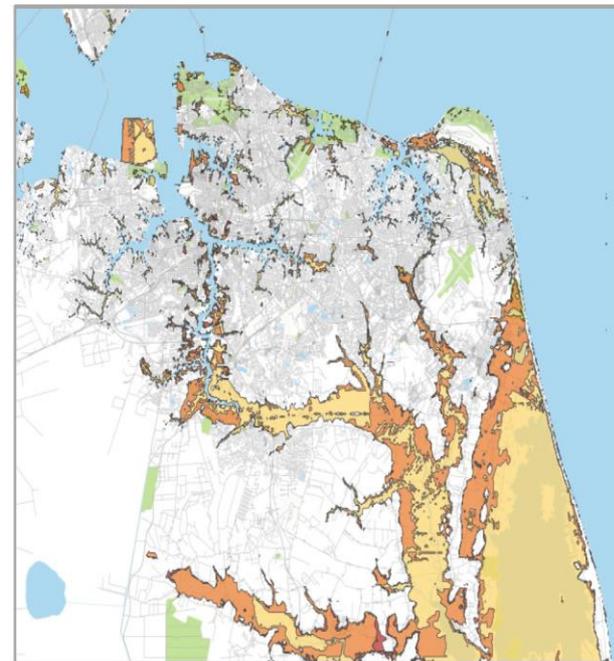
Miami



Houston



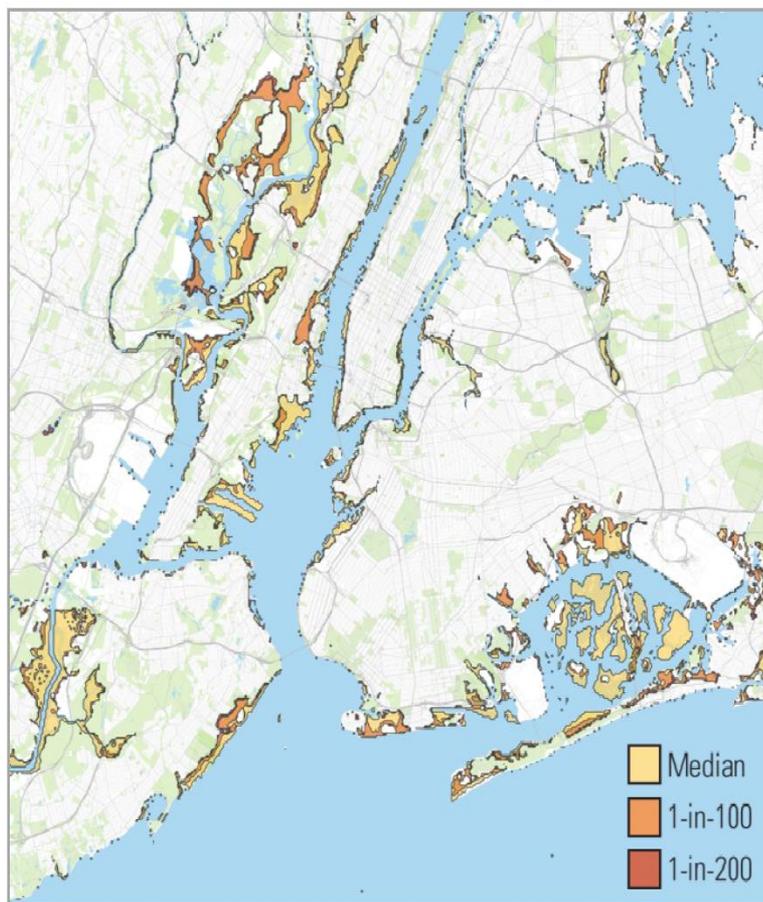
