Economists for Peace and Security (EPS)
ASSA New Orleans Panel Sessions

January 6th, 2023

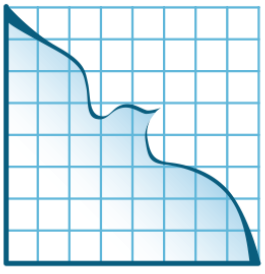

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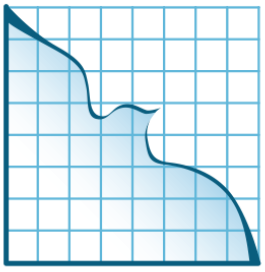
Table of Contents

- Introduction..... 3
  - ◇ EPS Co-chairs Linda Bilmes and David Colt

- Session 1: Nature Counts: Accounting for the Environment in National Statistics..... 6
  - ◇ Moderator
    - Linda Bilmes, Harvard University..... 6
  - ◇ Panelist(s)
    - Bert Kroese, International Monetary Fund..... 8
    - Eli Fenichel, White House Office of Science and Technology Policy..... 18
    - Mauricio Rodas, Quito, Ecuador-Former Mayor..... 25
    - Joseph Stiglitz, Columbia University..... 28
    - Panelist Discussion..... 38

- Session 2: Inflation and Inequality..... 46
  - ◇ Moderators
    - Allen Sinai, Decision Economics and Linda Bilmes, Harvard University..... 47
  - ◇ Panelist(s)
    - LaToya Cantrell, City of New Orleans Mayor..... 50
    - Jason Furman, Harvard University, "Inflation"..... 55
    - William Darity, Duke University, "Inequality and the Wealth Gap"..... 65
    - Joseph Stiglitz, Columbia University, "Inequality and the Economy"..... 69
    - Panelist Discussion..... 78



An Introduction to Economists for Peace and Security

Economists for Peace and Security (EPS) is a United Nations-accredited non-governmental organization (NGO) dedicated to promoting non-military solutions to world challenges.

The organization was founded in 1989 by Dr. Robert J. Schwartz and a group of distinguished economists and policy experts including Nobel laureates Jan Tinbergen, Wassily Leontief, Franco Modigliani, James Tobin, Kenneth Arrow, and Lawrence R. Klein as well as John Kenneth Galbraith, Andrew Brimmer and Barbara Bergmann. The Board of Trustees has continued to attract renowned economists and public figures, notably the Nobel laureates Joseph Stiglitz, George Akerlof, William Sharpe, and Daniel McFadden, Oscar Arias, Amartya Sen, Robert Solow, and Douglass North.

Today the organization includes 13 affiliates around the world as well as trustees and fellows including former Council of Economics Advisors Chair Jason Furman, former FDIC chair Sheila Bair, and prominent scholars in the field including Raul Caruso, award-winning Professor of Peace Economics at Catholic University in Milan and Duke University Professor William S. Darity, author of seminal works on wealth and inequality.

Since its founding, EPS has focused on issues that are relevant to global peace, including the complex interrelationships among economic development, security, conflict, climate, public health, income distribution and how they influence prospects for war and peace. Our members have worked to conduct rigorous economic analysis into these issues, and to organize meetings and seminars, publish books, articles, exchange opinions with scholars, and government and non-government representatives, and cooperate with like-minded organizations in other professions around the world.

EPS has a long-standing affiliation with the United Nations and holds special consultative status to two UN bodies: the Economic and Social Council (ECOSOC)and the Department of Global Communications.

Economist James K. Galbraith, the Lloyd M. Bentsen Jr. Professor of Government & Business Relations at the Lyndon B. Johnson School of Public Affairs at The University of Texas at Austin, served as the chair of EPS from 1996 through 2016. Under his leadership, EPS expanded internationally and convened hundreds of seminars, symposia, panels, and other opportunities for those concerned about the state of the world to participate in discussions and hear from leading economists and public intellectuals.

EPS at the Allied Social Sciences Association (ASSA) Annual Meetings

As part of this effort, every year we sponsor panels at the ASSA meetings, bringing together experts to focus on critical topics relevant to peace and human well-being. In recent years, we have presented new material that has changed thinking on many topics; for example: Costs of the Iraq and Afghanistan Wars; Reshaping the definition of "national security" to include public health; Reparations for Slavery in the context of US Compensation Policies; the changing Role of the Federal Reserve; Capitalism and Inequality; Competition with China, and European security.

2023 ASSA meeting in New Orleans

This year EPS convened two panels at the ASSA meeting in New Orleans, both of which attracted large audiences. We have transcribed and edited both panels and all presentations in this document for the benefit of economists, social scientists, public policy practitioners, and anyone interested in these important topics.

Panel 1: **Nature Counts: Accounting for the Environment in National Statistics** opened with the observation that economic statistics do not currently account for the value of "natural capital". Thus, our most basic data, such as GDP, fails to provide any assessment of the value or condition of biodiversity that underpins human existence. In other words, "If all the bees in the country die, GDP can still go up." Economists have a vital role to work with scientists, accountants, and statisticians to change this system.

The panelists focused on how to re-imagine and re-design economic statistics to account for the environment, including biodiversity and ecosystem services, and the mechanisms to produce such data and integrate it into public and private financial statistics at the local, national and global levels.

The panel was moderated by EPS' co-chair, Harvard Professor Linda Bilmes, who serves as the sole United States member of the UN Committee of Experts on Public Administration, where she chairs the Working Group on Climate Change and Natural Resources. Dr. Bert Kroese presented the efforts to "mainstream" natural capital accounts. A highlight was his slide explaining the economic value of a whale, using a whale diagram. Dr. Eli Fenichel explained the new, first-ever White House initiative on natural capital accounting. Nobel laureate Joseph Stiglitz described his work, over several decades, to improve economic statistics by including measures for both natural and human capital. Mayor Mauricio Rodas introduced the perspective of cities, which account for some 70% of the world's population and emissions. All panelists then answered questions from the audience.

- Dr. Linda Bilmes, Harvard University (Moderator)
- Dr. Bert Kroese, Chief Statistician, International Monetary Fund
- Dr. Joseph Stiglitz, Columbia University
- Dr. Eli Fenichel, White House Office of Science and Technology Policy
- The Hon. Mauricio Rodas, Former Mayor Quito, Ecuador

Panel 2: **Inflation and Inequality** was moderated by Dr. Allen Sinai, a long time EPS Fellow and Board member who is well-known as one of the world's leading economic forecasters. The panelists analyzed the topics from several perspectives. Mayor Cantrell described how inequality and inflation are affecting New Orleans, along with her enthusiasm for the upcoming Mardi Gras celebrations. Harvard economist Jason Furman presented a wealth of data charts as he discussed inflation, inequality and how these problems are connected. Professor William "Sandy" Darity, in a talk titled "Making America Great for the First Time", presented his work on racial wealth disparities and inequality. Professor Joe Stiglitz examined the underlying drivers of inflation and critiqued some aspects of Furman's presentation. All panelists then answered questions from the audience.

- Dr. Allen Sinai (Moderator)
- The Hon. LaToya Cantrell, Mayor, City of New Orleans
- Dr. Jason Furman, Harvard University
- Dr. William Darity, Duke University
- Dr. Joseph Stiglitz, Columbia University

We are pleased to send you the transcripts so you can enjoy the panels – including the lively commentary and discussion among the panelists and the audience – for yourself. As a reminder, EPS would appreciate your contribution, which help us to continue engaging in the world and bringing together leading scholars to help make the world a safer, better place.

With our best wishes,

Linda Bilmes
David Colt
Co-chairs, Economists for Peace and Security

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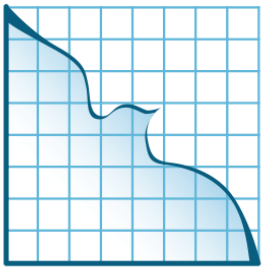


Linda Bilmes: Good morning. I am Linda Bilmes, Co-chair of Economists for Peace and Security. I am the Daniel Patrick Moynihan Senior Lecturer in Public Policy and Public Finance at the Harvard Kennedy School, and for the past seven years, I have been served as the United States member of the United Nations Committee of Experts on Public Administration, where I chair the working group on Climate Change. Wearing all those hats, I am delighted to welcome you here today.

Economists for Peace and Security is a group of experts in economics and related fields dedicated to world peace and economic justice. It was founded by Kenneth Arrow, Lawrence Klein, Robert Solow, Robert Schwartz, and Barbara Bergman. From the beginning we have interpreted our mission broadly to include not only nuclear disarmament but also preventing the root causes of conflict, including social equity, economic fairness, access to healthcare, and protecting the planet.

The group of individuals who have been involved as trustees of Economists for Peace and Security includes some of the finest minds in these fields, including Nobel laureates Amartya Sen, Daniel McFadden, Eric Maskin, Roger Myerson, Oscar Arias, George Akerlof, Joseph Stiglitz, Robert Solow and numerous prominent thinkers including Sheila Bair, Jason Furman, Robert Reich, George Papandreou, James Galbraith, Sir Richard Jolly, and many others.

This panel today is focused on a puzzle, and an understudied intersection between economics and the environment. And the puzzle is that governments and multilateral institutions devote an enormous amount of effort to collecting data and statistics and rely on those statistics. And yet, our basic economic metrics like GDP do not reflect the condition of natural assets like air, water, soil, insects, that make life possible in the first place.

This deficiency in basic economic data makes it easier to deplete the natural world – as we see all around us -- and makes it harder to measure the true economic and social condition of any country. Yet we know that it is possible to incorporate the value of environmental assets and the ecosystems they sustain into national statistics. And our panel today brings together four leading experts on this subject who can tell us not only how to revise national statistics, but why it is essential to do so.

Bert Kroese is the Chief Statistician and Data Officer and Director of the Statistics Department at the IMF. Before joining the Fund, Dr. Kroese worked for 25 years at Statistics Netherlands, where he was an innovator in many fields. And in particular, Bert has chaired the UN Committee that helped establish the System of Environmental Economic Accounting (UNCEEA) which has become the gold standard for governments to include the values of environmental and ecosystem services into national accounts. And so, we are delighted to welcome Bert.

Eli Fenichel is a Professor of Natural Resource Economics at Yale who works on a wide range of natural capital systems from tropical forests to fisheries. He is currently on leave from Yale and serving in the White House Office of Science and Technology Policy as Assistant Secretary for Natural Resource Economics.

And what has happened under Eli's watch over the past year is rather extraordinary because until this administration, the US was lagging badly in the global effort to revise economic statistics for natural capital. In just a few months, Eli and his team produced an ambitious and exciting plan to make dramatic changes in how we account for natural capital in US statistics and have launched a government-wide effort to do this.

One of the features of panels at Economists for Peace and Security is that we also convene leading practitioners who bring actual on-the-ground experience to these discussions. Mauricio Rodas is the former mayor of Quito, Ecuador, and he is an impassioned advocate for climate actions in world cities. Mauricio has been a world leader on this subject. As mayor, he hosted Habitat III, the UN's Conference on Sustainable Development, and he served as president of the C40 Cities Climate Leadership Group, The Global Covenant of Mayors for Climate and Energy, and a Young Global Leader of the World Economic Forum, a fellow of the Global Council of Cities and Urbanization and many other organizations. Mauricio has also worked extensively in Mexico and is a visiting scholar at the University of Pennsylvania. He also serves with me as co-chair of the working group on Climate at the United Nations Committee of Experts on Public Administration.

Finally, it is always a special honor to introduce my friend and colleague Joseph Stiglitz. As you are aware, Joe Stiglitz is one of the leading economists in the world. He has served as Chief Economist of the World Bank, as President of the Council of Economic Advisors; he has written more than 30 books, including co- authoring with me, The $3 Trillion War about the cost of the Iraq and Afghanistan conflicts; he has received more than 40 honorary degrees; he is the winner of the John Bates Clark Medal in 1979 and the Nobel Prize in Economics in 2001.

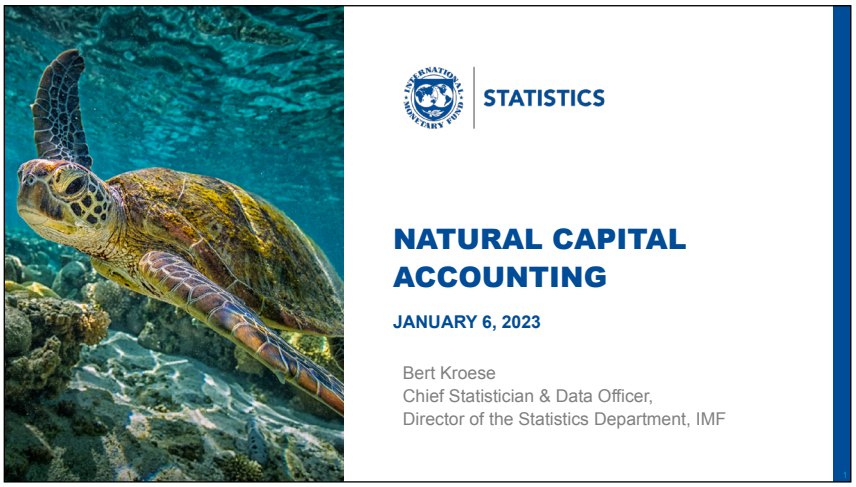
One of Joe's perhaps the lesser known but extremely profound contributions is that for decades, he has been calling for reform in the way we measure economic performance. In 2009, Joe chaired a UN commission that proposed changing how we calculate GDP to include sustainability and human wellbeing. In 2010, he chaired an international commission on measuring economic performance in France that reached the same conclusion, and he currently chairs the successor to that group. And he has been, along with Amartya Sen, the world conscience around the fact that our economic statistics do not capture the underpinnings of sustainability and human wellbeing.

And so, I am delighted to welcome this amazing panel. Thank you very much for being here and welcome to all of you. We are going to start off with Bert Kroese who will lay the table for us. Thank you.

Bert Kroese: Thanks Linda, for the introduction and thanks for inviting me to this panel. Both through my previous job at Statistics Netherlands, my present position at the IMF, and as a former Chair of the UN SEEA, I have been involved in the field of National Capital Accounting [Chart 1] and I am glad to share my experiences.

This talk will be a mix of the experiences from these three roles.

Chart 1:



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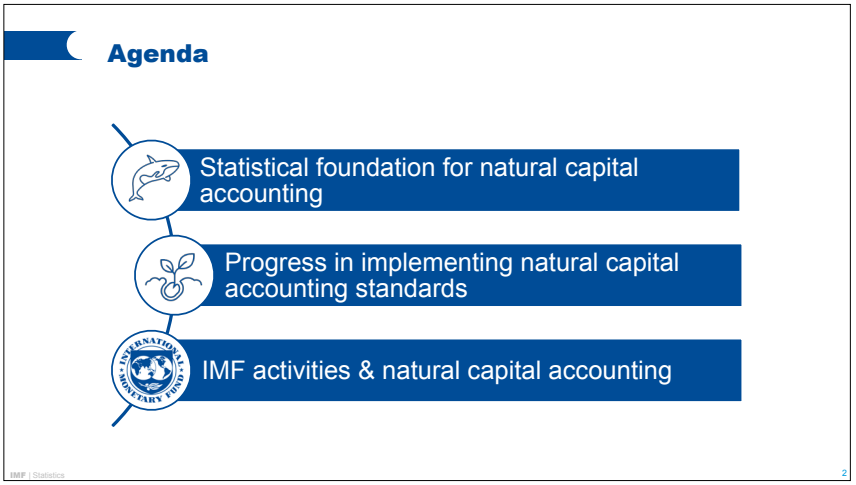


I will talk a bit about the statistical foundation for National Capital Accounting, about the progress in implementing National Capital Accounting standards, and what is blocking progress. I will also say something about the IMF activities in this field.

Chart 3:

Chart 4:

I think most statisticians now agree with Joe Stiglitz that we should go beyond GDP. GDP is an important concept. It is based on the SNA, the System of National Accounts. This is a framework, a statistical framework, and it is important to have that because it means that the data are well-defined and well-understood and are internationally comparable. That is one of the reasons that GDP and economic growth have had a large role in many analyses. But it is also clear that measuring GDP is not enough. Many policy decisions have impact not only on the economy, but also on the environment and on society. We need to have insights on what the integral effects are of policy decisions. And so, we need integrated data on the environment, society, and the economy. I think the recent COVID crisis made it ultimately clear: you cannot just implement measures that block the transmission of the virus without looking at the broader effects. Measures may have immediate impact on the economy and on society. Policy decisions have impact on many areas and coherent integrated data is important. In this chart we see six more or less recent IMF blogs that illustrate that point. Policy makers need more data than just GDP.

Chart 5:

Linda already mentioned the system of environmental economic accounting (SEEA). The work on this was started long ago in recognition that GDP is not enough to base decisions on. Ten years ago, in 2012, the Central Framework (SEEA-CF), was adopted by the UN Statistical Committee. The UN Statistical Committee is the governing statistical body with all countries in the world being part of it. Once a year it meets in New York and decides on new statistical standards, like the SNA. And this SEEA central framework basically extends the SNA by systematically describing the natural inputs of economic activities and also the discharges and emissions of economic activities into nature. It also looks at the economic activities to protect the environment, and flows of individual natural assets like water and timber. The Central Framework is a structured way of describing the relation between nature and the economy using the same principles and classifications as in the SNA. Data based on SEEA can be used in various analyses that study the environment and the economy in an integrated way.

In 2021, the System of Ecosystem Accounting (SEEA-EA) was adopted as a new additional statistical standard. It deals with ecosystems which are combinations of living things with the natural environment that provide services. Examples are mangroves, peatlands, dunes, and oceans. The SEEA-EA system combines the ecological and spatial view on ecosystems with the economic view. It describes the ecosystem in a spatial way and its condition in terms of biodiversity, water and air quality etc. It also describes the services they provide to the economy and to humankind as a whole. This is about provisioning services, but this is also about flood protection, air filtration, clean water, etcetera.

