Conference Call Via WebEx

Climate Risk and Resilience (C) Working Group

Thursday, June 18, 2020

NAIC National Association of Insurance Commissioners

Date: 6/17/20

WebEx Conference Call

CLIMATE RISK AND RESILIENCE (C) WORKING GROUP

Thursday, June 18, 2020
1 pm CT (2 pm ET; 12 pm MT; 11 am PT)

ROLL CALL

Mike Kreidler, Chair	Washington	Derek Oestreicher	Montana
Ricardo Lara, Vice Chair	California	Barbara D. Richardson	Nevada
Austin Childs/Alex Romero	Alaska	Anna Krylova	New Mexico
Peg Brown	Colorado	Marshal Bozzo/Nina Chen	New York
Andrew N. Mais/George Bradner	Connecticut	Tracy Snow/Tom Botsko	Ohio
Colin M. Hayashida	Hawaii	Andrew Stolfi	Oregon
Judy Mottar	Illinois	David Buono	Pennsylvania
Travis Grassel	Iowa	Rafael Cestero-Lopategui	Puerto Rico
Robert Baron	Maryland	Michael S. Pieciak	Vermont
Peter Brickwedde	Minnesota		

NAIC Support Staff: Anne Obersteadt

AGENDA

1. Call to Order/Roll Call—*Commissioner Mike Kreidler (WA)*

2. Hear an Update on the Drafting of the *Insurance Regulatory Discussion Points on Catastrophic Events* Document —*Mike Peterson (CA)* — Attachments A-C

3. Hear an Update on California's Development of a Sustainable Insurance Roadmap —*Mike Peterson (CA)* — Attachment D

4. Hear a High-Level Summary of Ceres' Recently Released *Addressing Climate as a Systemic Risk: A Call to Action for U.S. Financial Regulators* Report—*Steven Rothstein, Managing Director of the Ceres Accelerator for Sustainable Capital Markets* — Attachment E

5. Discuss Work Plan for 2020— *Commissioner Mike Kreidler and Jay Bruns (WA)* — Attachment F

6. Any Other Matters— *Commissioner Mike Kreidler (WA)*

7. Adjournment

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Attachments A-C

Hear an Update on the Drafting of the *Insurance Regulatory Discussion Points on Catastrophic Events* Document

—Mike Peterson (CA)

Insurance Regulatory Discussion Points on Catastrophic Events

PURPOSE

The purpose of the Insurance Regulatory Discussion Points on Catastrophic Events ("CAT Discussion Points") is to inform state insurance regulators on each other's efforts related to catastrophe risk, resilience and insurance. The questions are intended to be a guideline for each state to consider as they craft their unique discussion points. Actions that focus on resilience at the local and state levels are important to supporting the availability and affordability of insurance. State insurance regulators play an important role in directing how communities integrate resiliency into their planning decisions. The responses to the CAT Discussion Points will serve as an important mechanism from which state insurance regulators can share and learn from each other's actions.

Weather-related events have impacted all 56 states and territories in the US in recent years. Catastrophe events are predicted to increase in frequency and severity requiring increased efforts to achieve resilient communities. Insurance plays an important role in disaster recovery by providing the funds needed to rebuild or resume operations. Insurance also indirectly reduces damages by incentivizing mitigation and hardier rebuilding.

The CAT Discussion Points was developed by compiling the questions insurance departments receive most frequently from legislators and policymakers. The questions are intended to be applicable to most perils. However, as they will be answered by each state insurance department, the responses will reflect the weather events experienced in that state. For instance, many south-eastern coastal states responses are likely to reflect issues from hurricane and tropical storm exposures, such as storm surge, heavy rainfall, flooding and wind. Responses from northeastern states are likely to reflect issues from snowstorms. Tornadoes, hail and flooding are common exposures for mid-western states. Western states are likely to reflect issues from wildfire, flooding and mudslides.

Additionally, the discussion points covered in the responses will vary by the nuances of each state's regulatory environment. Each state has different criteria, coverage options, exclusions and availability of coverage. In many high-risk hurricane states there are homeowners' insurance exclusions for windstorm damage. States in the central US at higher risk for severe storms, tornadoes and hail may charge a special deductible for windstorm and hail damage. Western states are increasingly facing insurance non-renewals in areas with a high risk of wildfires.

It is common for states to place short-term moratoriums on policy cancellations and non-renewals

Insurance Regulatory Discussion Points on Catastrophic Events

PURPOSE CONTINUED

after a significant catastrophe event. If there are no insurers willing to provide insurance coverage due to high-risk, some states offer coverage through state-sponsored residual market mechanisms. To incentivize loss reduction measures, certain states mandate insurers provide discounts for mitigation or retrofitting improvements. Some fund retrofitting directly by providing consumers with grants and loans.

COMMONLY ASKED QUESTIONS FOR CONSIDERATION AS DISCUSSION POINTS

(If responses are different by peril, please note.)

I. Mitigation
   A. Mitigation generally reduces risks and promotes more availability of insurance. What incentives do consumers have to mitigate their home?
   B. Are there incentives built in to the pricing of insurance policies?
   C. Has the insurance department advocated and/or required insurers to offer incentives in the pricing of insurance policies?
   D. What data is needed to help support resiliency incentives being built into insurance policies?
   E. What mitigation tactics do insurers employ most frequently?
   F. If a state funds mitigation incentives, such as grants, loans, and/or public-private partnerships, is there an overall strategy to improve availability of insurance in the state?
   G. How do statewide mitigation efforts, such as Utah's Catastrophic Wildfire Plan, prioritize projects, monitor progress, and fund maintenance to reduce the risk of future losses?
   H. If mitigation is a potential pathway to a more resilient insurance market, are states with similar risks making similar pre-disaster investments?
   I. Do states have specific statewide standards for home or community mitigation?
   J. Are states offering any tax incentives for home mitigation actions?
   K. What state regulations trigger a retrofit of a home?
   L. Are there any restrictions on local governments in regard to land development?

Insurance Regulatory Discussion Points on Catastrophic Events

COMMONLY ASKED QUESTIONS CONTINUED

II. Supervision of claims

A. Speed

i. What are the state laws regarding the timing of the payment of claims?

ii. Are insurers required to distribute a certain percentage of an insured's contents coverage before an inventory is submitted?

iii. How have states approached getting money to consumers as quickly as possible so that they can start recovering?