Norfolk



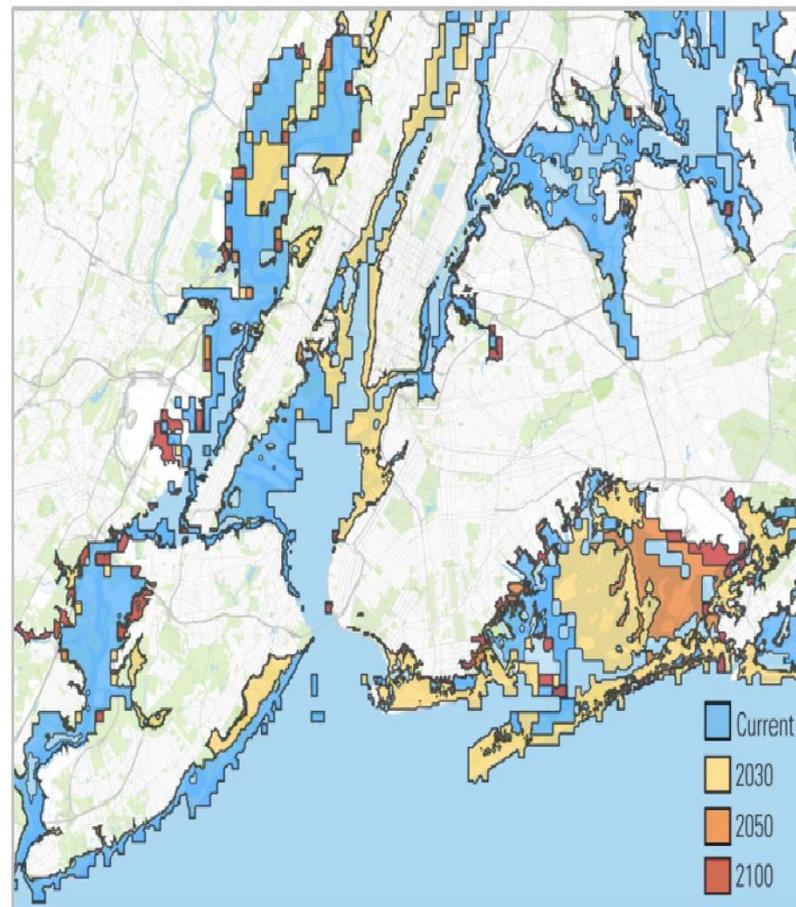
Comparing inundation to storm surge risk