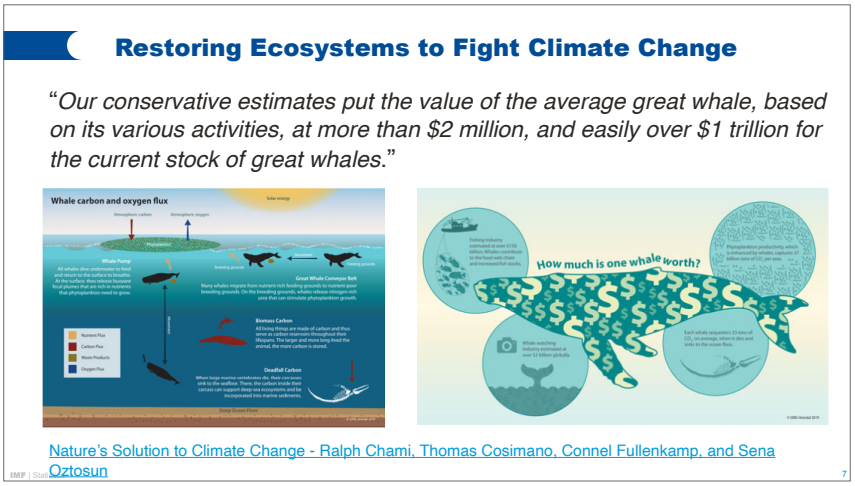
In the ecosystem manual, ecosystem services are described in qualitative terms. There are also chapters in it about valuation, describing these same services in monetary terms. This is the hard part and there are still many discussions on it. This specific part of the manual is not a statistical standard yet and is adopted as 'internationally recognized statistical principles'. These principles are used for example my country, the Netherlands. We have made publications using it and other countries have too. But there is still discussion around valuation because how do you value things that are not on the market, like flood protection and air filtration. The good thing about both parts of the System of Environmental Economic standards is that they make the link between the environment and the economy. They use the same concepts, definitions, exchange value approach, and can be used to make an integrated description. They are used a lot to produce data. There are also all kind of application guides and special guides how to deal with energy, water, etcetera.

Chart 6:

So why do we need this kind of data? An example can be found in countries that have a lot of forests. Somewhat oversimplifying, they can cut down the forest, sell the timber, make the land into agriculture, and make a lot of money. But then they would lose the retention services of carbon and the tourism aspects. And it is important that if you make these policy decisions, you have an integral view of what you gain and what you lose. That is why describing the contribution ecosystem in an integrated way, according to national accounts concept, is so important.

At the IMF, climate change is high on our agenda. We see that it threatens long- term economic prosperity, welfare, and growth. And also in the shorter term, disruptions are caused by hurricanes and droughts. So, both in our surveillance work, policy advice work, capacity development, and also our statistical work, we do a lot. And our work in this area is growing. Last year, we introduced the Resilience and Sustainability Trust. It is a large fund that countries can borrow money from on concessional terms to do economic transformations, for example, those necessary because of climate change.

Chart 7:

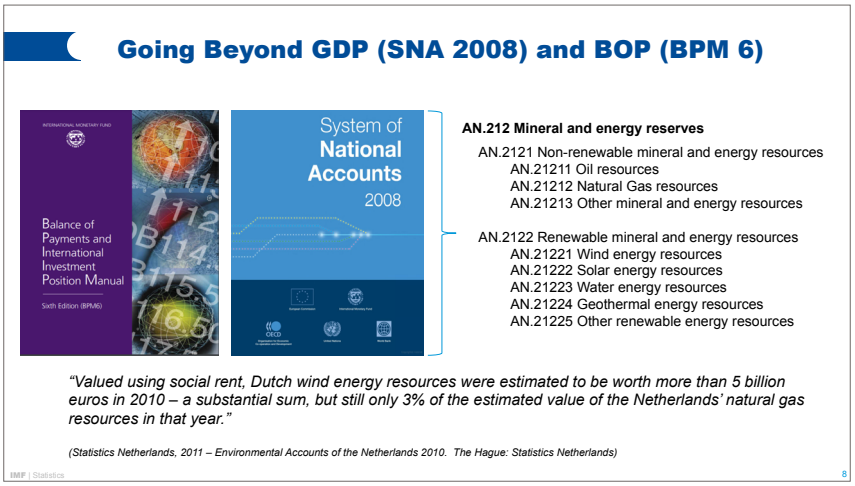


Here is another example of how a value can be assigned to the contribution of nature to the economy. I use IMF research of a couple years ago about great whales. They are beautiful animals and they have a value in themselves. We love the animals, but they also provide a measurable service to humankind. One service is obviously supporting tourism as people go on excursions to see whales. Whales additionally also play a large role in carbon retention. Whales are big animals. They store a lot of carbon, but they also stimulate growth of phytoplankton, which also results in a lot of carbon retention. And together, depending on the specific carbon pricing, the IMF research shows that every whale

is worth about $2 million, and the current stock of these whales is valued at $1 trillion.

Obviously you can discuss the specific assumptions and people do that. But the value of zero is wrong anyway. And if you have these numbers, you can discuss, for example, "Well, is it worthwhile to move shipping lanes because shipping collisions for whales are a big cause for death?" That costs money, but on the other hand you do not lose the value that the whales provide. So, this is the kind of information that these ecosystem accounts can provide.

Chart 8:

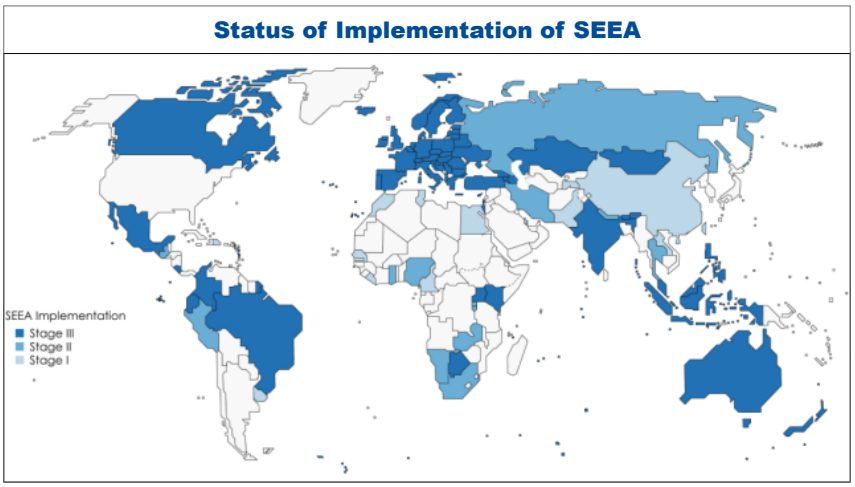


Not only are there relatively new systems in addition to the System of National Accounts, also that system itself is updated. About every 15 years, we revise the SNA and the Balance of Payments manual (about the external sector). In 2025, there will be a new version. The final decision on the SNA has to be made, of course, by the United Nations. The proposal now is that in the new system not only the oil and gas reserves will be included in the asset boundary, but also the renewable mineral and energy resources which is a big step forward.

And apart from that, we will be much more attentive to net measures. So not only gross domestic product, but also net measures that not only subtract depreciation from GDP but also the depletion of natural resources.

Chart 9:

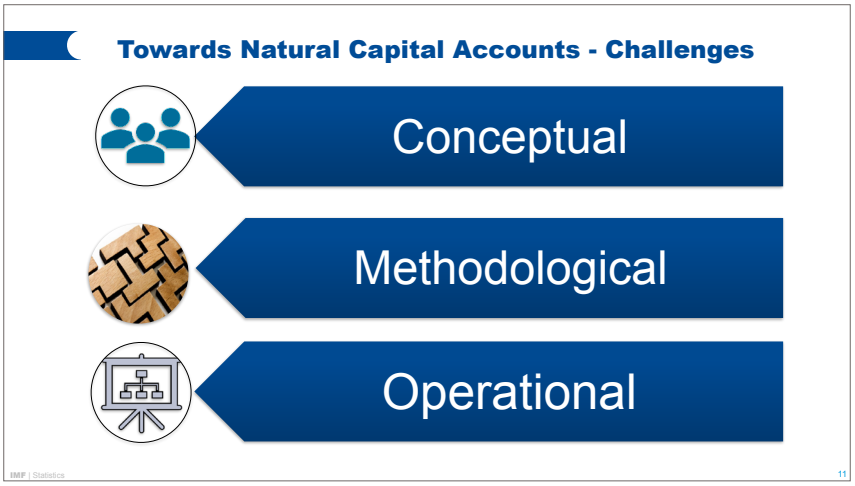
Chart 10:



So the good news is: there are statistical standards, they can be used, they are well defined, they are accepted by the global community, and they are well tested. In this chart (based on self-reporting) you can see that these standards are used in many countries in the world, but it is still very uneven and a lot of progress still has to be made. The dark blue countries publish data regularly. The middle blue countries produce environment economic accounting data on an ad hoc basis. And the light ones do it only experimentally. The white colored countries do not publish SEEA data at all.

Luckily, Eli, will tell us in the next presentation that in a couple of years the United States will have a different color. So, I am happy to hear that. And also, other countries will follow, but still the uptake is not as large as we would like to have it. About ninety countries are now producing these accounts.

Chart 11:



So what are the challenges? Why isn't every country publishing SEEA accounts? Well, there are conceptual challenges. Like I said, how do we value a service of nature that is not on the market? There are methodological challenges too. You need a lot of spatial information, satellite data. How do you use the satellite data to transform that into accounting tables?

There are also limitations in the operational models. Statistical offices all over the world are not always very well-funded. And governments sometimes give the priority to other statistics. But a main obstacle is often the cooperation between various institutions needed to create the accounts. You cannot do it alone in the statistical office. You need to work together with the entire government. You need to gather

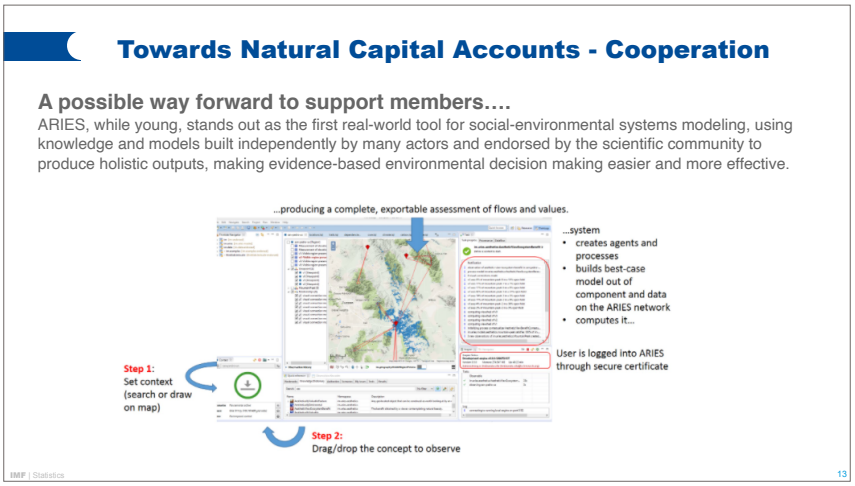
data with the environmental agencies and energy agencies. This needs a government-wide approach of institutions willing to work together to share knowledge and data. And this is not easy. And that is why I was so happy to read your document, Eli, that in the United States, this cooperation is well-organized now, because you really need that.

Chart 12:

Here is how it worked in the Netherlands. We were lucky that there are two departments interested in this, the Ministry of Health, Welfare, and Sport, and the Ministry of Agriculture, Nature, and Food Quality. They needed this data for policy making. An example is what to do with peat lands. Is it a good idea to drain them or not. If we drain them, there is fertile land fit for agriculture. If we do not drain them, we prevent the carbon emissions that result from draining.

We had a lot of cooperation with our environmental and our energy agencies in creating these accounts, especially with Wageningen University. They did a lot of the modeling, the satellite images, et cetera. A lot of data based on SEEA can be found on the Statistics Netherlands webpage. For example, a complete set of ecosystem accounts, including the difficult monetary valuation.

Chart 13:



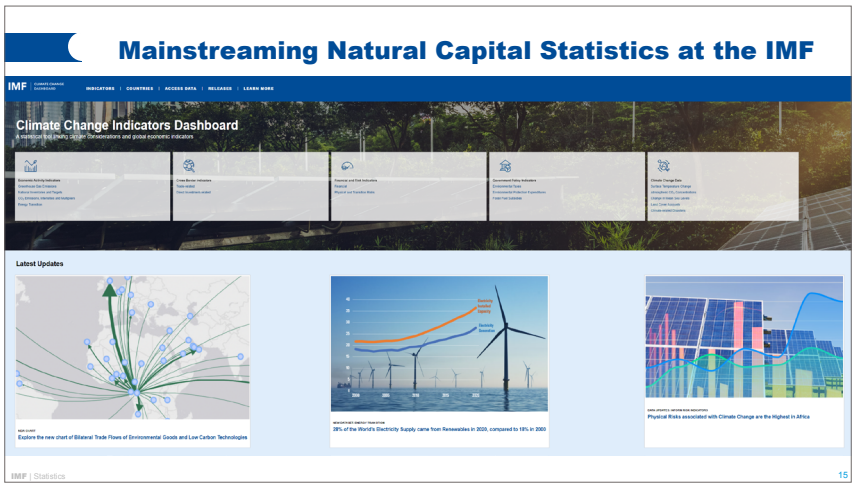
Cooperation on data and algorithms is another exciting way forward. There is a new development called ARIES hosted by the Basque Center for Climate Change. ARIES stands for Artificial Intelligence for Ecosystem Services. This is a website containing open-source satellite data. It is interoperable data, which means they can be approached in the same way. And ARIES also contains a lot of artificial intelligence models that can be applied to the satellite data in order to automatically generate ecosystem accounts, basically for any region in the world, including local areas.

You can also bring your own data in the system. In the US, you probably have better satellite data than on the ARIES platform. You can also bring your own artificial intelligence model and combine that custom model and the data that is there to produce your ecosystem tables. It is tested in a number of countries in the world, and I hope this brings forward the adoption of SEEA-EA.

Chart 14:

So now to the IMF, because that is where I work now. Climate is very important for the IMF because we see that it has a large impact on economic and financial stability. The role of the statistics department is to provide data supporting the work of the IMF and the member countries. One way the statistics department is doing that is by introducing a climate indicators dashboard.

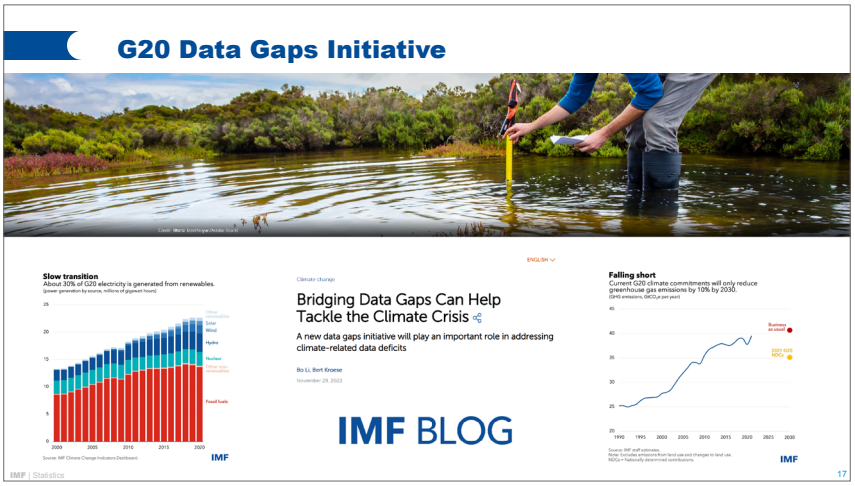
Chart 15:



This dashboard can be found on the IMF website. There are basically five parts: One part is about the relationship between climate and economic activities. The second part is about cross border indicators like trade, foreign direct investments. The third part is about physical and transition risks and about green finance. The fourth part is about government actions related to Climate Change. And the fifth part contains more general climate data.

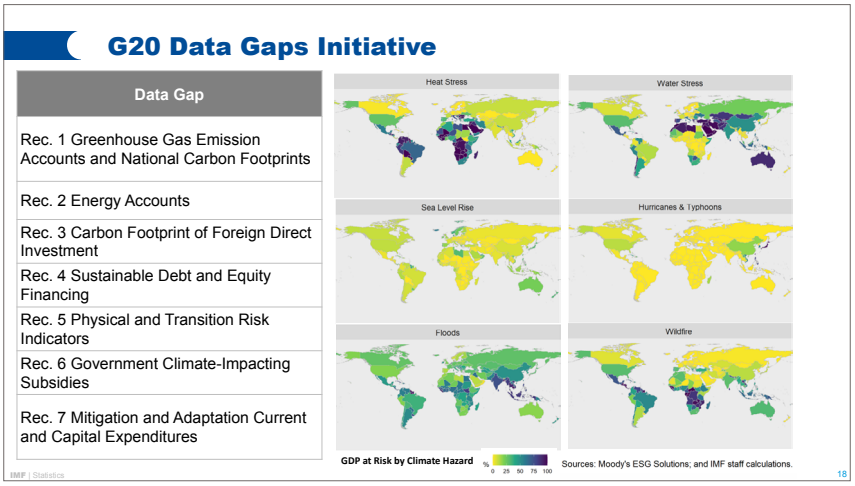
The idea of the Climate Indicators Dashboard is to bring together internationally comparable data. This dashboard is hosted by the IMF but we do not do it in isolation. We work together with the World Bank a lot. But also with OECD, the United Nations, FAO, and with many other institutions. Bringing the data together is really a global initiative. Not all the countries and all relevant indicators are in there yet. This is work in progress.

Chart 16:



The last thing I want to mention is something very exciting, the G20 Data Gaps Initiative. Last November, the world leaders of the G20 in Bali asked the IMF to work together with other institutions like the Finance Stability Board, UN, World Bank and the G20 economies to fill data gaps. And they decided on 14 data gaps. Seven of them were on climate, and the other seven were on FinTech, access to finance, income and wealth inequality. A lot of work will be done in the coming years to fill the data gaps based on these recommendations and that will also greatly benefit the data availability on climate. I wrote a blog on the DGI initiative with Deputy Manager Director Bo Li from the IMF.