B. Additional Living Expenses (ALE)

i. What are the time constraints for using ALE?

ii. Does ALE apply to partial losses, or when local infrastructure is not accessible or useable (*e.g.,* inaccessible roads or unusable water system) or only to total losses?

III. Nonrenewal

A. What are the options if a consumer is non-renewed?

B. Are there any circumstances under which a consumer must be renewed by an insurer?

C. How much advance warning are insurers required to give insureds and is this enough time to take any mitigation actions to prevent a non-renewal?

D. What prevents an insurer from asking for mitigation actions from a homeowner (installing a more resilient roof) and then making a decision to non-renew that consumer?

E. Are there mechanisms to determine what percentage of non-renewed consumers decide to go without property insurance?

IV. Insurance Premiums

A. Are there safeguards against abrupt insurance premium increases related to a specific risk?

B. Are there any state laws or regulations governing "grace periods" for the payment of premiums after disasters?

C. Do insurers commonly use predictive modeling to price insurance and how has that affected premiums for consumers?

Insurance Regulatory Discussion Points on Catastrophic Events

COMMONLY ASKED QUESTIONS CONTINUED

(If responses are different by peril, please note.)

V. Insurance Coverage Adequacy and Exclusions

A. Are insurers required to provide any regularly updated estimate of replacement cost and the corresponding change in premium to consumers?

B. Are there other safeguards for consumers to reduce the likelihood of being unintentionally underinsured?

C. Is there any scenario under which a consumer is "guaranteed" offer/renewal of insurance?

D. How recently were building codes upgraded to address the weather-related perils of your region? How broadly are these codes required and enforced?

E. Are there any required post-disaster studies conducted to understand to what degree insurance coverages were adequate?

F. Why do some homeowners policies require separate deductibles?

VI. Rebuilding Restrictions and Requirements

A. Are consumers who suffer a total loss required to build on the same property or can they use their insurance coverage to purchase a home in a different, potentially less risky area?

B. Are states required to upgrade to the newest building code?

VII. Residual Market

A. Where do consumers go if they are not able to get coverage in the admitted market?

B. How much of the insurance coverage provided in your state comes from your residual market?

C. Are there exclusions or specified inclusions to what is covered in your residual market?

VIII. Adjuster Licensure

A. What is the state licensure process?

B. What steps have you taken to expedite adjusters ability to respond to catastrophic events?

Insurance Regulatory Discussion Points on Catastrophic Events

COMMONLY ASKED QUESTIONS CONTINUED

(If responses are different by peril, please note.)

IX. Insurance Department Interactions with Stakeholders

A. How does the insurance department help drive resilience efforts across state and local agencies and departments? This includes any work done with:
   i. Building departments to adopt more resilient standards requirements (such as roof taping)
   ii. Land use/development departments to implement resiliency into their planning
   iii. Emergency management, natural resources, economic development and health agencies

B. What successes and challenges did you encounter in these efforts? How did you address the challenges?

C. What data is needed to help support adoption of more resilient standards?

D. How does the insurance department liaise with regional entities/organizations on resilience?

E. How does the insurance department leverage outside research and data (such as from educational institutions, federal scientific agencies, etc.) to gather resilience data, upgrade hazard maps, etc.

F. How do insurance departments help consumers and communities address their at-risk assets? What tools are available to help identify risk, estimate the costs and understand the benefits of protection?

G. What risk-disclosures do regulators require or request from insurers? What is the most common metric used to disclose severity of impact?

X. Post-Catastrophe Regulatory Response

A. Where there any post-catastrophe regulatory restrictions (such as on claims or underwriting) placed on the business practices of insurers?

B. Where there any post-catastrophe regulations that expanded requirements on insurers (such as mandated or retroactive expansion of benefits)?

C. Where there any post-catastrophe regulatory fines or actions taken related to compliance violations?

D. What proximate cause or concurrent event issues arose from the catastrophe? How did your insurance department handle them?

Insurance Regulatory Discussion Points on Catastrophic Events

COMMONLY ASKED QUESTIONS CONTINUED

(If responses are different by peril, please note.)

XI. Technology Considerations

A. What authority do regulators have over insurer use of models for underwriting?
B. How are state insurance regulators balancing insurers' use of risk segmentation versus pooling in a time of increased data?
C. Is there parametric coverage available in your state for catastrophes? If so, for what coverages?

XII. Managing Overlapping Crises in a Time of Increasing Uncertainty

A. How has responding to catastrophic events during a pandemic complicated or changed your typical responses and actions? What are the lessons learned?

NAIC National Association of Insurance Commissioners

Date: 5/22/20

Informal Drafting Call of the

CLIMATE RISK AND RESILIENCE (C) WORKING GROUP
Friday, May 22, 2020
2-3 p.m. CT

Meeting Summary

The informal drafting group of the Climate Risk and Resilience (C) Working Group met by conference call on Friday, May 22, 2020. The following states participated: Washington, Chair; California, Vice Chair; Alaska; Colorado; Illinois; Maryland; Minnesota; Montana; New York; New Mexico; Ohio; Pennsylvania; Puerto Rico; Vermont. The call was led by California.

During the call, the informal drafting group:

1. Discussed revisions to the Insurance Regulatory Frequently Asked Questions (FAQ) that had been implemented based on the Working Group's March 11, 2020 conference call. (See 3/11/20 summary for specifics.)
2. Discussed additional revisions, including:
    a. Converting the document from public to regulator-only to allow for more robust sharing among states. States would still be able to leverage information from the FAQ for public use, as deemed appropriate.
    b. Revising the "Purpose" language to specify the questions are meant to be a list of potential discussion points for states to consider in crafting their state's unique response. States are not expected to answer every question.
    c. Move technology related questions (III.F., IV.D.,V.G.) to a newly created Technology section.
    d. Create a new section for Managing Overlapping Crises in a Time of Unknow.
3. Discussed post-call revisions
    a. Drafting members are asked to contemplate if additional revisions are needed to ensure the questions are not peril specific.
    b. Drafting members are asked to contemplate what additional questions are needed in the Overlapping Crises section.
    c. Revisions and additions are to be sent to NAIC staff (aobersteadt@naic.org)
4. Discussed information to be shared by drafting members post-call
    a. MN will share material they send to legislators and other public offices on tornadoes, hail and flood risks in their state.
    b. Getting input from TN on the impact of recent tornadoes in a time of COVID would be helpful.
5. Discussed state-specific disaster management activities.
    a. MN works to make consumers in higher risk areas more aware of proactive steps through sharing tools, such as home inventory lists, at community events and through social media, such as sending out consumer awareness tips on spring flooding in the winter.
    b. CO partners with PCIAA, emergency managers and others on mitigation actions and standards. They are also developing a webpage devoted to disasters that can be easily shared with others, such as the Red Cross.