New York City

Mean sea level rise by 2100

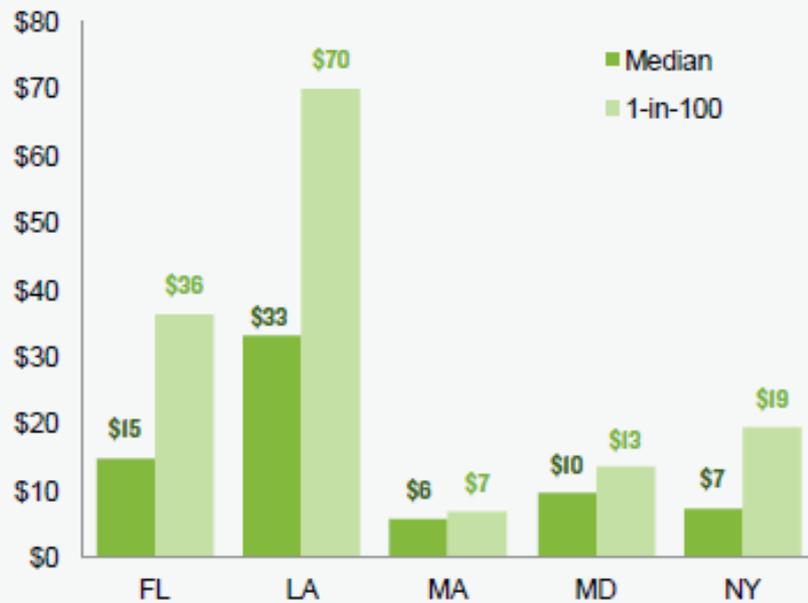


1-in-100 year floodplain

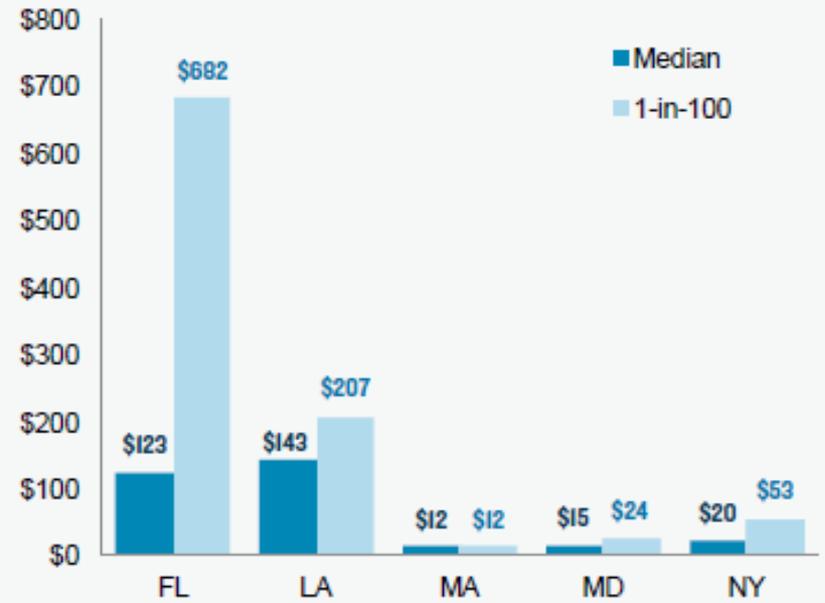


Coastal Infrastructure (2050, 2100)