Chart 17:

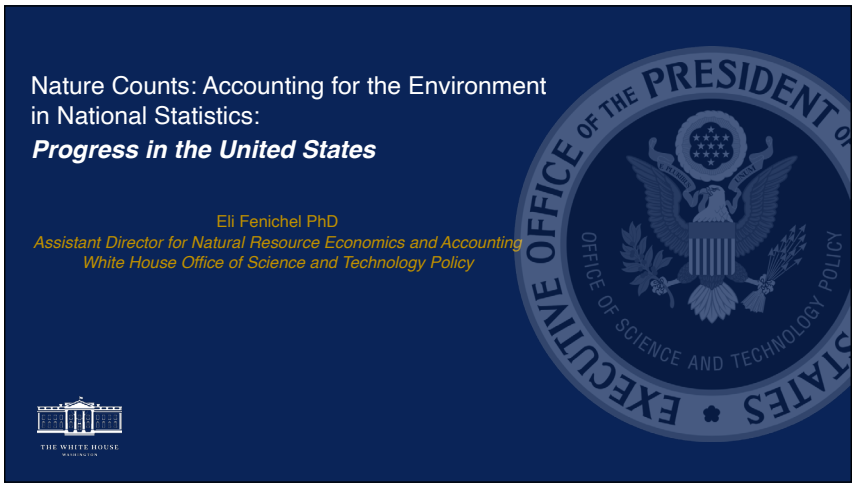


The seven DGI recommendations related to climate are to develop and publish data on: 1) greenhouse gas emission accounts and national carbon footprints in order to help deciding mitigation policies; 2) Energy accounts: the use and supply of energy, including renewable energies; 3) carbon footprint, foreign direct investment, and looking at carbon leakage; 4) sustainable debt and equity and financing - trying to come up with definitions and data that are internationally comparable. 5) Physical and transition risk indicators - what risks are affecting the economy; 6) government climate impacting subsidies, and 7) current and capital expenditure on climate mitigation and adaptation. This latter recommendation is important because if we have an unambiguous definition of government spending on these things, we can also use that to benchmark countries on their investments in mitigation.

This is basically what I wanted to say in my presentation. The positive message is that there are statistical standards to describe the relationship of the environment and the economy. These standards use the concepts of the System of National Accounts so data on the environment can be compared to economic data we are used to. These standards are already used in a lot of countries, but we hope for further uptake in the coming years. The IMF has the topic of climate change high on the agenda, and we will try to improve our database to support that purpose. Thank you.

Eli Fenichel: So, it is great being here. I am Eli Fenichel, the Assistant Director for Natural Resource Economics and Accounting at the White House Office of Science and Technology Policy. [Chart 1] If you are not familiar with OSTP, we work for the President's Science Advisor and we basically are the in-house science policy think tank. And this administration has realized that social science is a big part of science. So, I am excited to be here telling you about the progress that we are making on including the environment in national accounts.

Chart 1:



Last April, Secretary Raimondo, our Secretary of Commerce, announced that the US will initiate natural capital accounts and regular standardized environmental economic statistics. [Chart 2] She went on to say that we will be developing a national strategy and that by the end of this year we will begin implementing that national strategy and you can see her remarks on YouTube.

Chart 2:

And yes, last August, we put out a National Strategy for Natural Capital Accounts, environmental economic statistics, and took public comment on that for 60 days[1]. You can view that. To date, we are up to 27 different departments, offices, agencies involved enthusiastically. This is an all-of-government approach working very well. And I will push back a little bit on what Linda was saying because there was actually quite a bit of expertise spread out through the US government in this area and not just USGS. And people have been enthusiastic to jump in and work together.

The strategy makes five principal recommendations. And I will go through what those five principal recommendations are. The strategy itself is almost a hundred pages long and there is a lot of detail under each of these, which we will not have time to get into, but I would be happy to discuss with people afterwards.

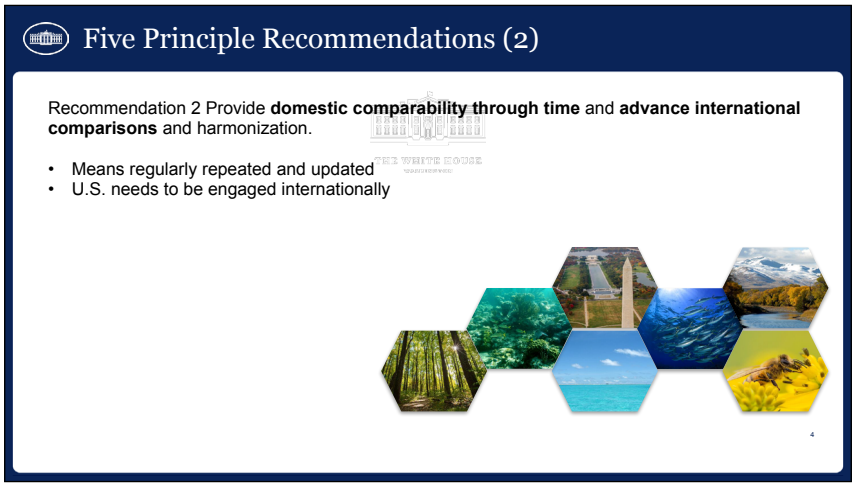
Chart 3:

The first recommendation is to be pragmatic. It is easy in this space to get lost in theory and try to get to the perfect. But our national accounts, over their long history, have been a pragmatic tool. And, there have been conceptual debates from the very beginning and the national accounts have continued to evolve. So, the goal here is to be pragmatic and provide information, and we focus on the five focus areas: one being sustainable development in macroeconomic decision-making -- much along the lines of what Bert was just talking about. And also, in supporting federal decision-making in programs, policies, and regulations.

And one of the things about a statistical system is it is not just the data, but it is the structure and the patterns in the data that help guide those decisions, which is why this is so important. We also recognize the need for the federal national accounts to help guide the private sector, taxonomies and organization information and benchmarking data. We also recognize that a lot of our national accounts data gets used to parametrize, and feed into, local planning models at various levels. It would be wonderful if the economy and the environment moved along together on a single track, rather than we analyze the economy and then we analyze the environment in some ad hoc way. And then try and push them together, but [we were to produce] an integrated set of statistics, and finally, of course, help with conservation and environmental policy.

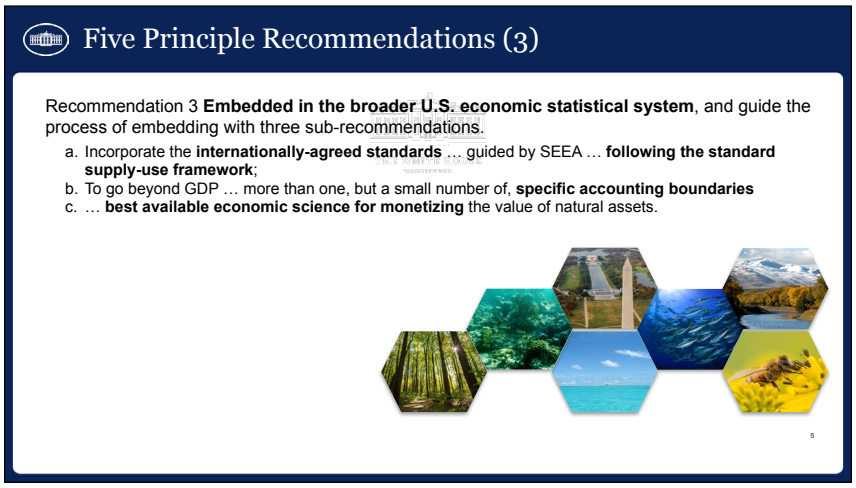
[1] The National Strategy was finalized weeks after the panel discussion and the final strategy is now available at https://www.whitehouse.gov/wp-content/uploads/2023/01/Natural-Capital-Accounting-Strategy-final.pdf"

Chart 4:



The second recommendation was to make sure that these are, first and foremost, domestically comparable through time, and then also to advance international comparisons and harmonizations. So domestic comparability through time goes right to what Bert was just saying about the need to be able to repeat the same statistics over and over again on a regular basis. The national strategy for the US proposes to get to at least an annual updating, and then it is also important to be engaged internationally -- and hopefully, we are planning more engagement internationally.

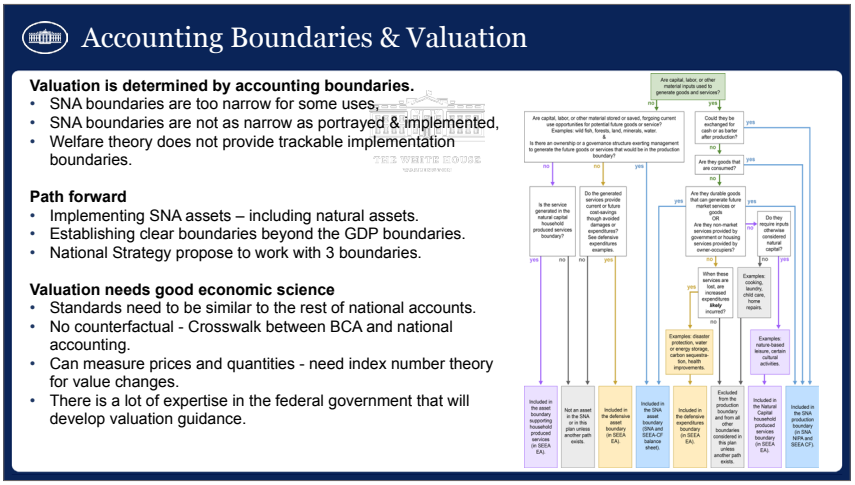
Chart 5:



The third recommendation is to ensure that these are embedded in the US economic statistical system. And this is important because there has been some debate about whether or not environmental statistics should just be a separate set of statistics. But, we think that they should be aligned with the economic statistical system and aligned with supply-use tables that underpin the national income and product accounts as well as the national balance sheet -- and that they do need to work together. So, what this means is using the internationally agreed standards that we have been hearing about today, guided by things like the SEEA program, and developing supply-use tables.

It also means going beyond GDP. We spent a lot of time thinking carefully about how do we do that in a practical way? And we concluded that we need to think about the GDP boundary and the SNA boundary. And, then we need to have a small number of other tractable boundaries that we can also work towards -- and then using the best available economic science for monetizing the value of natural assets. I am going to say a little bit more about B and C because I think these are some of this is related to the ideas we have been hearing about this morning already.

Chart 6:



Valuation from an accounting standpoint is guided by the accounting boundaries. That is kind of what has to be valued. The SNA boundaries are clearly too narrow for some questions, and some policy questions, but certainly, GDP has proven useful for other policy questions as it is -- or as it has evolved, is probably a fairer way to say that. Also, the SNA boundaries are not quite as narrow as they are often portrayed and often implemented. So, there are some real gaps between what is in even the 2008 SNA that Bert was talking about -- being revised right now -- and what actually gets implemented in most countries. And that is true in the US as well.

On the other hand, we often think about economic welfare theory, which is my academic background. I spent a lot of time thinking about that. But as you dig into it, welfare theory does not provide a trackable accounting boundary for implementation. When I have to go talk to the people at our agencies about building a supply- use table, we need to find a path forward.

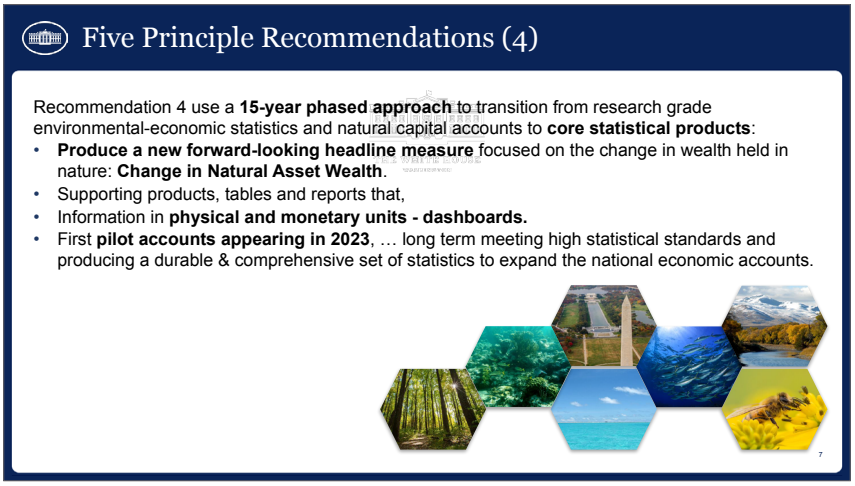
First, we need to actually implement the SNA boundaries around things like biological assets. And [we need to] figure out how to get the attribution correct because there are a number of natural assets, environmental services in the SNA, but they are probably misattributed to other things. Then, we want to establish other clear boundaries to go beyond GDP. We have proposed two additional boundaries for a total of three boundaries, and we have modified this OECD flow chart to try and map out how these different boundaries work together. The two additional boundaries we focused on are actually well-known that people have discussed since the beginning of the national income and product accounts.

One of these is an additional boundary that addresses defensive expenditures and the assets associated with them. We have actually noticed as you go through the history [that] there have been things that would have been in defensive expenditures -- and over revisions of the SNA --have actually just made it into the GDP boundary. So, we think this is actually important to be forward-looking, period, and get ahead of the curve. Then, the other one is household-produced services, and particularly those related to the environment. We are thinking specifically here about certain leisure and cultural experiences. This does not bring everything that everyone would want into the system, but we have some boundaries to start moving the fence posts a little bit further, while maintaining the operability of GDP.

What does this mean for valuation guidance then? We want to make sure we set high standards, but we want to align them with everything else going on in the national accounts. And so, we do not want to set a standard for the environmental-economic statistics here [raises hand high] if the standard for everything else is here [puts hand down low]. Where does that leave us with valuation? A lot of our valuation experience for the environment involves non- market valuation, as has been mentioned. A lot of that has been developed in the context of benefit-cost analysis where there are clear counter-factuals. National accounts do not have clear counterfactuals. That does not mean the methodologies are unsound or not transferrable, but we need to do a careful crosswalk, and we have begun thinking about how to do that.

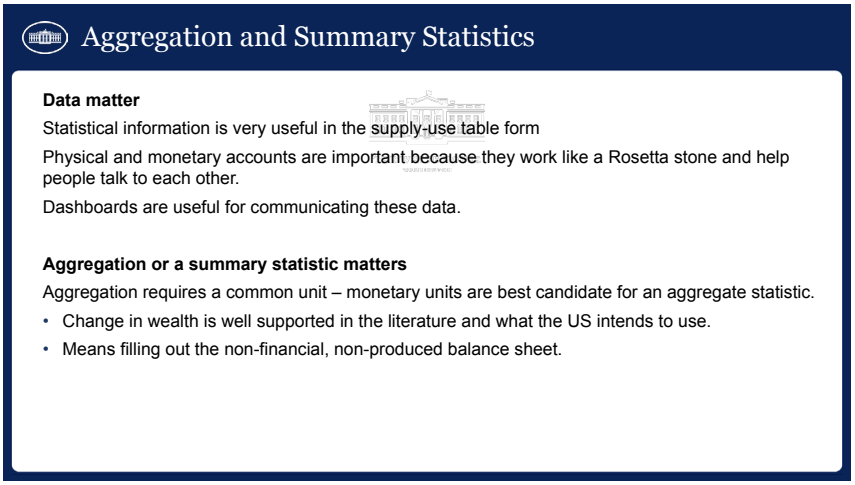
We know we can measure prices. We know we can impute prices for other things in national accounts. We know how to impute prices. We know how to measure quantities. One of the things we highlight in the strategy, that we seem to be lacking, is the appropriate index-number theory to think about that change in values. But there is a lot of expertise in the federal government, and federal ex-perts are already starting to think about how we resolve these as part of our strategy.

Chart 7:



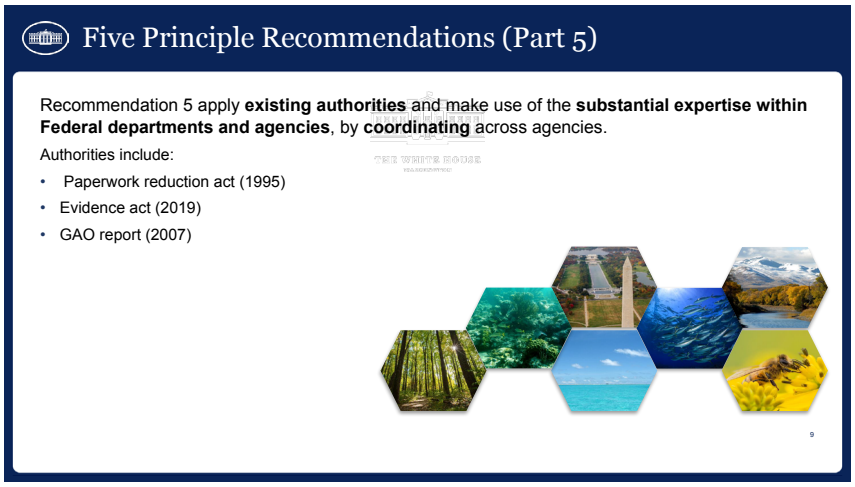
We also realized that we needed a long-term strategy. The national accounts have evolved over many years along with the national income and product accounts and the statistical system. So, we set out to lay out a 15-year phased approach right from the start, recognizing that we have a fair bit of research scattered around the US government in places like USGS, but also the BEA (U.S. Bureau of Economic Analysis) and also NOAA and also NASA and also Bureau of Labor Statistics. How do we to advance those from being one-off research projects to being core national statistics that do not carry any research disclaimers? So that when federal government employees talk about them, they do not put this little disclaimer that says, "this is just my personal opinion," but is it actually the core statistics of the US?

Chart 8:



That is where we want to get to over the next 15 years. That is also going to involve developing a new forward-looking headline measure that aggregates these. We are thinking about a change in the natural asset wealth, read off the non-financial, non-produced section of the balance sheet. That alone is not enough because it is also important to provide the underlying data, since a lot is lost in aggregation, in both physical and monetary terms. And we believe that dashboards will be quite useful. Who knows if dashboards will still be the technology that is the most useful in 10 years? But right now, that is what we are thinking. Maybe it will be like holograms or something; I do not know. And then also, while we have this 15-year phased strategy, we are not waiting. We are expecting to see our very first pilot accounts emerging by the end of this year.