c. CO said responding to disasters in rural areas during the pandemic has had a negative impact on how effectively they can respond. Rural evacuations must be made to disaster centers further out, causing substantial dislocation to victims.
d. They have experienced an increase in concurrent and cascading events. Currently, they are contemplating the implications of fire risk and shelter in a time of COVID-19.
e. MD holds a webinar with the P&C industry to discuss regulatory expectations and company actions (like use of new claims technology) during/post catastrophe.

Date: 3/17/20

Informal Drafting Call of the

CLIMATE RISK AND RESILIENCE (C) WORKING GROUP
Wednesday, March 11, 2019
11 a.m. – 12 p.m.

Meeting Summary

The informal drafting group of the Climate Risk and Resilience (C) Working Group met by conference call on Wednesday, March 11, 2020. The following states participated: Washington, Chair; California, Vice Chair; Colorado; Maryland; Nevada; New Mexico; Oregon; Pennsylvania; Puerto Rico; Vermont. The call was led by California.

During the call, the informal drafting group:

1. Discussed revisions to the Insurance Regulatory Frequently Asked Questions (FAQ) that had been implemented based on the Working Group's prior conference call. The FAQ aims to be a compilation of questions state insurance regulators find they are frequently being asked related to resiliency efforts and pre/post catastrophe activities.
    a. To address the suggestion the FAQ should be all-peril, rather than wildfire specific:
        i. Reference to the wildland urban interface was deleted from Section I
        ii. Reference to or questions specific to wildfire were deleted from Section III
    b. To address the suggestion questions on insurance coverages and exclusions be added
        i. The title of Section IV was changed to "Insurance Coverage Adequacy and Exclusions"
        ii. A question was added to Section IV asking if post-disaster studies were required to understand the adequacy of insurance coverages
    c. To address the suggestion a residual market section be added
        i. Section VII titled "Residual Market Questions" was added, with further questions to be drafted by the drafting group
        ii. Two questions were added to Section IV asking how recent building code upgrades are and how they are enforced

2. Discussed adding the following revisions:
    a. Add an introduction to describe the perils the FAQ could apply to.
    b. Add a question related to what data is needed to support mitigation incentives and how this data can be obtained.
    c. Add questions for how much is included in the state's residual market and if there are any exclusions/inclusions to what is covered.
    d. Amend the question under "Insurance Coverage Adequacy and Exclusions" related to insurers' requirements to provide estimates of replacement cost to include "and the corresponding change in premium resulting from it."
    e. Add a question for how states work with building departments to adopt required standards for resiliency, such as taped roofs in Connecticut and updated maps in California. Add a question asking how successful or receptive building departments were when approached.

f. Add an Adjuster Licensure category. Add a question requesting the state's licensure process. Add a question for steps taken to expedite adjuster's ability to enter catastrophic areas.
g. Add questions asking if states are required to upgrade to the newest building code and what state regulations trigger a retrofit of a home.
h. Add a question on how the insurance department works with sister agencies to promote resilience and building standards.
i. Add a question related to where consumers go if they can't get coverage in the admitted market.
j. Add questions related to proximate or concurrent cause issues.
   i. California noted difficulties related to determining if a mudslide was caused by a wildfire or occurred independently. Colorado noted the rule of if a flood or water caused a mud slide are unintelligible.
   ii. Storm surge or flood (wind vs. water) was an issue in Maryland after Hurricane Sandy (likely FL, SC, LA and TX too).
   iii. Colorado noted cancelations due to a second hail claim within a year from two different hail events.
   iv. Colorado, Iowa and New Mexico commented on the lengthy time it can take for damage to show.
   v. Colorado noted issues after the 2017 hail event included vehicle damage estimates taking a year, supply chain issues, issues with contracted adjusters and reliability of hail proof roofs by some manufactures.
   vi. Vermont noted identification of damage from a 2015 hail event was delayed by out-of-town rental property owners.

3. General discussion
   a. Discussed the importance of the question related to safeguards against abrupt premium increases. Insurers tend to increase rates after a catastrophe and keep them high in good years. Shareholders benefit through high dividends in the good years, but policyholders do not benefit.
4. Post-call revisions:
   a. Expanded "Purpose" section to function like an introduction
5. Mitigation section changes:
   a. Added:
      i. Has the insurance department advocated and/or required insurers to offer incentives in the pricing of insurance policies?
      ii. What data is needed to help support resiliency incentives being built into insurance policies?
      iii. What mitigation tactics do insurers employ most frequently?
      iv. What state regulations trigger a retrofit of a home?
   b. Moved to the Insurance Coverage Adequacy and Exclusions section:
      i. Is there any scenario under which a consumer is "guaranteed" offer/renewal of insurance?
6. Insurance Premiums section changes:
   a. Reordered from V. to IV. for spacing reasons
7. Insurance Coverage Adequacy and Exclusions section changes:
   a. Reordered from IV. to V. for spacing reasons
   b. Modified to include highlighted:

            i. Are insurers required to provide any regularly updated estimate of replacement cost and the corresponding change in premium to consumers?
    c. Added:
        i. Why do some homeowners policies require separate deductibles?
        ii. Is there parametric coverage available in your state for catastrophes? If so, for what coverages?
    d. Moved from the Mitigation section:
        i. Is there any scenario under which a consumer is "guaranteed" offer/renewal of insurance?
8. Rebuilding Restrictions and Requirements section
    a. Expanded the section name to include "and Requirements"
    b. Added:
        i. Are states required to upgrade to the newest building code?
9. Residual Markets section
    a. Added:
        i. Where do consumers go if they are not able to get coverage in the admitted market?
        ii. How much of the insurance coverage provided in your state comes from your residual market?
        iii. Are there exclusions or specified inclusions to what is covered in your residual market?
10. Adjuster Licensure section (new section)
    a. Added:
        i. What is the state licensure process?
        ii. What steps have you taken to expedite adjusters' abilities to respond to catastrophic events?
11. Insurance Department Interactions with Stakeholders section (new section)
    a. Added:
        i. How does the insurance department help drive resilience efforts across state and local agencies and departments? This includes any work done with: i. Building departments to adopt more resilient standards requirements (such as roof taping); ii. Land use/development departments to implement resiliency into their planning; iii. Emergency management, natural resources, economic development and health agencies
        ii. What successes and challenges did you encounter in these efforts? How did you address the challenges?
        iii. What data is needed to help support adoption of more resilient standards?
        iv. How does the insurance department liaise with regional entities/organizations on resilience?
        v. How does the insurance department leverage outside research and data (such as from educational institutions, federal scientific agencies, etc.) to gather resilience data, upgrade hazard maps, etc.?
        vi. How do insurance departments help consumers and communities address their at-risk assets? What tools are available to help identify risk, estimate the costs and understand the benefits of protection?
        vii. What risk-disclosures do regulators require or request from insurers? What is the most common metric used to disclose severity of impact?
12. Post-Catastrophe Regulatory Response section (new section)
    a. Added:
        i. Where there any post-catastrophe regulatory restrictions (such as on claims or underwriting) placed on the business practices of insurers?

ii. Where there any post-catastrophe regulations that expanded requirements on insurers (such as mandated or retroactive expansion of benefits)?
iii. Where there any post-catastrophe regulatory fines or actions taken related to compliance violations?
iv. What proximate cause or concurrent event issues arose from the catastrophe? How did your insurance department handle them?

Attachment D

Hear an Update on California's Development of a Sustainable Insurance Roadmap

—Mike Peterson (CA)

Commissioner Lara and United Nations Announce Nation's First Sustainable Insurance Roadmap to Reduce California's Climate Risks

News: 2019 Press Release

For Release: July 24, 2019
Media Calls Only: 916-492-3566
Email Inquiries: cdipress@insurance.ca.gov

Commissioner Lara and United Nations Announce Nation's First Sustainable Insurance Roadmap to Reduce California's Climate Risks

LOS ANGELES, Calif. – The California Department of Insurance and the United Nations Environment Program (U.N. Environment) have launched a yearlong effort to develop a Sustainable Insurance Roadmap to confront California's climate risks. Insurance Commissioner Ricardo Lara and Butch Bacani, who leads U.N. Environment's Principles for Sustainable Insurance (PSI)—the largest collaboration between the United Nations and the insurance industry—announced the groundbreaking initiative at a roundtable co-hosted with the UCLA School of Law and UC Berkeley School of Law.

This is the first time the United Nations has partnered with an American state to create a sustainable insurance strategy and action plan that would tackle the growing risks of climate change. Last year, California experienced the deadliest and most destructive wildfires in the state's history, resulting in more than $12 billion in insured losses, making it the world's costliest disaster.

"We have a historic opportunity to utilize insurance markets to protect Californians from the threat of climate change, including rising sea levels, extreme heat and wildfires," said Insurance Commissioner Ricardo Lara. "Working with the United Nations, we can keep California at the forefront of reducing risks while promoting sustainable investments."

"A sustainable insurance roadmap will enable California to harness risk reduction measures, insurance solutions, and investments by the insurance industry in order to build safer, disaster-resilient communities, and accelerate the transition to a low-carbon, sustainable economy," said U.N. PSI leader Butch Bacani. "With Commissioner Lara's vision and leadership, we look forward to working together with insurers and key stakeholders to drive ambitious climate action now, in line with the aims of the Paris Agreement on Climate Change."

California is the largest insurance market in the U.S., and one of the largest in the world. The California Department of Insurance was one of the first insurance regulatory and supervisory authorities in the world to sign U.N. Environment's Principles for Sustainable Insurance and commit to tackling global sustainability challenges such as climate change, biodiversity loss and ecosystem degradation, pollution, and social and financial exclusion.

The California Sustainable Insurance Roadmap is envisioned to pave the way for innovative risk management, insurance and investment solutions that reduce climate risks and protect natural ecosystems. For example, new insurance products could be developed to promote cooler streets and renewable energy. In other countries, insurance solutions for coral reefs and mangroves are emerging as these natural ecosystems have been proven to significantly reduce wave energy and buffer storm surge, reducing flood risk and protecting communities. In this vein, insurance solutions for California's protective, life-supporting natural infrastructure—such as wetlands and forests—could reduce climate and disaster risk and present new opportunities.

The latest report of the Intergovernmental Panel on Climate Change (IPCC) highlights the rapid, far-reaching and unprecedented changes needed to limit global warming to 1.5°C. It shows that every extra bit of warming matters, and that warming of 1.5ºC or higher increases the risk associated with long-lasting or irreversible changes, such as the loss of some ecosystems. Moreover, the latest report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) finds that around 1 million animal and plant species are now threatened with extinction, many within decades, more than ever before in human history.

The California Department of Insurance and U.N. Environment's PSI Initiative will engage insurers and reinsurers, public policy leaders, environmental NGOs, researchers, and risk management experts on this major collaborative effort to make California's communities and economies resilient, inclusive and sustainable.

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About U.N. Environment's Principles for Sustainable Insurance Initiative: Endorsed by the UN Secretary-General, the Principles for Sustainable Insurance serve as a global framework for the insurance industry to address environmental, social and governance risks and opportunities—and a global initiative to strengthen the insurance industry's contribution to building resilient, inclusive and sustainable communities and economies.

www.unepfi.org/psi

About Commissioner Ricardo Lara: Commissioner Lara is one of California's environmental leaders who authored the state's super-pollutant reduction strategy and received the first Climate and Clean Air Award with former Governor Jerry Brown. He wrote the nation's first climate insurance bill to protect California's natural environment. Under his leadership, the Department of Insurance has created the first deputy-level position for climate and sustainability.

www.insurance.ca.gov

Attachment E

Hear an Update on Ceres' Recently Released *Addressing Climate as a Systemic Risk: A Call to Action for U.S. Financial Regulators* Report

—Steven Rothstein, Managing Director of the Ceres Accelerator for Sustainable Capital Markets

Ceres

THE CERES ACCELERATOR FOR SUSTAINABLE CAPITAL MARKETS

ADDRESSING CLIMATE AS A SYSTEMIC RISK

A call to action for U.S. financial regulators

JUNE 2020

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Special thanks to Report Consultant **Peyton Fleming**

Thanks also go to the many colleagues at Ceres who provided invaluable assistance with this project, including Blair Bateson, Sam Burke, Jim Coburn, Maura Conron, George Grattan, Tim Green, Cynthia McHale, Ryan Martel, Brian Sant, Dan Saccardi, Sara Sciammacco, Troy Shaheen, Alex Wilson and Elise Van Heuven.