Current Property Value Below Mean Sea Level by 2050, billion USD

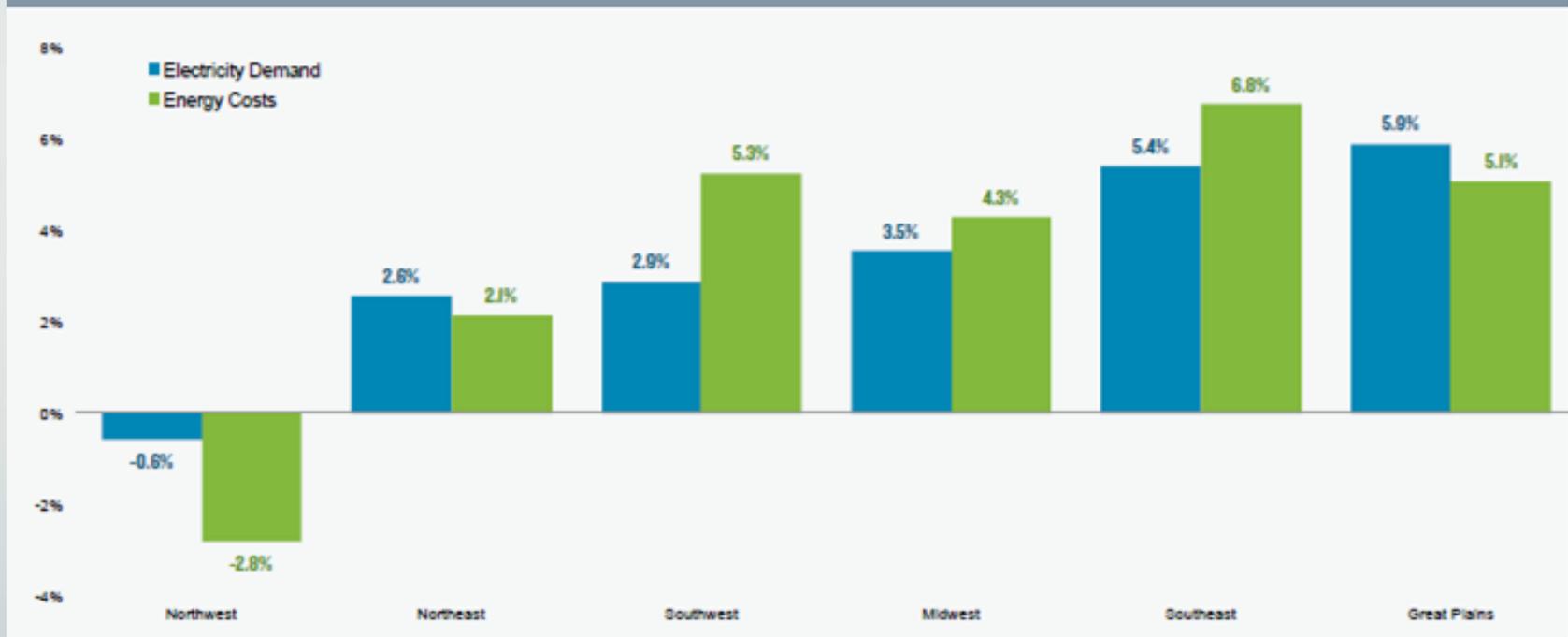


Current Property Value Below Mean Sea Level by 2100, billion USD