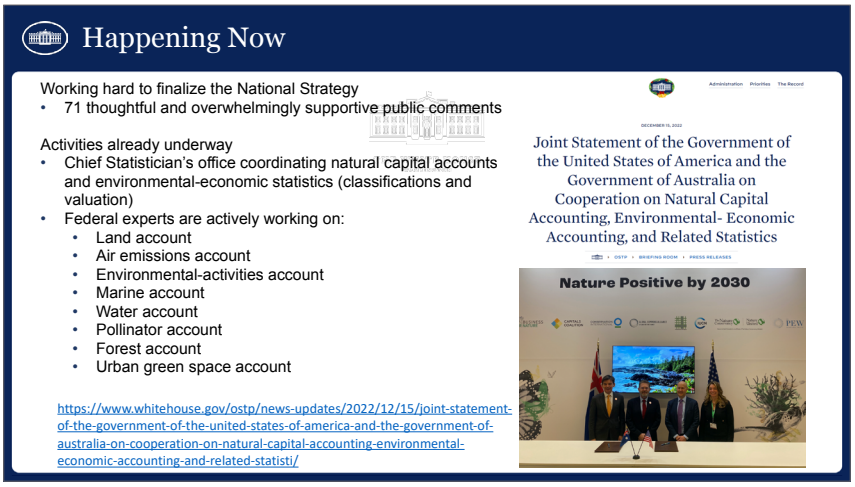
Chart 9:



The fifth recommendation is to use the existing authorities and the substantial expertise within the US government. As a whole, the US government was actually far ahead in the early 1990s, and then that all got scattered. So that is the best way to think about this. We did not lose it. It just kind of got scattered and went off in different directions, and now we are bringing it back together.

A lot has changed since the early 1990s in the US. We have completely overhauled our statistical system since BEA's initial foray into environmental- economic statistics. We had the Paperwork Reduction Act and the Evidence Act, which overhauled the way our statistical system works. It created the modern version of the office of the office of the Chief Statistician of the United States.
Karin Orvis is the current chief statistician, [who] has all the authorities to do environmental-economic statistics. And actually, the Evidence Act is probably the first time that Congress actually called for national statistics related to the environment.

Chart 10:



So, what is going on right now? [Chart 10] We are working incredibly hard to finalize the national strategy. I think we are getting close. We received 71 very thoughtful public comments. One of the interesting things about these, I will say, is that they look more like journal peer review comments, than the types of public comments we often get in government. These 71 comments, I think, were on the average of three to four pages long.

There are a lot of ongoing activities already. The Chief Statistician's office has already brought somebody in to start shepherding the technical work on natural capital accounts and environmental-economic statistics. We have folks in our various agencies across government already collaborating on a wide range of topical areas in the first and second phases. And then just last month we signed a joint statement with the government of Australia for further collaboration around environmental-economic statistics and natural capital accounting. So, I am excited to further converse with this group, and really grateful to Linda for pulling this all together.

Linda Blimes: Thank you. So, we have heard now about the challenges in the statistics, and the work that is going on today and the progress that is being made. How does this translate to the ground? What difference does it make? And so, I am delighted to introduce the former Mayor of Quito, Ecuador, Mauricio Rodas, to help us understand how this kind of data can help governments, especially cities around the world that are trying to use this data. And also to hear about what cities need from economists. Thank you, Mauricio.

Mauricio Rodas: Thank you so much Linda for this invitation. It is great to be part of this exciting conversation. So yes, we have heard about the importance of natural capital accounting at the national level but let us also think about it as a tool for sub- national governments. How can NCA be implemented at the local level, and what would be the benefits of doing so?

Chart 1:

So first of all, why should we be thinking about cities? What is the role of cities in the battle against climate change? Well, we live in a highly urbanized world. By the 1800s, only 3% of the world's population lived in cities. Now, more than half of the world's population lives in urban areas. It is projected that by the year 2050 it will be nearly 70% of the world's population living in cities. It is in cities where more than 80% of global GDP is being produced. But if we talk about climate change, we must consider that it is in cities where more than 70% of CO2 emissions are taking place.

Chart 2:

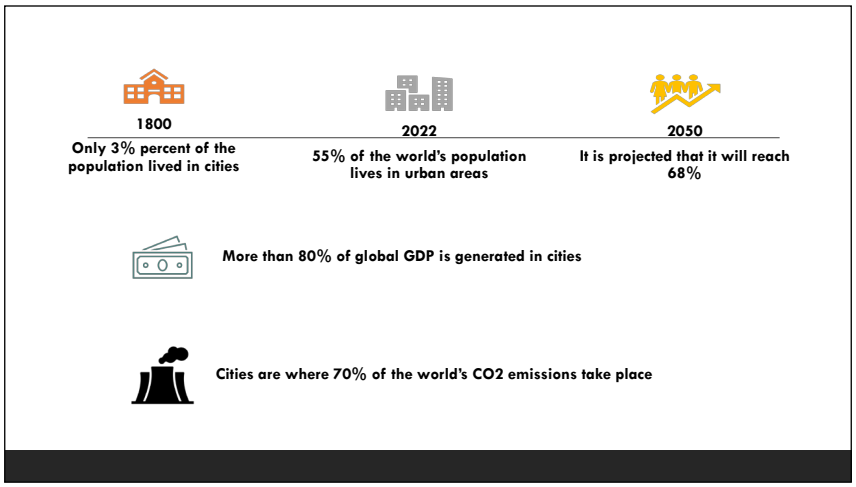
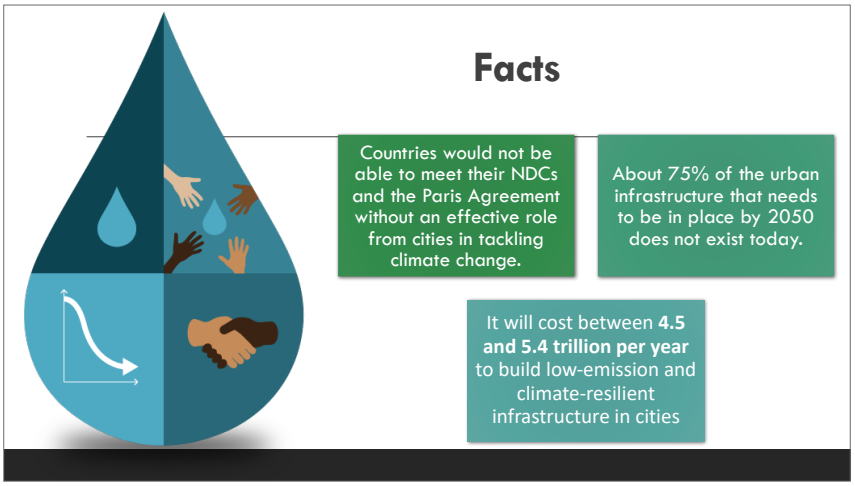


Chart 3:

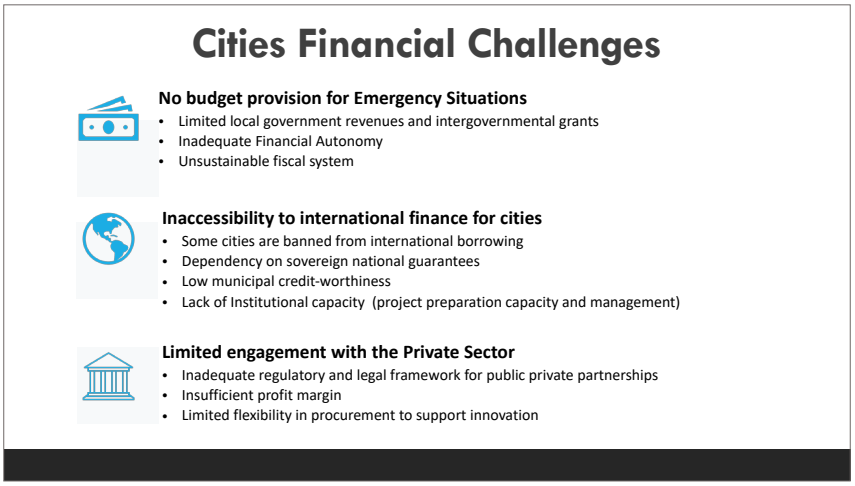


Therefore, it will be impossible for countries to meet their NDCs and meet the Paris Agreement goals without an effective role from cities in tackling climate change. And for cities to do that, they need to undertake a huge transformation in their infrastructure to make it climate resilient. The good news is that about 75% of the urban infrastructure that will be needed by the year 2050 does not exist today. So, we have time to make some significant changes in the way we develop that infrastructure to make it climate friendly. It is estimated that it will cost between $4.5 and $5.4 trillion dollars per year to build low emission and climate resilient infrastructure in cities. That is the amount of money that cities need.

Chart 4:

Unfortunately, cities confront an international financial system that was designed for countries, not for cities. It was designed under Bretton Woods in the forties when the world was not nearly as urbanized as it is today. We live now in a different reality, and unfortunately, the international financial system has not changed. It is still following the Bretton Woods logic of the forties, without reflecting the highly urbanized reality we are experiencing. And that is why it is so important to analyze and discuss bold and disruptive reforms to the international financial system to make it more cities-friendly. Otherwise, it will be impossible for cities to tackle climate change in an effective way. Therefore, it will be impossible for countries to meet the Paris Agreement goals.

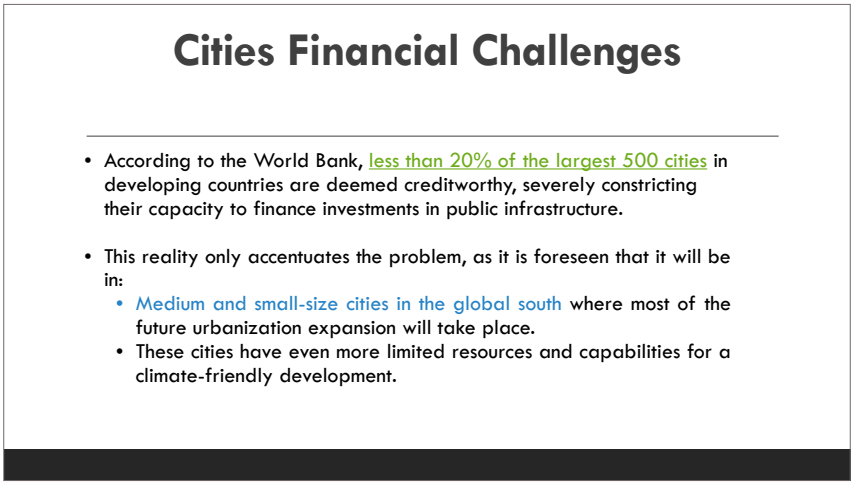
Chart 5:



What are the kinds of challenges that cities face regarding this current international financial system? There are no budget provisions for emergency situations in cities. When an emergency hits, cities have a very hard time confronting that reality. As we all know, they lack financial autonomy. They are constrained to intergovernmental transfers, and they have, unfortunately, unstable financial systems. More importantly, cities do not have proper access to the international financial system. In many countries of the world, cities are even banned from international borrowing. In some other countries like Ecuador, cities can access international finance. But they need a national government's guarantee, which you cities may not be able to get because of political rivalries between the national and the local government. This is something that I personally witnessed, experienced and suffered from. So it is a big problem.

On top of that, cities in many countries of the world lack the proper level of creditworthiness or the institutional capacity to develop bankable projects. And when it comes to the private sector, in many countries of the world, cities experience a regulatory framework that is extremely difficult to implement -- for example, to undertake public-private partnerships, which is preventing cities from receiving private sector investments.

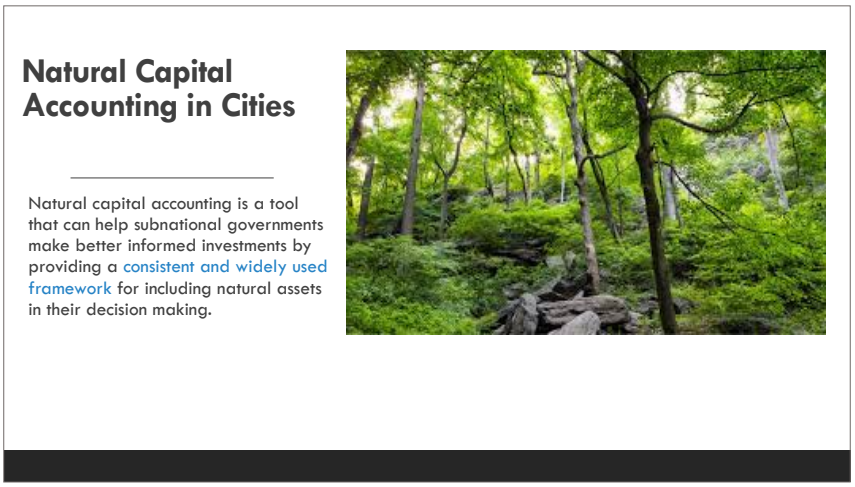
Chart 6:



Going back to the point of creditworthiness, according to the World Bank, less than 20% of the 500 largest cities in the developing world are deemed creditworthy. We are talking about the 500 largest cities. Can you imagine the situation of the medium and small-sized cities in the developing world?

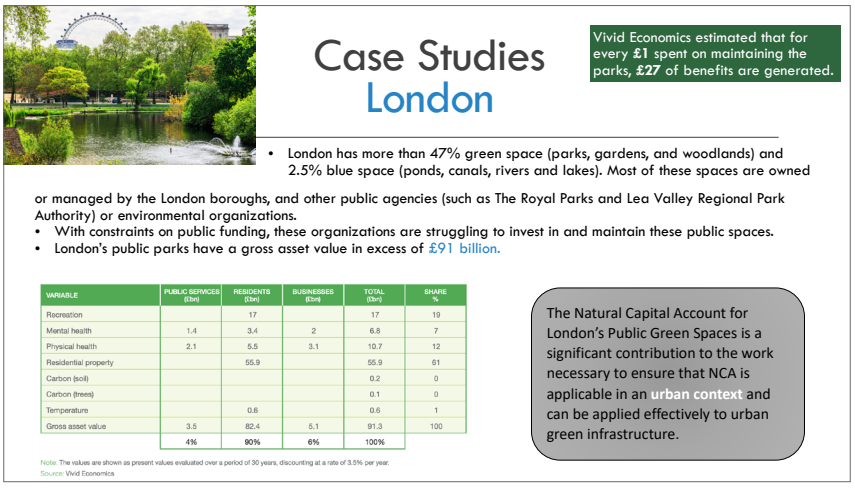
It is much worse. And the problem is that it is estimated that those are the cities that will grow the most in the developing world. That is where the largest portion of urbanization will take place during the next few decades. Those cities are not prepared for undertaking the kind of challenges they have under the current financial architecture.

Chart 7:



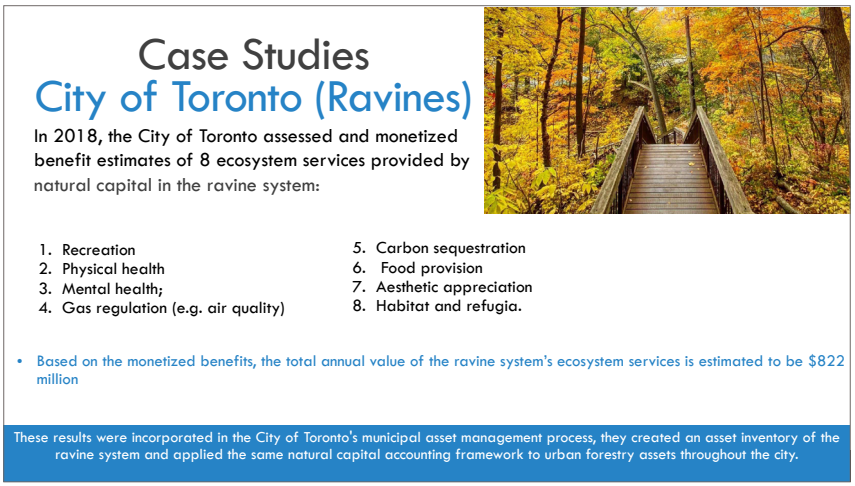
Now, why can natural capital accounting be an effective tool for cities to improve the conditions they have to face to access international finance? Because natural capital accounting can become a tool that will help some national governments make more informed investments, providing a consistent and widely used framework to include natural assets in their decision-making processes. Unfortunately, not many cities are doing so. Very few cities in the world have implemented natural capital accounting systems effectively.

Chart 8:



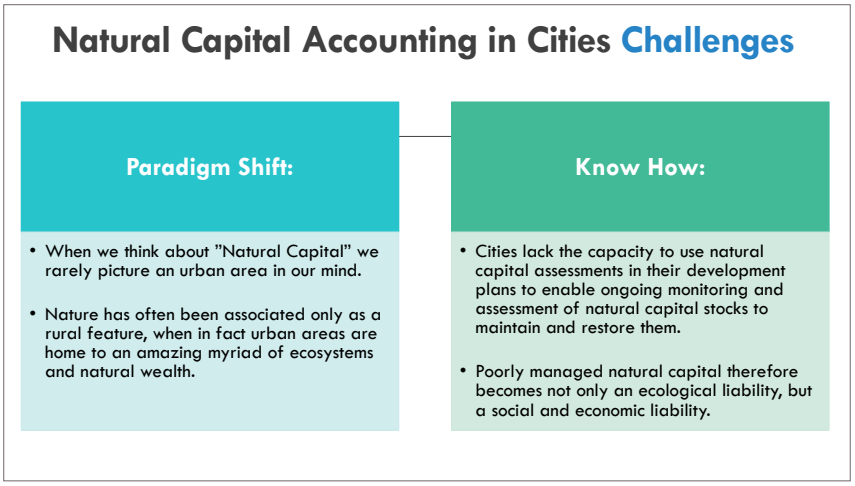
One of them is London. Some of the public agencies in charge of taking care of green and blue spaces in the city of London developed a study. They hired Vivid Economics, which estimated that for every pound spent on maintaining parks, £27 are considered as benefits of these kind of investments. They came up with a figure of £91 billion in assets for their green spaces. And of course, they valued the ecosystem services that these green spaces are generating.

Chart 9:



Something similar happened in Toronto. In Toronto, they assessed the ravines systems and the estimated value of the ecosystem benefits was estimated to be $822 million. But again, much more has to be done. There are just a few other examples worth highlighting, and it is fundamental to foster the implementation of natural capital accounting systems in cities. But in order to do so we face several challenges.