Project Contributors

Ceres would like to thank the following people for contributing their valuable time and thoughtful feedback to this project and informing our recommendations. The views expressed in this report are Ceres' alone and do not necessarily reflect those of these contributors.

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LETTER FROM THE CHAIR

I am thrilled that this new Ceres report, "Addressing Climate as a Systemic Risk: A call to action for U.S. financial regulators," identifies so many important recommendations to address the systemic risk that the climate crisis presents. I have spent many years in risk markets, at the intersection of capital markets and insurance, so I am particularly aware of the importance of climate risk in both industries.

We hope that this first report from the new Ceres Accelerator for Sustainable Capital Markets will contribute to the critical discussions among federal and state regulators, legislators and others focused on these issues.

I hope you will consider joining us to advocate for these changes as quickly as possible.

Barney Schauble
Chair, Ceres Board of Directors
Chairman, Nephila Climate

About the Ceres Accelerator for Sustainable Capital Markets

The Ceres Accelerator for Sustainable Capital Markets (the "Ceres Accelerator") aims to transform the practices and policies that govern capital markets in order to accelerate action on reducing the worst financial impacts of the global climate crisis and other sustainability threats. The Ceres Accelerator will spur capital market influencers to act on these systemic financial risks and drive the large-scale behavior and systems change needed to achieve a net-zero carbon economy and a just and sustainable future.

For more information visit: ceres.org/accelerator.

FOREWORD

It is a special pleasure to prepare this foreword for Ceres' "Regulating Climate as a Financial Risk: A call to action for U.S. agencies."

Why such pleasure? The time for the release of this report and the place where I've just read it might have something to do with it. Considering place, I am in my house, as are you, I imagine, having just devoured this report, and wondering about the potential for action in a time of lockdown. In terms of the time, as you know, we are in the midst of a deepening recession, triggered by the federal government's failure to act early enough to contain a deadly pandemic, or swiftly enough to forestall the mass layoffs that have occurred. In the midst of all this, you may wonder, as do many, whether the climate change agenda has been knocked off course.

To the contrary. Absolutely not. It is both on course and absolutely relevant. If there could ever be a convergence of events in which we would most deeply feel and understand how an invisible enemy can totally upend a society and an economy, we are seeing it here and now. The pandemic reminds us, daily, of what we miss in our beautiful world, how it is threatened by deforestation, infectious disease, food scarcity, and pollution, and how interconnected and interdependent we all are.

The pandemic has exposed the fact that the best-paid workers many not be the most essential; that the U.S. is particularly vulnerable to shocks that hit our collective well-being like those related to health and climate; that financial markets cannot perform the work of assuring collective well-being; and that the magnitude of a crisis is determined not just by the impact of precipitating events, but by the fragility of the system it attacks. The world has been forced into a recalibration of values.

And so it is, that with near-perfect prescience, the work of the Ceres Accelerator for Sustainable Capital Markets, like this report, underscores that it is possible to act before catastrophe, and that there is opportunity in preemptive, early and bold actions by federal economic policy makers looking to avoid catastrophe. The tools exist. They are available now, and ready to be picked up and deployed.

Which brings us to "Regulating Climate as a Financial Risk." With both breadth and depth, Ceres offers us 50 specific recommendations covering seven key federal financial regulatory agencies, along with state and federal insurance regulators. These recommendations outline the affirmative steps that regulators should take to protect the financial system and economy from potential climate-related shocks that can flatten an economy and grind it to dust. Climate change affects financial stability, and in this report Ceres provides the action plans for federal financial regulators to do the work to protect that stability -- now.

If we want to create a sustainable climate, we need to transition to a net-zero carbon economy. This transition is not going to happen without guidance. Financial markets, themselves, are not going to be the first responders to keep us from the threats posed by a climate emergency. We are learning this the hard way. Thankfully, in many countries central banks and other financial regulators know that when it comes to curbing the effects that climate risk will have on the economy, particularly the heightened chance that such risks will bring about economic catastrophe, leadership must exist and concerted action must be taken. In this report, Ceres gives us, right when we need it most, a comprehensive set of valuable recommendations for United States' financial regulators –– something they can pick up and deploy now.

As I draft this foreword, our hearts are stuck in pain and grief, and our heads are in a place of anger, frustration and awful astonishment. The need to address both the current medical issues and the massive economic losses is critical. But even in the midst of this, Ceres helps us see that in this place and time there is a portal – a gateway – to an economy that is resilient and up to the task of handling the fast-unfolding effects of climate change.

At the very least, we must rebuild with an economy where the values of sustainability are explicitly embedded in market valuation. This transformation will come, in part, from urging the leaders of our financial regulatory bodies to do all they can – which turns out to be a lot – to bring about the adoption of practices and policies that will allocate capital and align portfolios toward sustainable investments that do not depend on carbon and fossil fuels.

Ceres has done us a great service by showing us the tools to take with us as we move through this portal to an environment that we can live in, both supported by and supporting an economy and society that is resilient enough to be transformed. Let’s pick up these tools as we walk through this portal, leaving behind our former sense of what’s possible, while walking towards an environment and an economy that we have confidence--this time--can be sustained.

Best wishes, and onward,

Sarah Bloom Raskin
Former United States Deputy Secretary of the Treasury;
Former Member, Federal Reserve Board of Governors

EXECUTIVE SUMMARY

Systemic risks have the potential to destabilize capital markets and lead to serious negative consequences for financial institutions and the broader economy. Under this definition, climate change, like the current COVID-19 crisis, is indisputably a systemic risk. Its wide-ranging physical impacts, combined with expected transitions to a net-zero carbon economy and other socio-economic ripples, are likely to manifest in both cumulative and unexpected ways and present clear systemic risks to U.S. financial markets -- and the broader economy. Left unmanaged, these risks could have significant, disruptive consequences on asset valuations, global financial markets and global economic stability.