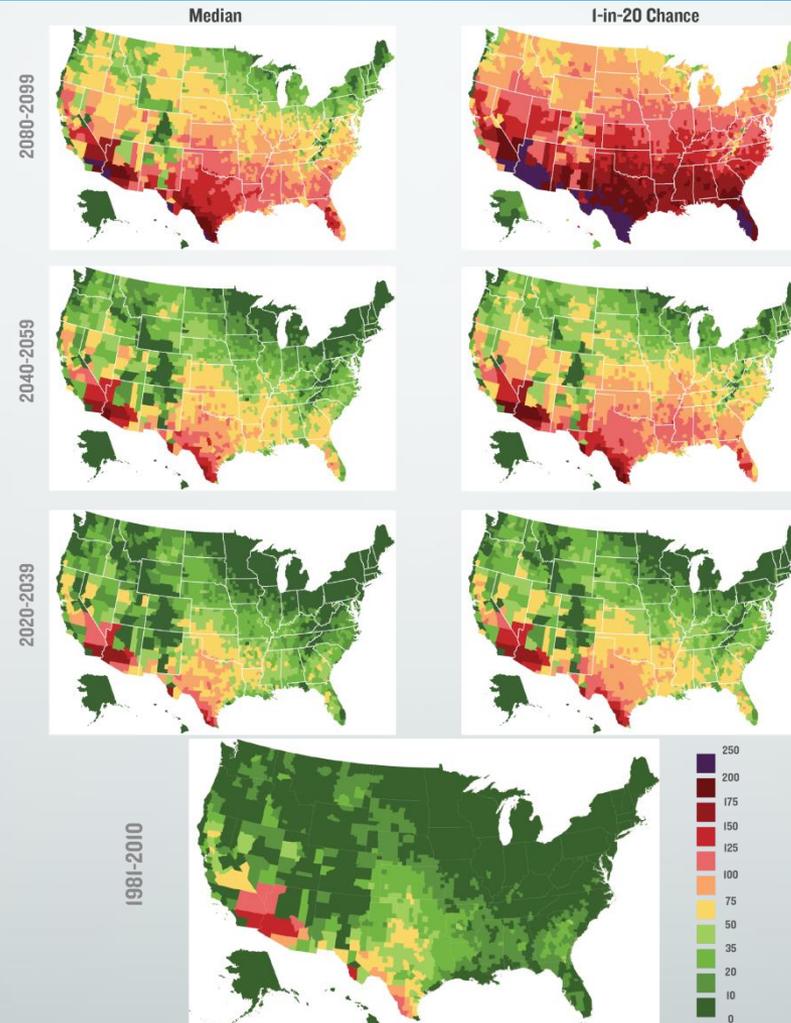


Energy

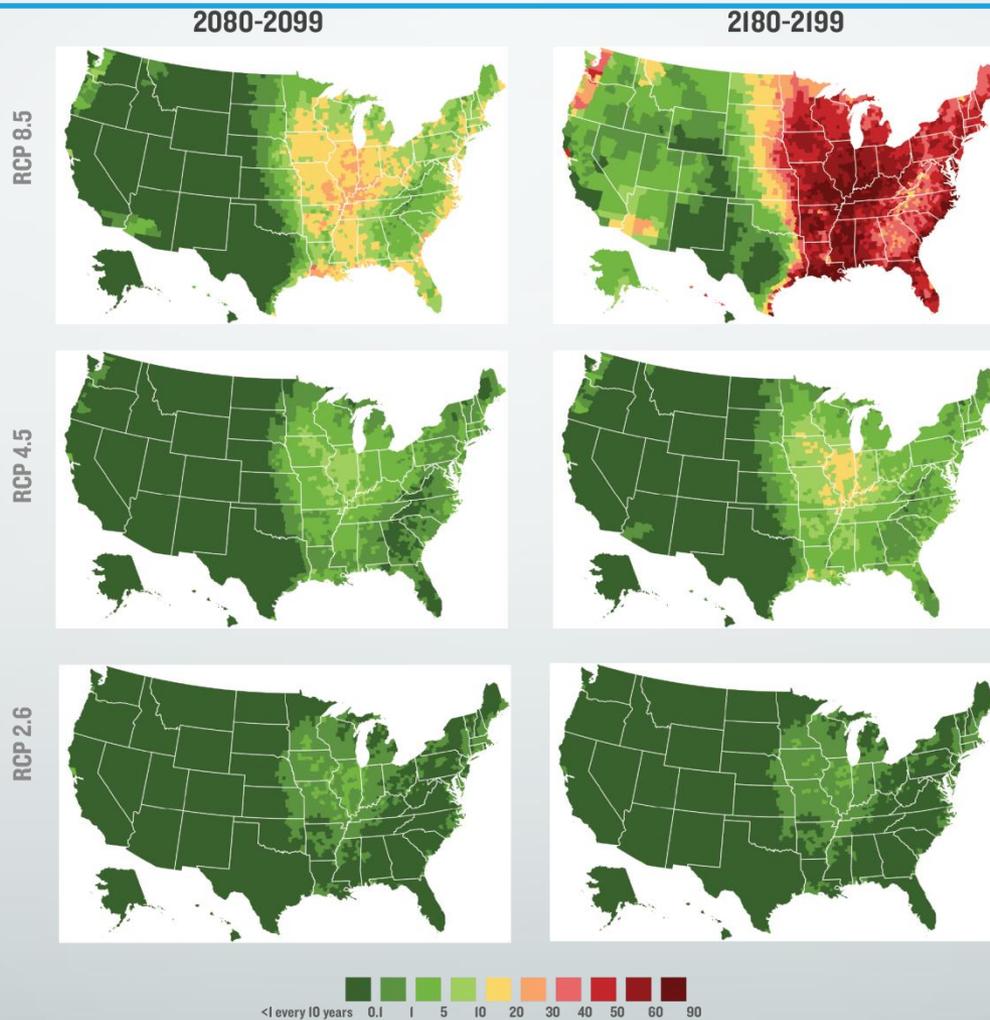
Change in Electricity Demand and Energy Costs by Region, 2040-2059