Chart 10:

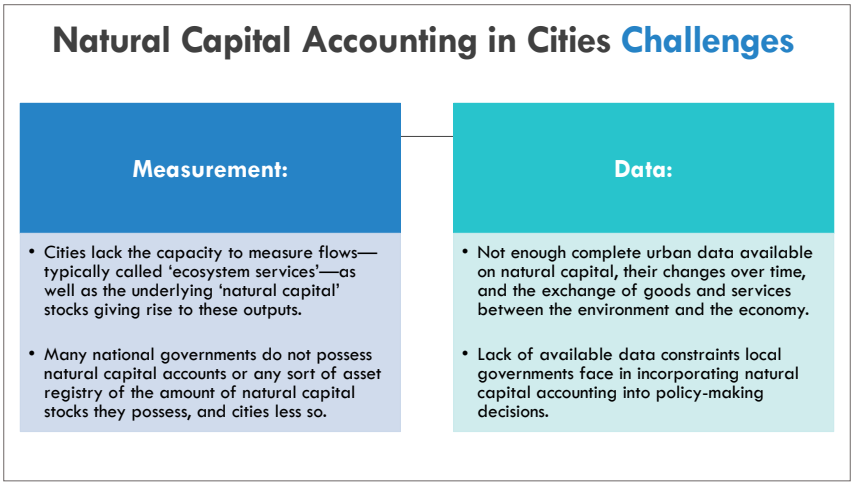


Bert mentioned some of the challenges that national governments are confronting. Many of them also apply to the sub-national level, but on top of that, cities have additional difficulties.

First of all, we need to promote a paradigm shift because when we think about natural capital, we rarely have an urban picture in our mind. Most times, we think about rural areas as those that are related to natural capital. When in fact, cities, urban spaces are home to a vast diversity of flora and fauna. And that is why it is so important to take care of urban biodiversity, but most importantly, to put value, and monetize urban biodiversity.

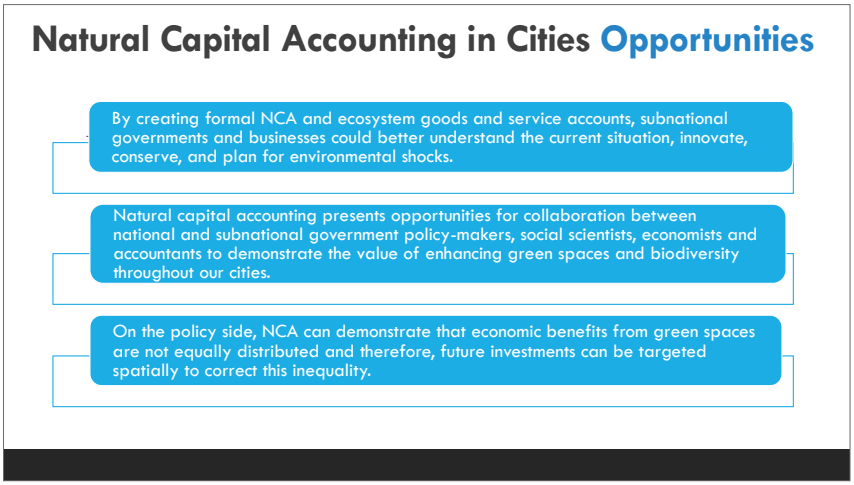
There is also a problem regarding capacity. Cities lack the capacity to use natural capital assessments in their urban development plans. We need to develop that institutional capacity. There is, of course, just like it happens at the national level, a problem regarding measurement.

Chart 11:



Cities lack the capacity to measure the economic value of ecosystem services, which is fundamental to foster a proper natural capital accounting system. And also, there is a lack of data, and not only for natural accounting, but for many other aspects of urban life. In addition the lack of data is preventing local governments from proper urban development planning.

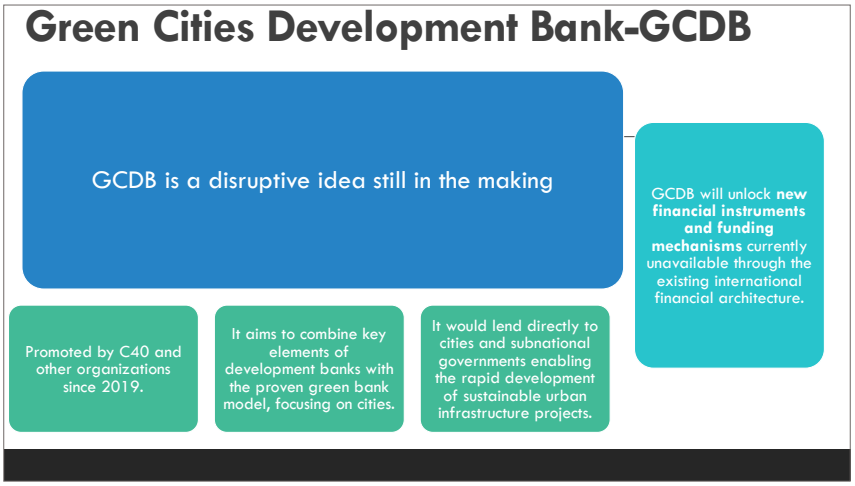
Chart 12:



Now, what are the opportunities? There are many. By creating natural capital accounting systems in cities, national governments will be in a better shape to understand the current situation, innovate policies, and conserve urban biodiversity in a much better way. Natural capital accounting also represents opportunities for a better collaboration between different levels of government, the private sector, and civil society, to conserve and restore urban biodiversity throughout our cities. And if we talk about policy, NCA can show the benefits of green spaces in a city to better allocate resources for a more equal distribution of green spaces in the future. We want to have more equally developed cities. If we want to address inequalities in different areas of the cities, the allocation of resources to develop green spaces is fundamental.

Now, this is an idea that Linda and I have been talking about. Also, I had the opportunity to share it with Joe. If we think about the need to reform the current international financial architecture to make it more city-friendly, there are some ideas that have been discussed that are on the table to promote bold and disruptive reforms.

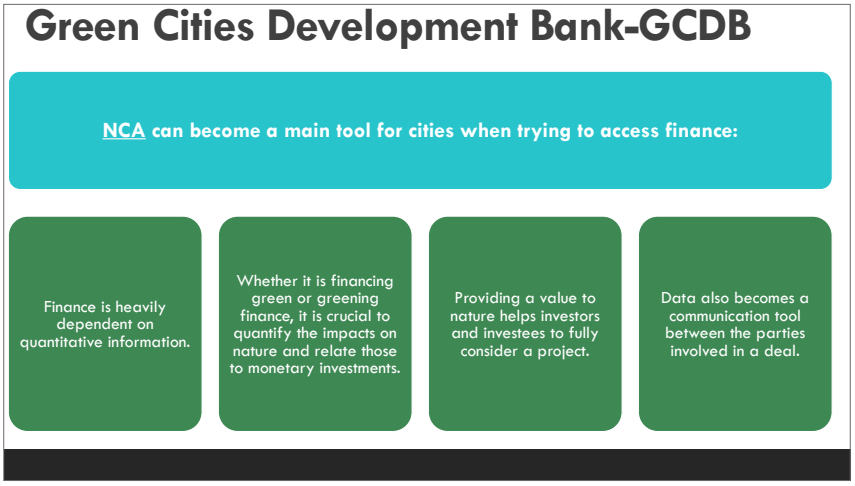
Chart 13



One of those ideas to further explore is the creation of a Green Cities Development Bank. So, this would be an institution that could combine the benefits of a green bank with the model of a multilateral development bank for cities.

This idea was promoted by C40 in 2019 and is currently being discussed. It is still an idea in the making, and it would be a mechanism to provide direct financial facilities for cities to undertake the kind of infrastructure transformation they need to tackle climate change effectively. The institution, for example, could become a guarantees fund. It can become a way of providing more concessional grants directly to cities, provide technical assistance, among other services, and a part of it can be precisely the development of natural capital accounting.

Chart 14:



This bank can become a mechanism to foster the implementation of this tool by providing technical assistance for cities. This can be done by developing a standardized way to measure natural capital, creating different mechanisms to make natural capital accounting an effective tool to attract more investments in cities, [and] particularly coming from the private sector, putting value on nature in cities.

So, these are the kind of ideas that are being discussed now. I think that combining them in a meaningful way can help cities and urban areas around the world, protect their natural capital, fight against climate change in a more meaningful way, and more importantly, provide a better quality of life for their citizens. Thank you.

Linda Blimes: Thank you. So, before we hear from Joe, I wanted to mention again that we are going to transcribe and edit these presentations and publish them on the Economists for Peace and Security platform, where they will made be widely available.

Joseph Stiglitz: What I am going to do is try to put a lot of what has been talked about in perspective and focus comments on a few particular issues. I am so impressed with what has happened over the last 10, 12 years since we began working on this -- and I will talk about what I actually began working on 30 years ago. Then I will come back and give some other examples.

Chart 1:

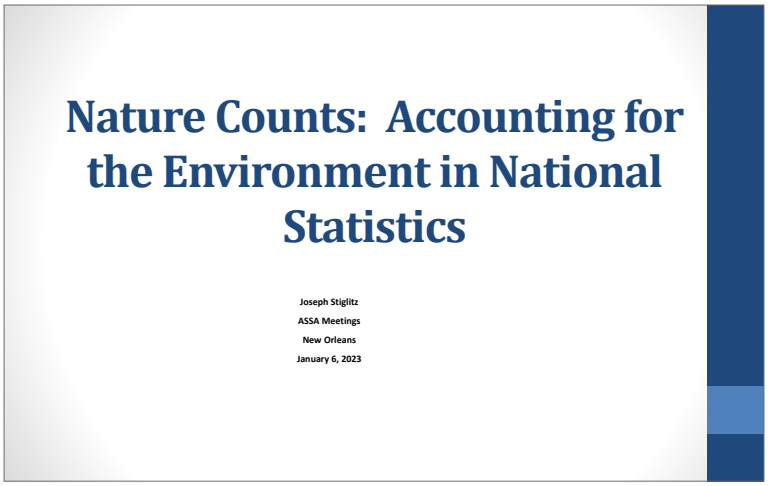


Chart 2:

The idea that you needed to go beyond GDP was actually recognized very early, even by Kuznets, who set up the national income accounts. He was very clear that it was not a measure of welfare. It was a measure of market income. I think he was worried that it would become a measure of welfare, and over time it has increasingly become that measure. As is often the case, the people who create these things understand the downsides more than the people who use them afterwards. There is a famous quote many of you may know from Robert Kennedy, in a famous speech he gave, that "GDP measures everything except that which is worthwhile." He then went on and elaborated on that and I think he captured a lot of our discontent with GDP.

Our original commission talked about a number of things that were included that should not be—defensive expenditures, for instance. GDP goes up when we spend more to protect ourselves against violence, and GDP goes up when we have to repair from climate change. So, if we do not do anything about climate change, GDP may go up but it will be just the opposite of what we want. So that, to me, is a really good example of why GDP is not reflective of what we really care about.

There is also inequality, insecurity, whole other aspects of subjective wellbeing and sustainability. And I am going to talk mostly about sustainability in all of its dimensions. I am going to talk about natural, environmental sustainability, but there are also social and political sustainability. The importance of this has already been mentioned because what we measure affects what we do, and what we do not measure will affect what we do not do. I am old enough to remember when inequality started really increasing in the mid-seventies -- and under Reagan it grew a lot. His solution was to stop measuring it because if you stop measuring it, it will disappear because nobody will notice it.

Of course, many of us thought that was not going to be the solution to the problem of inequality. The reason that President Sarkozy in France pushed to establish the International Commission on the Measurement of Economic Performance and Social Progress was that he felt under enormous pressure to produce [higher] GDP. Governments are rated on how high GDP is. But he also knew that French citizens in particular were very sensitive about the environment, and that if he did not do things that were good for it, he would be held accountable.

He wanted us to create a framework, you might say a report card, that was better than GDP, that was more reflective of what the citizens of France were concerned about. And then that morphed into the OECD Better Living Index and the initiatives of the OECD. One of the aspects of moving this into the OECD is that it is important to have international comparisons. It is important to have comparisons over time, but also international comparisons. That is why it is really important for the IMF to do it because the OECD is really specialized in the advanced countries. I began an initiative when I was in the Council of Economic Advisors under Clinton to create a system of environmental accounts, a green GDP, even satellite accounts.

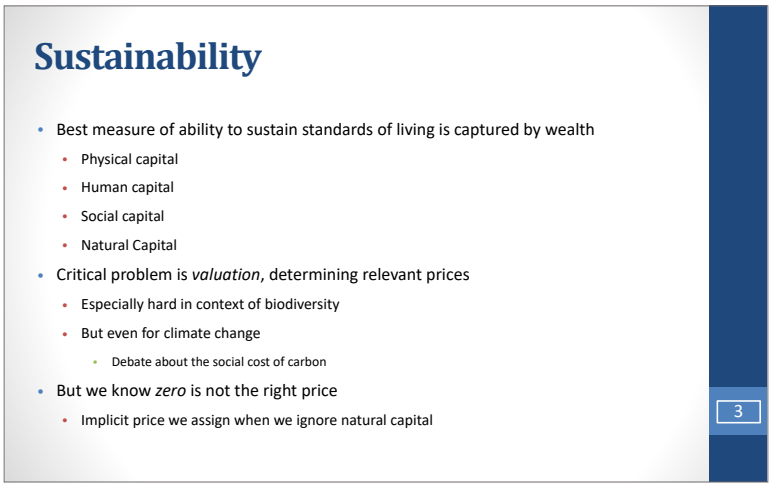
For those who do not know, most of the GDP statistics are developed in the Department of Commerce. So, the Council of Economic Advisors, working with the Department of Commerce, was making some progress until a large group of congressmen said that if you continue to do this work we will totally defund this whole area of government. We knew we were onto something important because if it were unimportant, they would not have put the political capital into threatening us with defunding. But it did put a cold shower on our progress at that time. And in the work that we did in the successor in our Commission on the Measurement of Economic Performance and Social Progress, and the successor at the OECD, there was active participation from the statistical offices of many of the European countries and Canada, but not the United States. We were an observer but not really engaged. That is why I am really pleased that now we are fully on board. That is a big change.

One of the reasons I think that this is so important is because it affects policy. We have been concerned about the extent to which these statistics are influencing policy. And there are a few countries that have picked up this agenda of beyond GDP. Most of them are not yet focusing on the environmental statistics but focusing on other aspects. Former New Zealand Prime Minister Jacinda Ardern has been particularly concerned about aspects of the "beyond GDP" agenda having to do with children and their wellbeing. It is a kind of capital that is not well measured typically, and she has made the measurement of that important. One of the interesting things about both New Zealand and Australia is

that a lot of the support for this initiative is coming from the Ministry of Finance. And that reflects their view that better statistics, in a broader sense, including those that better assess the environment of children, as well as every aspect of inequality, lead to better resource allocations. And the ministries of finance feel that to do that is part of their responsibility in allocating money. And they think that our statistical systems today do not give the kind of information that is important to them in making those allocations.

So, I think this is a really good time for this conversation. Next May, at the G7 meeting in Japan, these issues are getting discussed at the level at least of the finance ministers, and hopefully of the presidents. This had happened once before in the Pittsburgh meeting of the G20, but then it got lost – and so there were lots of other things that happened in the world. But I am hopeful now that this is being brought back onto the agenda.

Chart 3:



This session is about one aspect that is not captured well in our GDP statistics – this notion of sustainability. And there is a strong basis in economic theory explaining why the best measure of the ability to sustain standards of living is captured by our measures of wealth—more accurately, wealth per capita. If our wealth (per capita) is going down, we're less able to sustain standards of living. And it is going down: We are not investing for the . That is why it is very important to have measures of wealth in all the dimensions. Traditionally we focused on physical capital. We talked about human capital; there was work on social capital, and this session is about natural capital. I think trying to create systems of natural capital accounting is a really important aspect of the assessment of sustainability.

There are two aspects of doing this. One is the physical measurements. What is going on? And here some of the methodological and technical advances are really incredible. You can actually measure physically CO2 concentrations or emissions, or what is happening to water. You can do it with satellite. So, what is going on the physical side is very impressive. But from the economic point of view, the hardest issue is valuation. How do you take these fiscal numbers and add them up? And it is not only that many of these things are not marketed. When they are marketed and there is a price, there are so many market failures that there is no correspondence between the market price, and, you might say, the social marginal value.

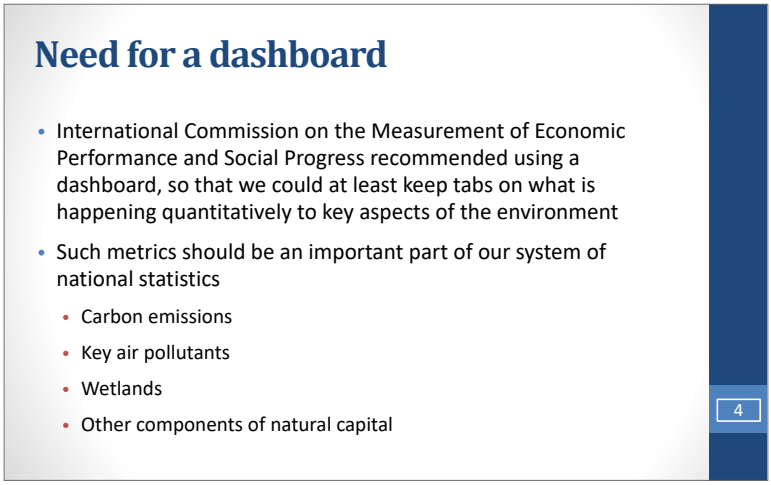
And that is really important to recognize – that the prices we want to use are unrelated to market prices. There may be a price of water, but it does not have anything to do with the value of water [or] the value of water in terms of Adam Smith, but in terms of the marginal value of clean water.

So that presents, I think, the biggest challenge and there are a number of methodologies that are used to value various parts of this.

I loved your discussion of the whale. You talked about each whale being worth $2 million. And you mentioned that it is partly because of the impact it has on the whole carbon system, including plankton. But we have to then value carbon. As many of you may know, one of the first things that President Biden did was to call for a revisiting of the price, the social cost of carbon. President Trump had put a price of $7 a ton. Obama had it at about $30. And the number that President Biden's team came up with, I think the final is around $60. That is half of what it should be. It is clearly much higher than that. I think the models they use to calculate are really, really defective.

Interestingly, one of the members of the Council of Economic Advisors -- not a member but a staff member colleague of mine at Columbia -- Noah Kaufman, has written a paper where he pointed out it should be $120. And I think that is really in the right ballpark, partly because they left out a whole set of things like risk and how you value risk and how you value impacts on inequality. But that means that if the effect of carbon storage associated with plankton is an important part of the whales' valuation, your whales are much bigger than $2 million.