This Ceres report, "Addressing Climate as a Systemic Risk: A call to action for U.S. financial regulators," outlines how and why U.S. financial regulators, who are responsible for protecting the stability and competitiveness of the U.S. economy, need to recognize and act on climate change as a systemic risk. It provides more than 50 recommendations for key financial regulators to adopt, including the Federal Reserve Bank (the Fed), the Office of the Comptroller of the Currency (OCC), the Federal Deposit Insurance Corporation (FDIC), the Securities and Exchange Commission (SEC), the Commodity Futures Trading Commission (CTFC), state and federal insurance regulators, the Federal Housing Finance Agency (FHFA), and the Financial Stability Oversight Council (FSOC).

Given the ongoing response to the COVID-19 pandemic, the role of financial regulators is more prominent than ever. While financial regulators are taking critical actions to support the U.S. economy in response to this immediate crisis, it is imperative that their efforts do not inadvertently worsen the impacts of climate change.

"The evidence on climate risk is compelling investors to reassess core assumptions about modern finance. Research from a wide range of organizations – including the U.N.'s Intergovernmental Panel on Climate Change, the BlackRock Investment Institute, and many others, including new studies from McKinsey on the socioeconomic implications of physical climate risk – is deepening our understanding of how climate risk will impact both our physical world and the global system that finances economic growth."

"These questions are driving a profound reassessment of risk and asset values. And because capital markets pull future risk forward, we will see changes in capital allocation more quickly than we see changes to the climate itself. In the near future – and sooner than most anticipate – there will be a significant reallocation of capital."

Larry Fink
Chairman and CEO, BlackRock
"A fundamental reshaping of finance,"
Fink's 2020 CEO Letter to BlackRock portfolio companies

ADDRESSING CLIMATE AS A SYSTEMIC RISK

Frequent extreme weather events are leading to mounting economic losses.

Physical risks from rising global temperatures – up 1.8° F since the mid-20th century – are the most immediate threat to the U.S. economy. Catastrophic flooding, droughts, wildfires and storms are becoming more frequent and extreme and have caused billions of dollars in financial losses. As global greenhouse gas (GHG) emissions and temperatures continue to rise, deeper economic losses are projected for the years ahead.

The Fourth National Climate Assessment (Vol.11), based on the work of thousands of researchers, suggests that unmitigated climate change could reduce the U.S. economy by as much as 10% annually by 2100. In a 2019 CDP survey, 215 of the world's largest listed companies reported nearly $1 trillion at risk from climate impacts, much of it in the next five years. A London School of Economics study projects that, unless it is addressed, climate change could reduce the value of global financial assets by as much as $24 trillion – resulting in permanent damage that would far eclipse the scale of the 2007-2009 financial crisis.

Social and environmental factors are exacerbating the economic impacts.

Unmitigated climate change and extreme weather events will have significant health impacts, including respiratory issues, the spread of diseases and premature deaths. Climate change and extreme weather events will also create major productivity losses, particularly in industries that require workers to be outside. Migration forced by climate change has already displaced an average of 26.4 million people per year globally between 2008 and 2015. By 2050, climate change will force 50 to 700 million people to emigrate. Finally, the rapid loss of forests and other ecosystems is starting to impact ecosystem-dependent industries such as agriculture, tourism, drinking water and pharmaceuticals.

Climate impacts are already manifesting in the largest state economies.

In just the last few years, California has experienced recording-breaking wildfires, in both number and size, that have taken hundreds of lives, bankrupted the state's largest utility, left millions regularly without power and brought home insurability into question. Florida is facing rapidly rising sea levels and now-routine flooding that are eroding coastal property values and wiping out freshwater supplies. Texas experienced two devastating once-in-a-thousand-years flood events between 2016 and 2019, each caused by torrential rains of 40 inches or more.

An unplanned transition to a low-or-zero-carbon economy could cripple key industries.

Changes in government policies, consumer sentiment, liability risks and technological innovation could cause significant losses for high-carbon industry sectors, and those that rely on them. Given the large size of these industries, these cumulative losses could send broad, intersecting and amplifying financial ripples on major financial institutions holding related assets.

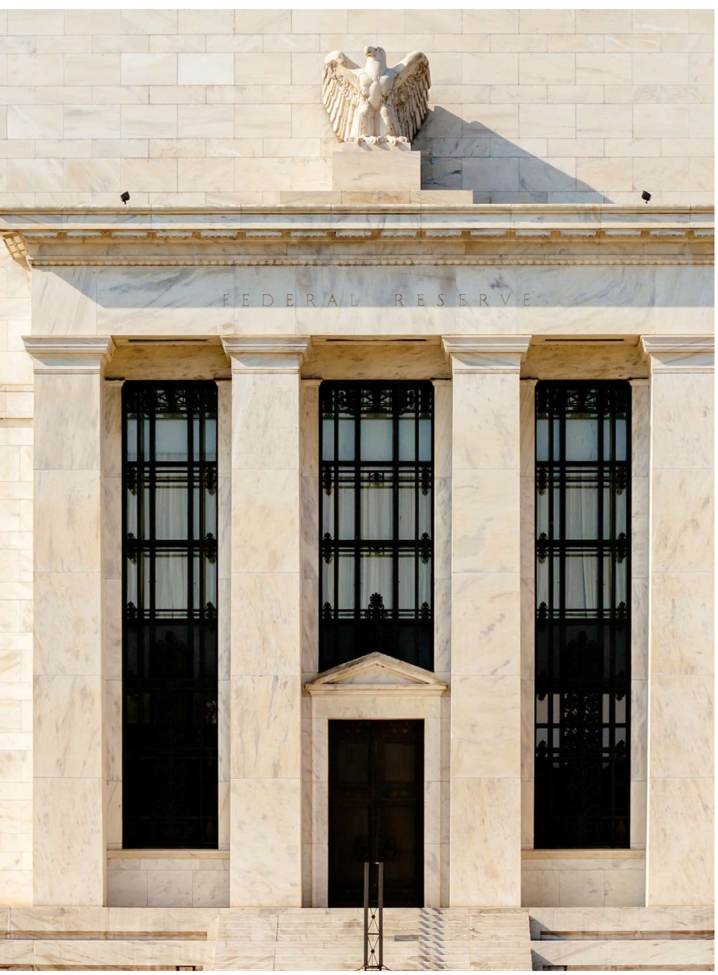
Economists and financial leaders say the scale of the losses from climate change could eclipse the subprime mortgage securities meltdown that triggered bank failures and, ultimately, a deep global recession a dozen years ago. "Even if only a fraction of the [climate] science is right, this is a much more structural, long-term crisis [than the 2007-2009 recession]," said BlackRock CEO Larry Fink in 2020.