Health: Number of days over 95° F

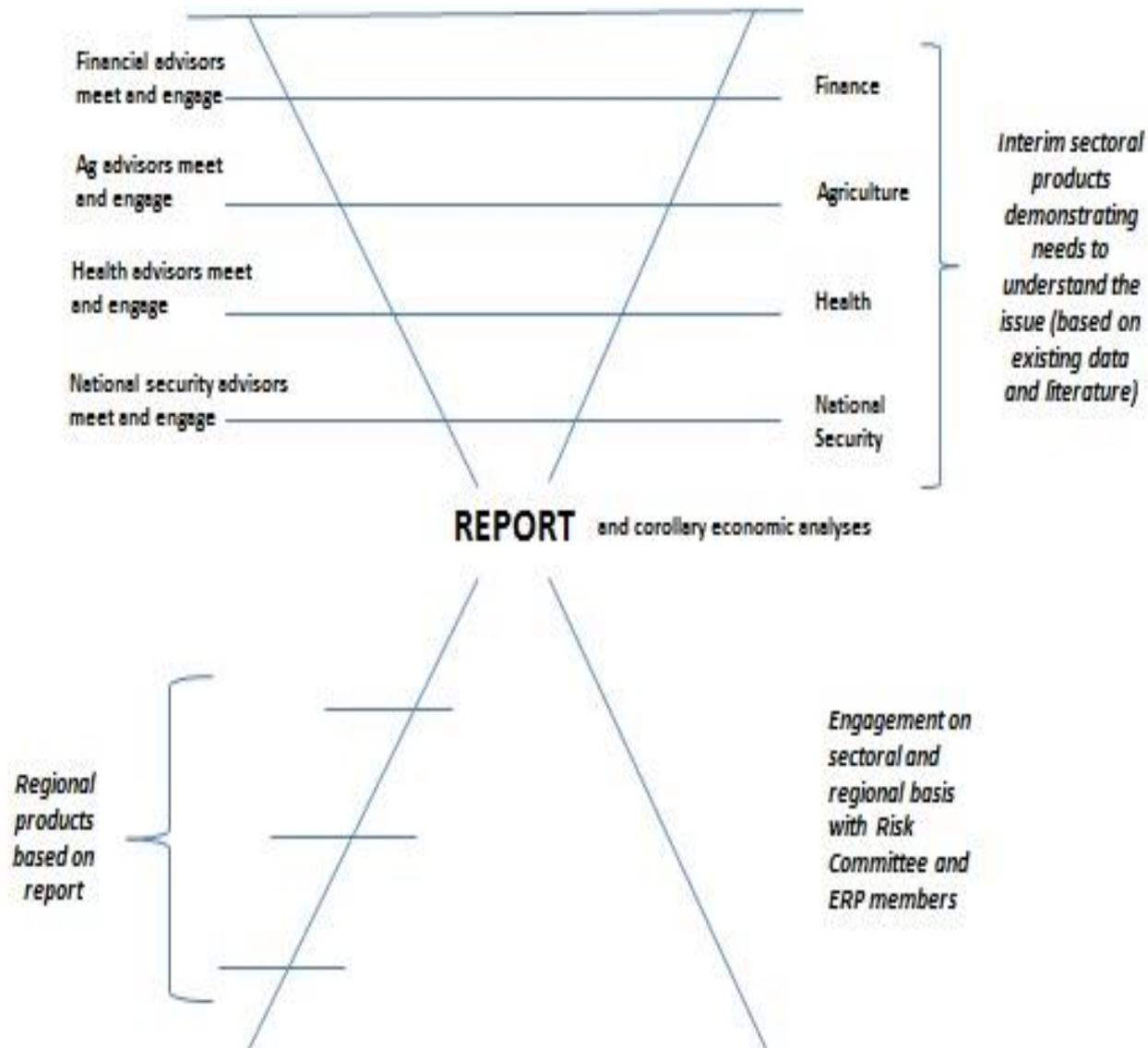


Health: Humid Heat Stroke Index



Rollout & Media Strategy

Launch with Co-Chairs



-
- 354 Media hits overall (and counting!)
 - Majority (54) in financial/business/trade
 - Individual press briefings with ag and health reporters
 - Mainstream, trade, and academic coverage

Press Coverage Highlights:

Print: [The New York Times](#), [The Wall Street Journal](#), [The Washington Post](#), [The Financial Times](#) (\$), [Fortune](#), [Forbes](#), [The Economist](#), [NPR](#)

TV: [CNN](#), [CNBC](#), [Bloomberg TV](#) [PBS](#); Clip reel [here](#)
Risk Committee Op-eds: [The New York Times](#), [Boston Globe](#), [Institute of Medicine](#), [Green Home Builder Magazine](#)
Masthead editorials: [Washington Post](#), [Financial Times](#), [Wall Street Journal](#)

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The Coming Climate Crash

Lessons for Climate Change in the 2008 Recession

By HENRY M. PAULSON Jr. JUNE 21, 2014



JULY 24, 2014

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Opinions

Robert Rubin: How ignoring climate change could sink the U.S. economy





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By Robert E. Rubin July 24 at 6:48 PM

Robert E. Rubin, co-chairman of the Council on Foreign Relations, was treasury secretary from 1995 to 1999.

Good economic decisions require good data. And to get good data, we must account for all relevant variables. But we're not doing this when it comes to

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 - Midwestern press (Chicago Tribune, Minneapolis Star Tribune), agricultural trade publications, and consumer goods outlets