Chart 4:

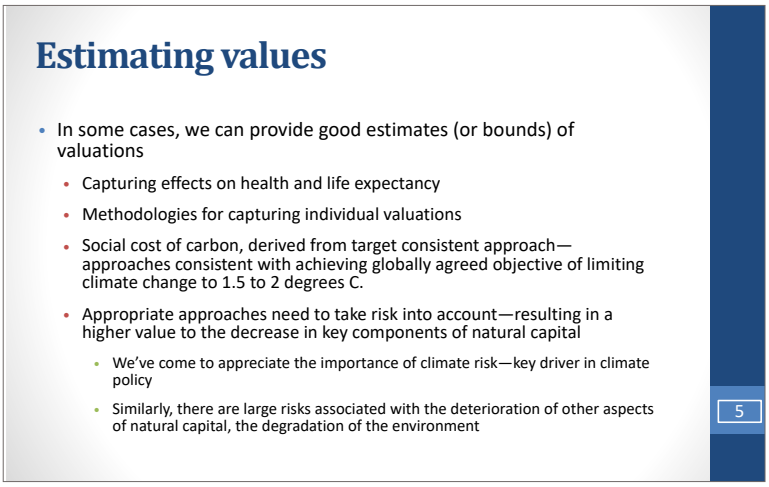


But when we go into the areas of biodiversity, which are some of the things that we have been talking about, those values are even more difficult to estimate. So, that was one of the reasons that our commission recommended the need for a dashboard. When aggregating things you lose information, and the point of GDP is that you want a number that you can focus on. But one number is too few for describing an economy. A billion numbers are too many to grasp. And so, one way of thinking about it goes back to the pragmatic approach of what we are trying to do here. One wants to have a set of numbers small enough that you can focus on what is going on and discuss it, but not so small that you lose information that is important for assessing what is going on in the economy.

So, the way I sometimes describe this is if you were driving a car there are two numbers that you might want to know: The speed of the car and how far you can go. Say you can go 250 miles and you are going at 50 miles an hour. If you added 250 and 50 you get a number 300 that does not tell you anything. It does not tell you either how fast you are going or how far you can go. So, there are some cases where trying to add things up does not make sense.

Trying to think judiciously about what the elements of the dashboard are, when you can aggregate and when you do not want to aggregate, seems to me one of the critical things. You may not want to aggregate because the numbers are not commensurate, as in the example I just gave. But you may not want to aggregate because of the degree of uncertainty on some of the variables: The imprecision is so great that when you add up something that is precisely known with something un-precisely known, the total is un-precisely known. That clouds the information you have about the part that you do know. So that is why we recommend a dashboard.

Chart 5:



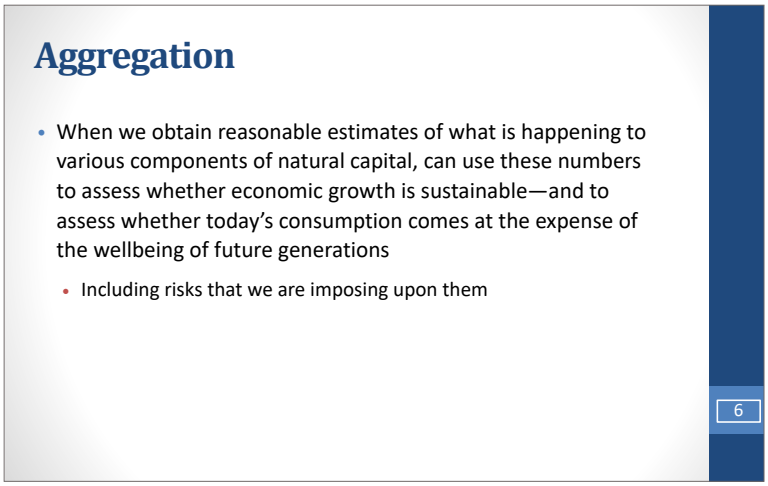
There are multiple uses for quantitative assessments of natural capital and how it is changing. In terms of estimating the values, in some cases, some of the things that are not marketed, we can make inferences. For instance, we do not have slavery anymore so we do not have market values of life, but we can make inferences about what people feel about the risk of losing their life, the statistical value of life. So that is one aspect of risk and there are other aspects of risk that we can make inferences about. We have to think about them cautiously from the choices people make. Linda and I, in our book, did a lot of that in terms of assessing some of the cost of the Iraq war. So that is one area where you can make some inferences.

Another methodology that has been used at times is contingent valuation: what people are willing to pay in order to preserve something. So, whales are something where even before it was recognized that whales were good for the carbon system a lot of people had very fuzzy feelings about whales and would have been willing to pay quite a bit to make sure that we had the biodiversity of whales. It was not for the oil they got from them or for the meat, but just having an ecosystem with whales.

So, while in the area of these non-marketed goods we cannot get the same precision that we have in the case of marketed goods, we can still make inferences.

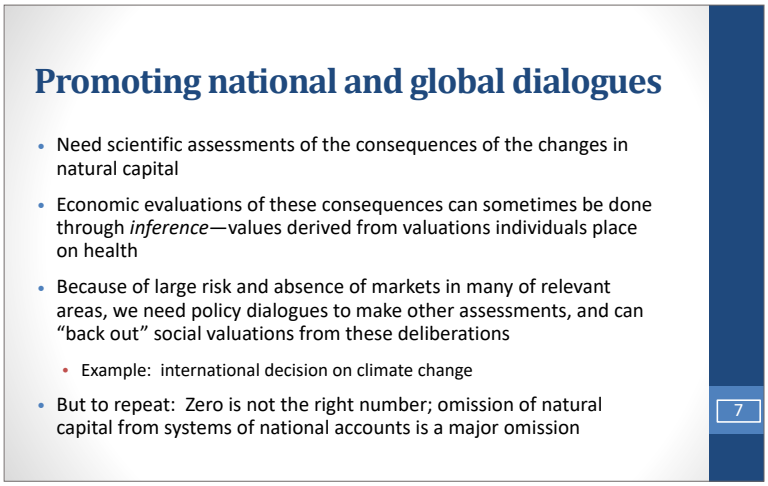
That brings me to another point I want to make in the area of GDP. We make all kinds of assumptions and we ignore all kinds of imprecisions, and it just does not bother us. The macroeconomists run regressions as if these data meant something and they have some systematic characteristic to them. So, they do mean something, but they do not have the precision that we often pretend they have.

Chart 6:



We know that any good is sold at multiple prices in different stores and on different days. And the way you collect the data may affect the prices that you use. So that is just one example of how we treat depreciation, depletion and so forth. A lot of the stuff that goes into this SNA, System of National Accounts, are conventions like all accounting conventions that are agreed upon. It is pragmatic; we make agreements to go ahead and make comparisons, but there is no holy grail. And what we are trying to do in this arena is to make a similar set of conventions, to be able to continue to discuss them and say where are they wrong.

Chart 7:



Let me just conclude with the importance of promoting national and global dialogues. We need to think about this at multiple levels. We need the scientific assessments of what is going on, and the quantitative measures of what happens. The effect of photo plankton in storing carbon was not something that was appreciated 20 years ago or 10 years ago. So, we really need to recognize that our knowledge about the science of natural capital is going to be changing very dramatically. And that recognition means that things that we did not include before we will want to include. So, we will have to revisit our systems of natural capital more than we do physical capital. Because I think we are learning more. It is a very complex system.

We will also have to continue to revisit the economic valuations. I think we are beginning to understand better the consequences of market failures and to be able to correct for some of those market failures -- for the implication they have on the shadow prices of capital goods, including natural capital.

The integrated assessment models were good models for assessing what was going on 30 years ago. But they are not particularly good models now because most of them do not include adequate assessments of risk and inequality and have a number of other deficiencies. Because of the large risk and absence of markets in many of the relevant areas, we will need to have policy dialogues to make other assessments.

Sometimes we can back out valuations from those assessments. So, one way of thinking about what is the correct shadow price on carbon today is what the international community has said. Do we want to take the risk of allowing climate change of an increase in temperature more than 1.7 degrees? They said, no we do not. Well, what does that mean? That says their evaluation of that risk has put a shadow price on that.

We cannot criticize that. That is a valid assessment of that risk. And if economists ignore that, we are ignoring something of first-order importance to the community, i.e., the international committee is making a decision about that. So, economists have actually not been very helpful in this because they have not paid attention to things that are first-order reports to most people, as they think about climate change. But to repeat something that was said several times already, what we know is [that] zero is not the right number for the valuation of natural capital. And omission of the natural capital from systems of national accounts is a major omission.

Nature Counts: Accounting for the Environment in National Statistics Panelist Discussion

Linda Bilmes: Thank you. I'd like to take a few questions, but before I do, I just want to summarize what we heard about the importance of this issue. We heard about the enormous progress, particularly on the technological and scientific side. We also learned about a couple of challenges, and I'd like the panelists to address two particular challenges.

First that many of the key decision makers, who are going to be using and relying on and needing this data are in cities. Cities will be making decisions on topics such as whether to protect a forest that is filtrating water, to a large extent. or to build a cement water treatment plant instead? So how do they make that decision? How do we translate environmental economic data into a format that is easily usable for cities and other decision makers, particularly on infrastructure projects? And shape the multilateral institutions and to make those projects creditworthy?

A second question relates to the valuation challenges that Joe Stiglitz just described. How do we incorporate natural capital into a situation where we have such an imperfect market? And let's touch on the issue with respect to the private sector and how to bring the private sector into this. We'll start with you Bert.

Bert Kroese: Okay, thanks for these great inputs. Before I answer the question, I want to come back to the situation of the US. The US has actually been very instrumental to bringing forward these standards. About 600 people have contributed in producing these ecosystem standards. Many US academics, people from BEA and all were very involved. So, there is a lot of knowledge here in US and I want to acknowledge that.

Coming back to cities. Well, I think the whole idea of ecosystems also applies to cities. I think one important requirement is that there should be very detailed satellite data Luckily, I think there are satellite companies that want to work together with the statistical community on this; for example, I talked to the European Space Agency (ESA) last week before Christmas. I think there are many things that can be done.

On valuation, yes, we can talk for a long time about that. It is clear, there were many discussions when we produced this ecosystem accounting manual. Agreeing on the principles how to measure the extent and condition of ecosystems and the qualitative descriptions of the services was in the end relatively straightforward. But the discussions on valuation were more difficult. There are two chapters in the manual on this and basically all arguments and approaches are there. Obviously if there is a well-functioning market its simple, we know what to do. But if it is not, what do you do? A number of approaches are described. For example, you can look for similar products that are on the market. You can also look for what the costs would be to produce something that would provide the same service. For example, for flood protection, what are the costs of creating a dam or dike to provide the same flood protection a mangrove forest gives? For recreational services, you can measure how much money people want to spend on gasoline to go there. At least that says something about how much they are valuing it. So, there is a lot there already, a lot of methods. Nothing is perfect though and there is still a lot of discussion.

But I agree with you, Joe. The value zero is wrong anyway. Also in the CPI and National Accounts this kind of valuation assumptions are made. We will keep doing research on valuation, and I hope we will make progress.

Eli Fenichel: Okay, so I think everything Bert has said about local is a hundred percent accurate, and I think the technologies are getting better to make that possible, very rapidly. The one thing I would add is I think that, or I should say I am optimistic that as cities can start doing natural capital accounting, at the very least they are showing managerial competence that I would hope in the not too distant in the future they'll be able to bring to capital markets. And I think some of the issues that Mauricio was talking about, about the limitation cities face in accessing capital that are structural, natural capital accounting isn't going to help, but it is going to push those issues further. So, I am optimistic on that front. It is something we have been thinking about.

On valuation, I agree with Bert, we can talk about this for hours. It is something I am very interested in from my academic life as well. I think what I will say is that personally having thought about this, looked at this a lot, the issue is not about measuring prices and quantities. I think actually if you sit down and do the math, it all works out to be approximately, certainly good enough within the other errors in international accounting. We do imputed prices on other things, like owner occupied housing, not particularly controversial. The real issue becomes how do you do, when we know we have prices and quantities both changing in welfare theory, we approach this one way through Hicksian measures in national accounting, we approach it through index number theory. There are some cases with superlative measures where we know these line up, but we have not fully worked these out for when you've got non-market effects in there. And I think this is just a technical issue, and we just need, I think, just more people, like in this room, helping dig in on it, because it is a small community that is thinking about it.

Mauricio Rodas: So, something that for me is fundamental is how can we foster political commitment on the part of mayors to do these kinds of things? If we think about what was happening 10, 15 years ago, back then, you saw very few mayors that were committed to the climate agenda. That has changed dramatically. Now, you see a lot of mayors doing great work on climate, working very enthusiastically on it, actually, and sometimes leading the way at the national level, being very bold and disruptive. And the reason for that, I think, is because they have realized that climate change is not only important for the sake of climate and the planet, but for the sake of improving people's quality of life. And I think that when mayors have incorporated that component into their agendas, that made a huge change.

Of course, a lot still has to be done. But I think this is a kind of mechanism that we should pursue with mayors by making the case of how developing a natural capital accounting system can help them to attract more investments into their cities. And to develop climate projects that will, at the end of the day, improve people's quality of life, and actually save people's lives. When they incorporate that dimension into their political speech, it turns out to be very sexy, actually. Because the problem is that when mayors in the past talked about climate, it was not sexy enough. So that is why not many of them did it. Once they have realized that talking about climate change and doing projects in that particular area can become sexy -- because at the end of the day, it is about improving people's quality of life and saving people's lives -- then the situation changes. And I think we can do something similar with natural capital accounting by making the case of how beneficial it would be for them as a mechanism to attract more investments, and to demonstrate the importance of valuing nature for improving people's quality of life. At the end of the day, it is a political game. Mayors are politicians, and they need to find the political profitability of doing this. And I think that this a very easy case to make, but we need to do it fast.

Joseph Stiglitz: So, the first point I make, one of the things that makes cities so interesting is that they are a complex, interacting system where externalities are really important. And it's exactly in areas where externalities are important that economics finds the greatest challenges, to put it euphemistically. That is to say, pricing is difficult, trying to assess the value of one thing versus another, the kind of questions that Linda pointed out. Some of this is understanding the science of these externalities.

I think every time we see something like what happened in Houston -- from having so much of Houston paved over -- and what that did to water; it reminds people that cement has consequences. It has advantages in durability, but it has some very big disadvantages. And green may be better not only in carbon, but in other ways. But the point I want to make is that because it's a very complex system, valuations are going to be very, very difficult. And I think the big advance is that people are beginning to now think about some of these systemic effects in a more systematic way. And I think that is a big advance.

The second thing I did want to comment on was that I think the green city bank, which you have been promoting, is a really good idea. While getting the private sector, green finance, is really important, one has to remember that the private sector is very bad in assessing long-term investments, and climate is long term -- nature is long term. The private sector is very bad at assessing risk, and there is a lot of risk in everything we are talking about in terms of climate. And the private sector does not do anything about public goods and externalities. So, I think we can expect a lot more of the private sector and we can try to get more out of it. But in the end, in some of these vital areas, it is really important to have more active public-sector, multilateral development institutions, and in particular, green city banks.

And one of the reasons why I like the idea of green city banks and green community banks -- and there are some being developed around the world -- is that they focus on the community. And because they are focusing on the community they do focus inevitably on some of the externalities of the interactions. And so, you can get the voices of those who are being affected more directly in a green city bank than you get at a very high level, at the multinational.

The final comment I want to make is how it is important to realize that we make a lot of imputations in our GDP accounting, and they have consequences. Our measured inflation would be markedly different if we treated housing differently than the way we do. We are all going to suffer because the Federal Reserve does not understand this very well. And so, it has hyperventilated about some aspects of inflation, and we are going to talk about that a little bit in a session we are having this afternoon.

The fact that there is this debate about the right social cost of carbon, is it seven, 60, or 120, makes a very big difference for our decisions. And so that kind of valuation, I think, is a first-order of importance. And climate change is probably the existential issue of the day. And if we cannot get that right, then we are not going to get a lot of our other policies right.

Linda Bilmes: Thank you. Let's take some questions So the gentleman over there.

Stefan: So, I am Stefan of Zurich and investment. So, I have a question on method and communication for method. When you've been talking about building an index for the valuation, I want to point out there is a problem sometimes of nonlinearity. For instance, if you, say, I want to build an index where I have the value of the water aquifer and the value of insects, pollinators, and the value of other things, well, the problem is that without pollinators, you have no economy at all. Without water aquifers, you also have no economy at all, because we'd just decline entirely. And so, there is no linearity there, which aggregating, as Joe was saying before, does not make sense, because without a single element of those, you have zero. And so, I was wondering, is there any work on that that has been done that will take into account which is critical of that?

And about communication, whenever there is an event, COVID, Ukraine, we read in the newspapers, "Oh, this country, the UK has lost 20% GDP." Now, when is it that we will read... Can we expect, at some point, to read in the newspapers, "Oh, this or that country have increased GDP, but have lost 10% of their natural capital," for instance? Because that would change a lot of the conversation. And so, do you have any reflection about why is it that it is not happening yet? We will see it one day. How ready are the data that you guys are preparing? But by the way, congratulations. It was really very interesting and insightful. Thank you very much.

Bert Kroese: On the latter part, that is exactly what should be done. That is goal, that we do not only publish the economic development, but also what happened to the environment, to natural capital, and to climate. We are not there yet. But for example, in Statistics Netherlands, we publish data for the greenhouse gases along the same rhythm and according to the same definitions as reported GDP amounts. At least you can see it in the same time and tell the story in the same way. For example, we have made more profits but on the other hand we had more carbon dioxide emissions.

Another thing is that in the Netherlands, we produce the Monitor of Wellbeing, which is basically built on the concept of natural, social, human, and economic capital. Every year in May, when the government has to go to parliament and has to discuss the consequences of its policies, this monitor is there too. As a result, the whole picture of development can be taken into account.

What happened to human capital in terms of education and health? What happened to natural capital, including many of the things we discussed today? What happened to social capital, trust in government and democracy, et cetera? And so, the day that the government goes to parliament, not only the economic consequences of policy is taken into account but at the same time, simultaneously, the other things. That is a big advantage and is also taken up in the media. There is no attempt to summarize all values in one number, but it is more like a dashboard.

On the non-linearity, I do not really know. I think it is important to present the ecosystem services separately, and do not do oversimplification.