Despite these risks, national and global efforts to mitigate climate change's impacts could create enormous clean energy investment opportunities that would translate into economic growth and job creation. Research suggests that transitioning to a low-carbon sustainable economy could deliver direct economic gains of $26 trillion through 2030, compared to business as usual.

Insurance companies and banks are on the frontlines of risk.
The insurance sector is particularly vulnerable to the physical impacts of climate change, and has already faced growing losses; insurers' investments are also at risk. Banks and financial institutions that have lent to and invested in risky, carbon-intensive sectors have the potential to have their investments become "stranded" in the face of the transition to a low-or-zero-carbon future.

The cumulative and unpredictable nature of climate impacts poses a risk to financial market stability.
While any of the impacts outlined above are significant, their cumulative, correlated and nonlinear nature poses the real risk to financial market stability. To put it simply, the whole is not only greater than the sum of its parts – it magnifies them, as well. If climate change affects markets suddenly and unexpectedly, it could burst a "carbon bubble," which could pose grave dangers to financial markets and the real economy, already weakened from the ongoing coronavirus pandemic.

At the same time, the response to the pandemic has also underscored the power financial regulators have to buttress markets in the face of a disruptive risk. With that power, regulators also have the responsibility to assess market vulnerability to such risks, and take action to make the economy resilient to such shocks. As stewards of the largest economy in the world, U.S. financial regulators, including the Federal Reserve, the SEC and others, have critical roles to play. They can send the appropriate market signals about the risks posed by climate change to the U.S. and global economy, and take the necessary steps to recalibrate our financial system.



ACTIONS NEEDED

This report outlines why and how key U.S. financial regulators can and should take action to protect the financial system and economy from potentially devastating climate-related shocks. Financial regulators have a mandate to maintain financial market stability, foster capital growth and competitiveness, protect consumers and investors and ensure market efficiency and integrity. Climate risk is relevant to each of these considerations.

This report focuses on the roles of those financial regulators that Ceres believes are particularly important to jumpstart the necessary action on climate risk now. However, we also believe that all regulators – financial and otherwise – have important roles to play in addressing the climate risk. "Addressing Climate as a Systemic Risk" makes a series of recommendations that build on the existing mandates of the relevant regulatory agencies. We also identify similar actions being taken by global regulators that could serve as important models for U.S. agencies to consider.

Our key recommendations:

The **Federal Reserve System**, including the **Federal Reserve Bank**, should:

- Acknowledge that climate change poses risks to financial market stability and immediately begin assessing their impacts. This includes building awareness of regional climate vulnerabilities, and conducting the needed research.
- Integrate climate change into their prudential supervision and regulation of systemically important financial institutions to ensure they adequately address climate change as a part of their risk management and are well prepared for transition risks. One clear opportunity is to require financial institutions to conduct climate stress tests. Another opportunity is to work with the SEC and other agencies to require banks to assess and disclose climate risks, including carbon emissions from their lending and investment activities. Finally, the Fed should coordinate with its global counterparts to define activities that are likely to exacerbate climate risks.
- Explore how climate risks can be addressed through monetary policy to keep the economy resilient in the face of disruptive risks. This policy assessment should include considering the climate impacts of injecting more liquidity into the economy, and integrating climate risk into collateral frameworks and economic outlook assessments.
- Explore the integration of climate risk into the community reinvestment process to bolster the resilience of low-income communities to climate change.
- Join efforts, such as the Network for the Greening the Financial System, and to allow for globally coordinated efforts on climate risks.

"When you put all these pieces together, it becomes pretty clear: climate change is an economic issue we can't afford to ignore.

This isn't just a concern for the Twelfth District. Or even the United States. Countries around the world are dealing with the economic impacts of climate change. And conferences like this are essential to understanding the challenges that lie ahead – for all of us.

Ultimately, this is our job. The San Francisco Fed is a public service organization. We're responsible for the people and the communities we serve. So, we have to get out in front of this issue and do what we do best.

Convene the best people and ideas. Study data and conduct research.
Talk to the communities we serve – and really listen when they tell us what they need."

Mary Daly
President and CEO, Federal Reserve Bank of San Francisco
"Why climate change matters to us," November 2019

The **Office of the Comptroller of the Currency** and the **Federal Deposit Insurance Corporation** should:

- Coordinate with each other and all banking regulators to ensure that climate change is integrated into the financial supervision process. This integration could include jointly issuing a bulletin highlighting the wide ranging ways that climate risks could impact financial performance and outlining principles to help financial institutions prudently manage them.
- (OCC) update the Comptroller's Handbook to issue enhanced guidance on climate risk to examiners, to be used in supervision of financial institutions. They should also integrate climate-risk supervision into the examiner education process.
- (FDIC) closely monitor the impacts of climate risk on bank lending and investments activities and explore how to integrate climate risk into the risk-based premium system for the Deposit Insurance Fund.

The **Securities and Exchange Commission** should:

- Analyze climate risk impacts on the securities markets and on the SEC mandate, and consider establishing a cross-divisional taskforce to allow for coordinated responses.
- Make clear that consideration of material environmental, social and governance (ESG) risk factors, such as climate change, is consistent with investor fiduciary duty.
- Issue rules mandating corporate climate risk disclosure, building on the framework established by the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD). In the short term, the SEC should enforce the existing regulations and interpretive guidance on climate risk.
- Direct the Public Company Accounting Oversight Board (PCAOB), overseen by the SEC, to assess whether firm audits adequately detect climate risks, and issue guidance to help auditors better understand how climate risk affects audits and accounting. The PCAOB should also assess existing standards to identify when amendments and updates may be needed, and issue such amendments.
- Encourage the Financial Accounting Standards Board to drive consistency in the way that climate risk is disclosed in financial statements.
- Issue guidance encouraging credit raters to provide more disclosure on how climate risk factors are factored in ratings decisions. They could also examine the extent to which climate risk is considered by credit raters, and summarize findings in annual examination reports.

The Commodity Futures Trading Commission should:

- Upon receiving the Climate-Related Market Risk Subcommittee's report, engage other financial regulators on climate change.
- Use the report's recommendations to enhance oversight of climate risk in the commodities and derivatives market.

State and federal insurance regulators should:

- Acknowledge the material risks climate change poses to the insurance sector and pledge coordinated action to address them.
- Assess the adequacy of current insurer actions for addressing climate risks.
- Join the Sustainable Insurance Forum.
- Require insurance companies to conduct climate risk stress tests and scenario analyses to evaluate potential financial exposure to climate change risks.
- Require insurers to integrate climate change into their Enterprise Risk Management (ERM) and Own Risk and Solvency Assessments (ORSA) processes.
- (State regulators) require insurance companies to assess and manage their climate risk exposure through their investments, and examine how climate trends affect company holdings and long-term solvency.
- (State regulators) encourage insurers to develop products for the new technologies, practices and business models that will emerge in response to climate risk that are responsive to both risks and opportunities.
- (State regulators) mandate insurer climate risk disclosure using the TCFD recommendations.
- Assess the sector's vulnerabilities to climate change, and report findings to the Financial Stability Oversight Council.

> "We purport to modernize, without mentioning what may be the single most momentous risk to face markets since the financial crisis. Where we should be showing leadership, we are conspicuously silent. In so doing, we risk falling behind international efforts and putting U.S. companies at a competitive disadvantage globally."
>
> **Allison Herren Lee**
> **Commissioner, Securities and Exchange Commission**
> "'Modernizing' Regulation S-K: Ignoring the elephant in the room," January 2020

The **Federal Housing Finance Authority,** responsible for government-sponsored mortgage giants Freddie Mae and Fannie Mae, should:

- Acknowledge the impacts of climate risk on the housing market.
- Conduct research to examine the impacts of climate risk on the mortgage holdings of Government-Sponsored Enterprises, particularly Fannie Mae and Freddie Mac.
- Launch a formal effort to develop strategies to address climate risk, being particularly aware of the impacts on vulnerable communities disproportionately threatened by climate change.

The **Financial Stability Oversight Council,** whose mandate is to identify risks to financial stability, should:

- Identify climate risk as a vulnerability and make recommendations on regulations that relevant agencies could adopt.
- Coordinate regulatory actions on climate change and the integration of efforts by all financial regulators addressing climate risk to allow for overall financial stability.

"In the crowded regulatory and supervisory space, there is limited scope for focusing attention on new issues but climate risks need immediate action in order to limit or reverse the impact of some of the negative trends under way. It is incumbent on supervisors to put in place the necessary measures for insurers to address any significant risks that could adversely affect policyholders and financial stability. In previous financial crises, events once deemed implausible have materialized. Climate change poses the same threat."

Bank of International Settlements
"Turning up the heat: Climate risk assessments in the insurance sector," 2019

CONCLUSION

Ceres knows that climate change is the biggest sustainability issue of our time, affecting everything from our financial markets, to our political security to our very existence on earth. For over three decades, Ceres has worked with companies, investors and policy makers to drive the consideration of climate change as a financial risk, and foster the uptake of climate solutions. We also believe that legislative action on climate change – such as a carbon price – is necessary to move the U.S. economy towards a competitive and prosperous net-zero carbon future.

But while policymakers at the federal, state and global levels need to take the lead in tackling the climate crisis, U.S. financial regulators themselves have critical roles to play in keeping a now-weakened economy resilient in the face of ongoing and future climate shocks. Rather than standing back, they should seize the opportunity in this moment of potential economic transformation to join global peers and develop a playbook for climate action. With global emissions and average temperatures still rising, watching and waiting are no longer responsible options, and will in fact guarantee the worst. And, unlike in the possible resolution to the COVID-19 pandemic, there will never be vaccines developed to protect against climate risk. But the good news is: we already have all the tools and knowledge in the financial markets to take sound preventative action.

Climate change presents risks to both the future and today -- unless regulators act boldly, now.

Attachment F

Discuss Work Plan for 2020

— *Commissioner Mike Kreidler (WA)*

National Association of Insurance Commissioners

CLIMATE RISK AND RESILIENCE (C) WORKING GROUP

Proposed 2020 Work Plan

- Support insurance regulators' resiliency efforts by:
    - Continuing to draft the *Insurance Regulatory Discussion Points on Catastrophic Events* (previously called the FAQ) with anticipated adoption by the Working Group at the NAIC Spring National Meeting in 2021. *(essential)*
- Enhance insurance regulators' ability to assess the adequacy of insurer actions for addressing climate-related risks by:
    - Reviewing the *NAIC Financial Condition Examiners Handbook* for potential revisions related to climate risk and resilience. Refer any proposed revisions to the appropriate group. *(high priority)*
- Advance insurance regulators' understanding of how to effectively communicate climate-risk to consumers to help close the climate-risk insurance gap.
    - Receive presentations from CIPR, Yale and others on research-based findings related to consumer education on climate change communication.
- Encourage insurers to develop products and policyholder incentives that support improved resilience and emerging climate-risk related technologies, practices and business models by:
    - Hearing a presentation from Ceres on their *Regulating Climate as a Financial Risk: A Call to Action for U.S. Agencies* Report
    - Hearing presentations from insurers and insurtechs on their new products, incentives and technologies that support climate risk and resilience.
    - Hearing presentations from modeling firms on how climate change is being incorporated into models and any resulting changes is related modeled risk.
- Support insurer climate risk disclosure by keeping abreast of disclosures from US insurers by:
    - Hearing presentations from insurers on their disclosure activities, resilience initiatives and innovative products
    - Hearing presentations from CIPR and AAA on their analyses of the *NAIC Climate Risk Disclosure Survey* responses
- Examine how rating agencies and other stakeholders/jurisdictions incorporate climate risk into their analysis and governance and if/how these findings can inform existing regulatory products, tools and practices by:
    - Hearing a presentation from Moody's on their climate related rating practices and recent purchase of Four Twenty Seven, a firm that measures the physical risks of climate change.
    - Conducting information-sharing dialogues with pertinent NAIC financial staff and external stakeholders on the use/development of climate risk-related stress-testing and scenario modeling.

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