Joseph Stiglitz: Can I ask one question that is related, which is does anybody ever calculate if climate change continues in the way it is going, what will happen to the natural capital of the Netherlands with such a large fraction of the country being underwater? You know, if you could calculate the consequences for the natural capital of your country, of what is going to be happening if you did not do anything and climate change proceeds? Has that calculation been done?

Bert Kroese: I think there are many studies in that direction, because part of our country is below sea level. Actually, the house where I live in the Netherlands is about sea level. I do not know if there is one definite number, but there are various models and studies. And it is not only the sea level, but also the rivers, that are flooding.

Eli Fenichel: On the alignment, fully agree, and if you look in the US national strategy, it is not coincidence that the goal is to release the annual numbers along with the -- I believe third quarter GDP is what we said -- for all the reasons that Bert has discussed. On the non-linearities, there is a fair bit of work. There are two kinds of non-linearity; there is sort of what I would call standard non-linearities that are important and that is like curvature, and then there is non-convexities, and I think there is more on the former than the latter.

One of the challenges of moving natural assets onto the national balance sheets is it is probably not reasonable to think about the total value of natural assets. However, changes in the value of natural assets can be measurable, because we know that small to moderate change in assets do have finite value. This notion that we can value changes for things, even though the things might be infinitely valuable if they went to zero. But we are not in a realm of where we are talking about going to zero, hopefully, right?

So, if we are talking about changes that are more marginal or more incremental, that is where the issue of how you build index numbers really matters. And that is the exact problem of when you have changes in prices and changes in quantities -- it is not a straight difference. And this has been known for 40, 50 years or more, right? And so those are the exact questions to be asking.

Mauricio Rodas: So precisely because of what Joe mentioned regarding the communitarian aspect of urban life, I think cities are very fertile ground for developing a natural capital accounting system -- because since there is this strong communitarian feeling. I think that for local authorities, it should be fairly easy to communicate the benefits about investing in nature by having these kinds of accounts. So, I think it can become a very strong communication tool for public authorities.

Now, the point is how to convince those public authorities to develop these kinds of systems. And the problem is that I think that many mayors around the world do not even know about this, or the

effectiveness that this could generate for them. So, I think it is also a communication effort that should be done with mayors. And I think that international organizations and city networks can play a vital role in doing so by demonstrating that, for example, developing these systems can, as I said before, not only help make the case about why it is important to invest in nature, but also to improve the shape of cities, to access finance, to attract more investment. I think that when you make that connection, it becomes really attractive, and mayors can be part of these kind of efforts.

Linda Bilmes: We will take next question.

Speaker 3: Yeah, I have a rural question. The focus on cities is quite interesting, but if any of the panelists could comment, the question of soils and soil fertility, is that better along than some other areas of natural accounting? Does it present special challenges of... Whatever you can say about soils and soil fertility, and it is of interest to cities as well.

Linda Bilmes: Eli has some expertise on expert on soil fertility

Eli Fenichel: I am not an expert on soil fertility, but I have worked with experts on soil fertility.

Speaker 3: Department of Agriculture.

Eli Fenichel: Yes, and outside experts as well.

Yeah. What I will say is no. I actually think soil fertility is lagging more than many others, and it is because soils are so complex. And one of the challenges that you see in just measuring things like soil organic matter is within field variation can be greater than between field variations. So, the technologies for doing the biophysical measurements that we have talked about -- that are advancing rapidly -- is an area that is like, three years, four years ago, when I was working with a team, and everyone was saying how hard that was. Now, people are saying it is hard, not super hard, and that is moving very quickly.

And then what we don't see are a lot of great arms-length markets in agricultural land, right? The markets are not super thick, like you would see in residential housing, right? The markets are much thinner when you are looking at it, so, there is not as much churn. A lot of it is rental and not well recorded and well reported. And so, the economic data are a little bit fuzzier than you would see in an urban setting, frankly, or a suburban setting on the economic side. And the biophysical measures of soil fertility are rapidly advancing. I would be optimistic, in say, five years out, we will be in a much better place. But I think right now the primary measure people are looking at is soil organic matter, or soil carbon, which are basically the same thing. Those measures are still really hard to do at scale repeatedly and reliably.

Joseph Stiglitz: Yes, I think this all comes down to what we are trying to measure here. Is it private values or social values?

If we understood well the relationship between the physical characteristics of the soil, and the fertility of the soil, then we can say how the (market) price should depend on soil fertility, because we know what can be produced at what costs, and therefore we know the rents on the land, and therefore, we know the value of the land, and how it varies with soil fertility. As it is, that may be different from actual market valuation. We know, too, that the value of land does not incorporate well, in many cases,

the risk of being underwater or being hit by a devastating hurricane. Thus, land values do not even incorporate well "private values," but they do an even poorer job in incorporating social values— reflecting externalities on others, e.g. associated with water run-offs.

So, I think the evidence right now is strong that land markets are so flawed that in areas where we have good estimates of productivity or the destruction of climate change, we ought to use those estimates and not the market estimates. In doing so, we are in effect marking a correction for the obvious market failure of ignorance.

Linda Bilmes: I think we have time for one more question. Yes?

Wes Austin: Hi, Wes Austin, US Environmental Protection Agency. So given that there was an effort in the nineties in natural capital accounts that was sunk due to political opposition, I am wondering how we can ensure that the numbers that we are tracking right now in this current effort do not meet the same fate. And this also goes to other efforts abroad that might face political opposition.

Linda Bilmes: Thank you, that's an important question about how do we politically insulate these efforts this time.

Eli Fenichel: So this is what I and my team have been thinking about for many months, and Joe was around the first time (in the early 90s), so I am curious what Joe has to say as well, because I have not talked to Joe about this. I have talked to other people who were there. What happened officially in the 1990s -- and I am going to give the official version that is in the congressional record -- is that Congress paused the BEA's work on environmental-economic statistics and gave BEA $400,000 to go get a peer review on the methodologies. That is "Nature's Numbers," which satisfied the congressional request -- and there have been multiple peer reviews, including a GAO report in 2007 that there were questions about a green GDP -- but the whole idea of environmental-economic statistics was something that the US should be moving forward on. So this all happened in 1992 to 1994, when the BEA first worked on environmental-economic statistics. The 1995 Paperwork Reduction Act was passed, creating the modern version of the Office of the Chief Statistician, which is in the Office of Management and Budget in the White House. The Chief Statistician has the authorities to coordinate across agencies and develop new statistical products. That has been delegated by Congress.

In 2019, just to confuse everyone, Congress passed the 2018 Evidence Act, but I have been always told that, to remind people it passed in 2019. This Act, again, changes the statistical system, and for the first time really elevates a lot of the natural sciences, so like EPA where Alex Martin is the statistical officer at EPA now. That is because of the Evidence Act, which basically allows elements within EPA, USGS -- that were not part of the statistical system -- to become part of the official statistical system, coordinated in the Office of the Chief Statistician.

So, while this does not guarantee that somebody will not throw a fit in Congress, Congress did overhaul the way the statistical system is designed since the first go around, and this is not BEA doing this. It certainly has the support of the Secretary of Commerce. And on Sunday, I am doing another panel specifically on the US strategy with Jed Kolko, the Undersecretary of Commerce, as well as some chief economists from other departments that are engaged in this. It is being run or overseen by the chief statistician, who has the authority from Congress to develop these new statistical products, including in the Evidence Act, which specifically calls for statistics related to the environment for the first time.

So yes, somebody in Congress could throw a fit, but now the legislation is much clearer than it was in the early 1990s.

Joseph Stiglitz: Yeah, I mean, it is always going to be difficult, and I think they have moved in the right direction. Obviously, if you have a president who does not want to... You know, like President Reagan did not want to talk about inequality, so he stops doing it. There are ways of, quote, "complying:" he appoints the wrong chief statistician and the frameworks and institutions that are created to try to move forward - there is no commitment. This 15-year plan is great, but it does provide momentum. It does expose any government that does not continue on in this line to having gone back on what was a plan and progress.

One of the things that is important here is that this has become an international effort. So having norms set by the IMF and the OECD makes any deviation by the United States or any other country more exposed, and that is all you can do. You can reveal that you are not complying with those international norms of collecting data. Then that raises questions, why do not you want to collect the data? And that becomes part of the politics itself. So, creating these structures does create a momentum, but it is not irreversible. And so, it is not perfectly insulated from either Congress or from the administration. But it has some momentum that I think is very positive, and particularly when there are international institutions that are moving along.

Linda Bilmes: Thank you all very much. On this final point, let me offer one anecdote from when I served as the Assistant Secretary of Commerce for Management and Budget in the 1990s. The National Weather Service, which is part of the Commerce Department, was modernizing and closing hundreds of field offices. These offices held a hundred years' worth of paper weather records from local weather stations all over the country. We requested funds to protect and digitize that information, but many Members of Congress didn't recognize the value of that effort. There just wasn't much awareness at that time that 100 years of weather records was actually valuable.

And even securing funds for modern computers at the Bureau of Economic Analysis was not easy, because some Members did not recognize the need to invest in improving and securing accurate data. But I think that since then, there has been progress in terms of cooperation, in terms of the global effort around this, and in data quality. We deliberately chose an international panel today that is leading these changes. As Joe said, the norms are changing around this issue, and hopefully that will benefit the outcome over the next few years.

<<session concludes>>

"Inflation and Inequality"
ASSA New Orleans Panel Session

Linda Bilmes: Good afternoon. I am Linda Bilmes, Co-Chair of Economists for Peace and Security (EPS), and I hold the Daniel Patrick Moynihan Senior Lecturer Chair in Public Policy and Public Finance at the Harvard Kennedy School. I am delighted to welcome you to the second session that Economists for Peace and Security is sponsoring today. I see some familiar faces in the room from the earlier session, which focused on how we can revise the way we produce national and international economic statistics to incorporate environmental values.

Economists for Peace and Security is a group of experts in economics and related fields dedicated to world peace and economic justice. It was founded by Kenneth Arrow, Lawrence Klein, Robert Solow, Robert Schwartz, and Barbara Bergman. From the beginning, we have interpreted our mission broadly to include not only nuclear disarmament but also preventing the root causes of conflict. Our Fellows and Members have an interest in public policy challenges including social inequity, economic distress, access to healthcare, and protecting the planet.

The group of individuals who have been involved as trustees of Economists for Peace and Security includes some of the finest minds in these fields, including Nobel laureates Amartya Sen, Daniel McFadden, Eric Maskin, Roger Myerson, Oscar Arias, George Akerlof, Robert Solow and Joseph Stiglitz, my long-time co-author who is here on his 2nd EPS panel of the day, and numerous prominent thinkers including Sheila Bair, Jason Furman, Robert Reich, George Papandreou, James Galbraith, Sir Richard Jolly, Allen Sinai, who is moderating this afternoon's panel, and many, many others.

This panel is focused on two critical issues that are dominating the headlines, inequality – referring particularly to the vast income disparities that have been growing for the past three decades, and inflation – which has returned like an unwanted ghost from the past. I'm delighted to introduce this panel and our distinguished moderator, Allen Sinai. Allen was a pioneer in the use of quantitative macroeconomic and econometric techniques for economic forecasting and is one of the leading forecasters in the world, with a background spanning academia, finance, business and government. Among his many roles in a long career, Allen has taught at Northwestern, the University of Chicago, MIT, Brandeis and Boston University, served as Chief Economist at Lehman Brothers, worked closely with the Federal Reserve and Bank of Japan, and is currently President and Chief Economist/Strategist of Decision Economics, an economics and financial markets forecasting and advisory firm. Most importantly, he is a long-time Fellow – and friend – of Economists for Peace and Security. Allen will now introduce the session and our panelists.

Allen Sinai: The title of this Session of Economists for Peace and Security (EPS) at the 2023 ASSA Meetings is "Inflation and Inequality."

The two, Inflation and Inequality, in and of themselves, are important topics of the day. Inflation is way high, the highest since the 1960s, '70s or '80s. The two represent short-run and long-run issues for the American economy, the Federal Reserve, Washington fiscal policy, financial markets, and the sentiment of America.

Inflation is currently the highest since the 1970s and 1980s, perhaps worsening an already huge threat to the future of America, that's Inequality. Inflation has, in and of itself, become one of the most important economic and political issues facing the country.

Inequality is a transcending problem—longer-run a societal, economic and political dynamic that has taken down countries throughout history and fomented political revolutions.

Both Inflation and Inequality, their interactions and policies to deal with them, are the subject of this Session.

Some Recent History
The Intersection of Inflation and Inequality, and Perspectives

After many years of very, very low price inflation, an External Shock, a unique non-economic event, COVID-19 and a resulting Pandemic, shut down the U.S. economy, producing an unprecedented two-month depression in a severe downturn but for only two months, with price deflation.

Then, at the end of the first stage of the Pandemic, as new vaccines began to be used a huge rebound occurred, starting in April 2020. Pent-up Demands were unleashed. Ultra-Easy Monetary Policy that had been put into place—zero interest rates and Quantitative Easing (QE)—took hold. The Massive Fiscal Stimulus responses that would not have happened except for the COVID Event provided a huge lift to the economy and continue to do so.

Against the restraint of the Supply Shock from the Pandemic, particularly food, energy and the labor market; inflation, not surprisingly, shot up, and exceeded, in its ascent, all thought likely.

Inflation does appear to have peaked or is peaking. But don't expect inflation to decline rapidly to the Federal Reserve's 2% target.

Historically, inflation stays "Sticky High" after accelerating to cyclical highs. Sticky-High inflation is not just a problem for the economy and policymakers, it also presents an inequality problem because it particularly hits lower-income families that typically have a big proportion of budgets in basic purchases. This crowds-out other purchases and reduces the standard-of-living for many families.

Inequality, broadly defined as inequality of income, wealth, more recently education, healthcare and opportunity, is made worse by permanently higher inflation. This is a large set of areas of impact. Janet Yellen, Secretary of the Treasury, has emphasized education. Others healthcare. And I add, opportunity.

An Historical Perspective

Perhaps at the center of the divisiveness in the politics of America, certainly in historical perspective, and at the heart of a longer-run competition identified by President Biden as between China and the US, Inequality is real. The question of which form of capitalism will prevail, liberal or democratic, the US form, or authoritarian capitalism, the China form, will be front-and-center in coming years. This has been framed in Branko Milanovic's "Capitalism Alone."[1]

The Session

For this Session, "Inflation and Inequality," we have a distinguished Panel.

First is Mayor LaToya Cantrell, Mayor of the host city for the ASSA this year, New Orleans, a perfect person for the topics of this Session, particularly for an intellectual, liberal, out-of-touch-with-reality guy like me, and perhaps some of the attendees.

Nothing could be more nitty-gritty, on-the-ground, than the running of New Orleans, what you do, Mayor Cantrell, representing your constituents—people from all walks of life, income levels, rich and poor, hard-working city employees, from a place in the United States that has been particularly hardhit by the Pandemic, climate change, and where so many struggle to make a living for their families in a difficult economy.

And you, in the thick of things, running this city and dealing with its people and problems every day, living and breathing it every day, immersed in a city thought to be deeply in the difficulties that inflation and inequality bring, are particularly able and qualified to provide dimensions of insight to us.

My wife says I don't listen enough. And, so I listen when she says it, but then I stop listening. I think one of the problems in America is that we don't listen enough—to the people who live, work and struggle with the inflation, inequality, and negative effects from inflation that make inequality worse.

Those of us who make or contribute to policy, particularly at the federal level, or who influence policy, may not feel the reality of income and wealth inequality, and often are remote, except academically, from that reality.

In my life at Lehman Brothers, did I really understand what was going on in the "trenches" for "ordinary" Americans? When I advised Congress in Washington and, yes, Presidents or their Administrations, Democratic and Republican, did I really have the "feel," other than from where I grew up, in Detroit Michigan, of the pain and suffering from inflation and inequality?

We need to know about this because we can't do anything about inequality if we don't know what is going on and how it really is. To know about it, we need to listen, especially to those who are living it.

And so, I am not often welcome at dinner parties up in the Northeast, friends' dinner parties in the Boston area, where I now live, because I complain to them that they are not listening. They are listening, but only to each other, not to whom they ought to be listening. That's a recipe for disaster

[1] Branko Milanovic, "Capitalism Alone, the Future of the System that Rules the World." Harvard University Press, Cambridge, Mass., 2019.

in the politics of America. And in the history of the world, it's a recipe for revolutions!

After the Mayor will be Jason Furman from Harvard's Department of Economics and the Kennedy School. Jason was Chair of the Council of Economic Advisers in the Obama Administration from 2013 to 2017 and the Chief Economic Adviser to President Obama.

His title is "The Progressive Case for Inflation Reduction."

We then have by Zoom, Sandy Darity, joining this Session remotely. Sandy is Director of the Dubois-Cook Center on Social Equity at Duke University, focusing on inequality, particularly race, class and ethnicity's history, on slavery and reparations. He's the most distinguished scholar in America and the world on these topics. His title is "Making America Great for the First Time."

And then, finally, the fourth panelist, Joe Stiglitz, a Nobel Prize winner for, among other things, Asymmetric Information, and who has written a number of books on today's topic, including The Price of Inequality (2012), People, Power, Profits (2015), and The Great Divide: Unequal Societies and What We Can Do About Them (2015).

Joe was a winner of the John Bates Clark Medal in 1979 for the most distinguished economist under 40. Currently, he is a University Professor at Columbia. He also served as Senior Vice President and Chief Economist at the World Bank (1997-2000) and Head of the Council of Economic Advisers in the Clinton Administration from 1995 to 1997.

His title is "Inequality and Inflation."

Now, the Agenda. Each speaker has 10-to-15 minutes for opening comments. After these presentations and some closing remarks, I will moderate an interactive Q&A and discussion with the panelists and the audience.

Mayor Cantrell, the floor is yours.

LaToya Cantrell: I will be speaking just from notes. I can't believe we don't have another microphone in the City of New Orleans. The mayor is blamed for everything. Don't blame me for that.

Allen Sinai: Can you snap your fingers to make it happen?

LaToya Cantrell: I wish. I wish. I wish.

LaToya Cantrell: Thank you all so much for being here, and it really is great to welcome you to the City of New Orleans, the over 7,000 economists that are here.

The City of New Orleans is definitely back, I would say!

We were the face of COVID when it came our way in March 2020, right after Mardi Gras. We became a hotspot in the country.

And so, it caused me to make some very quick and swift decisions, shutting our city down and the like, because we were on the path of having thousands of people die in our city.

Because of the guidelines we put forth, and because of the civic trust that was demonstrated by our residents, we were able to beat back COVID-19 and, of course, move through and be able to open up our city, preparing ourselves for Mardi Gras 2023.

Today is King's Day, so you can see my little earrings with the King cake and all. It's just the start of Mardi Gras season, but definitely a great start with you all here.

I mentioned COVID simply because it was the economists I had to lean on every step of the way to ensure that I made the right decisions that would impact our fiscal stability. And, of course, having to shut down, this city being one that is driven primarily by hospitality and tourism, you can only imagine how we were hard hit, definitely fighting for resources from the Federal government, for direct allocation of American Rescue Plan dollars.

We really did not get funded when money did come through the CARES Act, $70 million not fully reimbursed, although we did everything right. Our state took our dollars and that impacted us directly.

I will say that the single fight for direct allocation has been the lifeblood in saving our city, with the ability to not only open up, but to get back to basic city services and the like, and to do more, quite frankly, and be transformative as we rebuild ourselves and our lives from COVID-19.

We will be hosting the 71st Miss Universe competition in New Orleans next week. That's a big deal; again, just a reflection of how our city is bouncing back.

But it was economists, listening, that prompted me to take out a certificate of indebtedness so that we could have money to rely upon. You don't wait until you run out of gas before you have the dollars to put more gas in the tank.

What it was, it served as a lifeline as we moved through 2021 and 2022 being able to tap into those dollars from that COI, but also leveraging it with other dollars, for necessary support. It's meaningful that I have your ear. I just wanted to say thank you for what you all do, because I understand, in terms of being Mayor of this city, how it's helped us be fiscally prudent, fiscally sound.

We now have the largest fund balance we have ever had in the history of our city, over $136 million. And, of course, being at the forefront of climate change and other disasters that may come our way, we have to make sure that we're able to stand up, beat back whatever, all the things that come,

e.g., Ida, a hurricane. Well, we missed a hurricane. But we just had a tornado. This city is on the fore-front of climate change.

And so, when you think about inflation and also inequality, again, the City of New Orleans is known as a long, storied history of a city that CARES forgot. Because when we think about disparity gaps in our city, those that are the most vulnerable are supported.

My motto is our ability to meet people where they are. If we're going to deal with inflation, and if we're going to deal with inequality, you have to meet them where they are, where they live in this city. You have to know that Census Tract in order to activate resources and services for your people. That's how I operate. That's how we were able to move through COVID, being very specific about where the issues were, but going to the people.

When I think about it, and as I'm talking about inflation, and how we're managing through it, and inequality, and going back to that model of meeting people where they are, I first start with talking about livable wages and workforce development. This is key.

On livable wages, what we had to do here was start with City Hall. I had to start with where I can demonstrate that the City is focusing on where the needs are the greatest, within our own community, meaning those who work for the City.

And also, we have to make sure that the people we depend upon to serve are factored into how they are impacted by inflation. So, I very quickly moved to increase wages, the minimum wage to $15 an hour. This is something that I could do as Mayor for city employees in order to increase the minimum wage for our city overall. For the private sector, we have to go to the State of Louisiana. I wanted to be an example for private industry of what we need them to do to take care of people. Meet the people where they are. Because that is a part of our economic driver, and, of course, the infrastructure of this city.

So, I moved forward with not only increasing the minimum wage, but also a cost-of-living adjust-ment of 5%, which happened in 2022. We did a lump-sum payment. This was something that wasn't promised on the front end, because we didn't have the money. But I told my folks, if the dollars really came to pass, meaning through the American Rescue Plan and direct allocation, then I could make some sound and solid decisions because I knew what we would have, and not be surprised, if you will, about what would be taken away at the state level from the City of New Orleans.

That cost-of-living adjustment, and making the decision that it was going to be a lump sum, meant the world to our people. They were able to get the money in a lump sum, and then make sound and solid decisions for their families of how they would spend that money. I come from a single home, a single mom. I come from paycheck-to-paycheck, welfare to work. And so, I know firsthand how that lump sum, or just a little bit of dollars, can go a long way when you get it at one time. And, it's been transformational for our people.

But, that also was impacted by a 2.5% pay raise for 2023, 2.5% raise for 2024, just living in that margin of 2022 up to 2025, thinking about when we should see greater change in our economy.

In addition to that has been our workforce. Understanding, you heard me say that hospitality is the driver, right? But also, the need to diversify our economy has been front-and-center about what we

do in our city. On the front end, having our hospitality industry and our workers suffer tremendously through COVID-19, I had to come up with ways to get them back to work. So, not just by lifting up programs to provide resources or money to them directly, but also diversifying their skill sets.

One quick thing that we did was in technology. We are a fast-growing city relative to tech in our city, and so one thing we did was train hospitality workers for tech sales. We had to get them to understand that as they pitch that risotto, as they pitch that drink, as they provide customer service, it was transferable and translatable to tech sales. And so, we were able to put money into providing training. Now I can stand here and say that multiple dozens of people have been trained, they are now making $85,000 to $100,000 a year and they are not going back to hospitality. Although that's a great thing. But you have to diversify your economy and that means giving people tools to be better, to protect themselves and their families, and to put more money into their pockets.

This also speaks to climate change and resiliency.

This city, New Orleans, is on the forefront of climate change. We are diversifying relative to green infrastructure; for example, blue infrastructure, making sure that we are putting in and spending millions of dollars, literally daily, on infrastructure improvements throughout the city. Drainage projects. Holding water. Bringing it up and going into our drains. Mitigating flooding throughout this community.

We have to be smart about what we do, but that also means training people for the jobs of the future, expect where those jobs are right now. We have spent hundreds of millions, actually over $1 billion, and so much more, that will be put into the ground in this particular area of infrastructure. We have to train our folks for jobs that are now and that's how we believe that as we train them, we give them access to real opportunity. We are meeting people where they are. That's growing our economy, growing our people.

In the space of energy, New Orleans is very well positioned to be the energy capital of the world. We saw how microgrids seem now a part of what we're talking about. We saw it firsthand when we were hit by Hurricane Ida last year; but again, how that impacted other cities around the country. And so, with that, the City of New Orleans is positioned in wind manufacturing, offshore wind generation, hydrogen, and the like. Grooming our people, training our people, for these areas is what we are doing and it's paying dividends.

In addition, we have restructured procurement practices. So, when I talk about these millions of dollars, over $1 billion, that we have to put into the ground and infrastructure, money already Federal Government allocated, we have to do the job. It's on a deadline. We have to get the projects done. But the contracts are multi-million dollar projects and therefore we have de-bundled the contracts associated with these projects, because we need to give our people a better fair shake and an advantage of being able to bid on these projects. So we de-bundled, meaning that small minority contractors, our small contractors across-the-board, have a greater opportunity of getting a fair shake. With de-bundling, we've been able to spread out the support. And now I can say that we have subs, that were previous subs, now serving as primes. Large-scale companies are now subs. That's how we turn the map around and diversify, giving people better opportunities and a greater shake in our city.

This also speaks to that blue and green economy as well, the de-bundling that's happening as it relates to costs associated with energy and utilities. That's a big deal here. Our people are paying so much for utility bills, whether electricity and/or water. This is something we know that we have to deal

with.

We have a climate action plan that we have adopted. It is heavily embedded with solar energy, Solar For All programs, that we stood up wanting to get the bear out of people's pockets. That's attaching them to additional resources to help pay their bills. But we know we are looking at long-term sustainability, trying to get the bear out of their pocket over the long haul.

The Solar For All and other opportunities, energy efficient homes, weatherization, are something we are doing to help our people in the city as it relates to inflation and inequality.

I also wanted to talk about housing and affordability. That is a big issue as well when we talk about inflation, something we don't take lightly. We have been able to leverage over $71 million in this COVID environment, getting people help on rent. We are still a city of majority renters, with about 45% home ownership.

We have to focus on moving folks to home ownership, no doubt about that. We've set up programs with soft seconds, and the like, that are getting people into homes. But we also are structuring to keep them in homes. It's necessary for us to do. We have put over $71 million into rental and utility assistance for over 17,000 households.

This, again, gives us an ability, as we are getting the money out the door, to tap into additional resources coming from the Federal Government because there were other cities that were struggling to get the money out. But when money's on deadline, it needs to hit the ground. So, we are positioning ourselves to be able to meet people where they are with those dollars in real time.

We even stood up an eviction diversion program that received a national award, keeping people from being on the street.

Also, food insecurity. I heard that mentioned. We were able to leverage resources, created a food security task force, and put over 500 hospitality workers and restaurants to work to feed our community. We leveraged over $30 million to do that.

I'm most proud of, as I think about this guaranteed income pilot program, universal basic income is something I have embraced and joined mayors across the country in standing up for. Right now we do have a pilot program, 125 Opportunity Youth. It's the first universal basic income program, focusing on the youth, in the country.

It's a $350 stipend that's given to 125 persons so they can become fiscally stable. We partner with the University of Pennsylvania and Tulane University, in terms of managing the data, and of course being able to prove the effectiveness of this particular program.

What I'm saying is that we are doing multiple things on so many different levels to deal with inflation and the inequities in our city. But what I will say, and I'll leave you with this, more will come out in Q&A, as the mayor of the city, what I'm seeing when I think about inflation, is also as relates to these projects I kind of touched on. We are seeing bids come back anywhere 47% to 120% higher, meaning the cost to the project. So, when you think about, on the ground, what does that mean? It really means that we're going to have to pick and choose and prioritize which projects we can move forward on.

We don't want to spend all our money at one time. But again, when you have money that's on deadline, it forces you to make some solid and tough decisions about which project you will advance—sooner rather than later. But then, also, I'm sure as economists, I have to be very... What do you call it? I forget the word. We can't spend it all. We have to be prudent in our practices. So, I don't want to take on a project where the project cost has gone up 100% today and if I wait it out two to three years and come back, the cost can come down. I want to try my best to be conservative in terms of how we approach these projects and how we prioritize them, because you can spend it all at one time, and then the city is screwed.

The city is screwed when we're talking about green infrastructure, flood mitigation practices and the like. We have to prioritize. I'm just sharing that with you. Hopefully, you can share something with me, some insight on that. But it is something that is keeping me up at night when I'm talking about a city on the forefront of Climate Change, which already has changed. And, of course, there are Infrastructure projects that need to get done on a timeline and on deadline for the money. And, at the same time, we want to keep our city and citizens and your visitors safe as well.
So thank you again for indulging me. Thank you for having me. Welcome to New Orleans and let's get on with the program.

Allen Sinai: I like the way you do things. I like the way you do things. And you know what? I need somebody to help me with my budget.

Let us turn now to Jason Furman.

The Progressive Case for Inflation Reduction

Jason Furman: I'm not good going after the mayor though because she just covered everything so incredibly well and I'm just going to talk about three variables.

Her comments are a reminder why federal government policy can often be so much easier than local policy because you just have to do every single thing when you are a mayor, especially dealing with a city like New Orleans and the challenges you outlined so well.

I was very involved in the response to the Financial Crises and in the years after. I was involved in a number of projects to distill the lessons learned and to come up with ideas on what could be done better next time. And, when you're sitting in a Think Tank or something and writing lessons learned from an after action report, you usually think the lessons learned in your real report are going to be completely irrelevant. No one's going to ever look at it and care.

COVID-19, The Pandemic, Policy Responses and Inflation

This time, compared with the Financial Crises of 2006 to 2008, we were actually really successful.

In responding to COVID, the COVID responses didn't make any of the mistakes that were made in responding to the Financial Crises. Instead, it made a brand new set of mistakes. And I, for almost my entire career, starting in the 1990s, was on the more expansionary side of almost every macro debate. Over the last two years, I, for the first time, found myself not on the more expansionary side of the debate. I want to go through and explain that. I should caveat this by saying in what I think are the apocryphal words of then Chinese Premiere Zhou Enlai when asked to evaluate the French Revolution 200 years after the revolution, said "it's too soon to tell."

That's a little bit the case with the macro response here. In some sense, you can think of it if we sent a million soldiers to a foreign country. They won the War, which is fantastic. Today we found out the unemployment rate is 3.5%, tied for the lowest it's been in 50 years, which is just inspiring and exciting. But we haven't yet figured out if those one million soldiers are going to get back safely. And until you get those soldiers back safely, you can't really evaluate whether the War Plan itself was successful.

So there's a common phrase that it's better to err on the side of doing too much, not doing too little. In some sense, I agree with this, it's unobjectionable. It does have the word err, which implies that you actually can make an error and it's not really very quantitatively useful.

How Much is Enough in an Aberrant Situation?

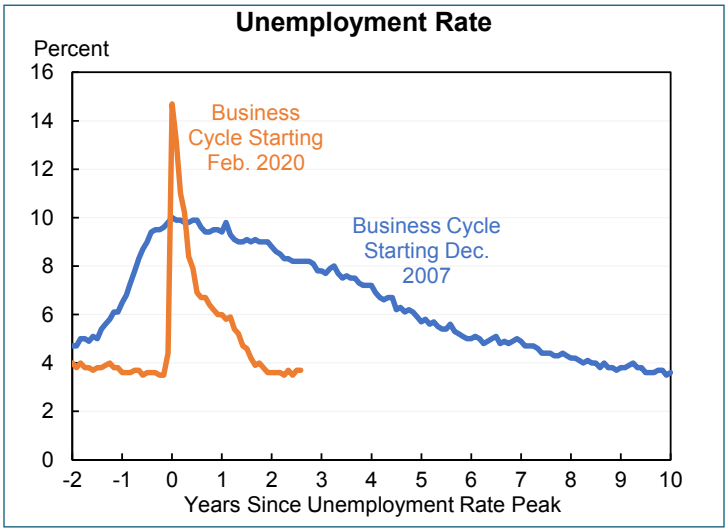
Do you want to do $1 trillion or $10 trillion or $100 trillion? Surely, at some point you actually can err on the side of doing too much, not too little. So to look back and try to evaluate what was being done, it's too soon to tell because we haven't seen the exit yet. These things are really impossible. This isn't like a controlled experiment in a hundred countries, getting one treatment, then a new 100

countries, and getting another.

I'll just briefly do a little bit of comparison with the economic experience coming out of the Financial Crisis in the United States during 2006-2009 and a little bit of comparison with the Euro area to see what we can glean from the two.

Unemployment Rate peaked much higher and recovered much faster than last time…

Chart 1:

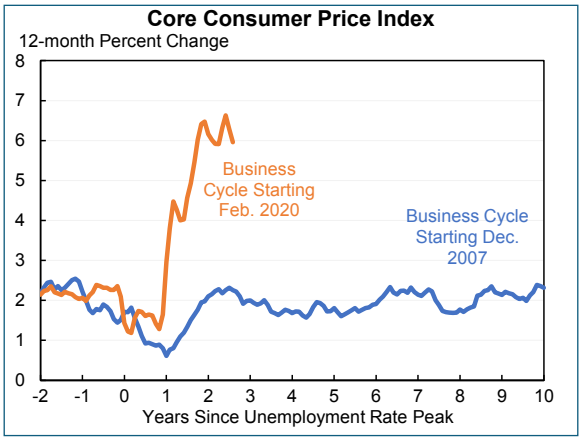


So, this is the unemployment rate and doesn't include the latest numbers (Friday, Jan. 5, 2023). We can add another little wiggle down to 3.5%. So much better this time. It went higher, it fell much faster, it came down much faster and went lower. At this stage in the last Recovery, the unemployment rate was still 8% and going to take another seven years to get to where it is now.

Inflation, on the other hand, has been much higher this time. It wasn't anything to be noticed in the last recovery (Chart 2). This time it's gone, as Allen said, to the highest rate in decades. Although the last two months were a decent amount better, it remains to be seen whether that lasts or not. If you try to put these together, you can look at the incomes of households over comparable periods for the last two episodes.

…But inflation has risen much higher this time

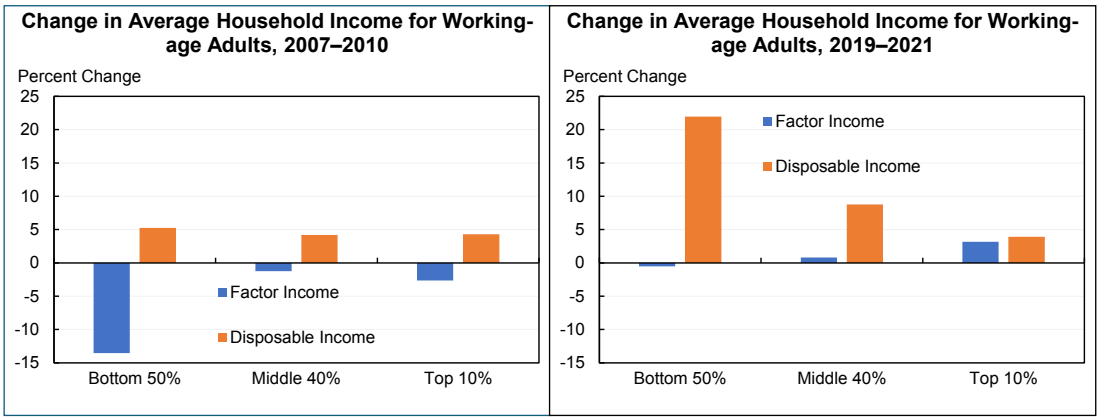
Chart 2:



Sources: Bureau of Labor Statistics (BLS); Macrobond.

*Taxes and transfers cushioned the blow in 2010, while amplifying the gains Post-Pandemic

Chart 3:



On the left of Chart 3, you see the 2007 through 2010 experience. This is the brunt of the Financial Crisis. The blue bars are what happened to people's market income. That went down. That's because you still had really high unemployment in the year 2010. They especially went down for the bottom 50% who bore the brunt of the job losses where there was a truly horrific economic impact.

The orange bar shows what happened to disposable income after taxes and transfers.

You can see that back then, policy, which I think was inadequate, did do actually a pretty good job of insulating people. Incomes went up over that terrible, terrible period for the economy. When you took into account what you got from the government, you were actually better off by about 5% in 2010 relative to 2007.

Now look at the current episode, which you can see on the right. The same sort of period of time, 2019 to 2021, is as earlier. But here, the blue bars are pretty small because the economy had mostly recovered by 2021. The orange bars, after taxes and transfers, show enormous gains, especially at the bottom. Some of the biggest gains in income we have ever seen are represented because of the taxes and especially the transfers.

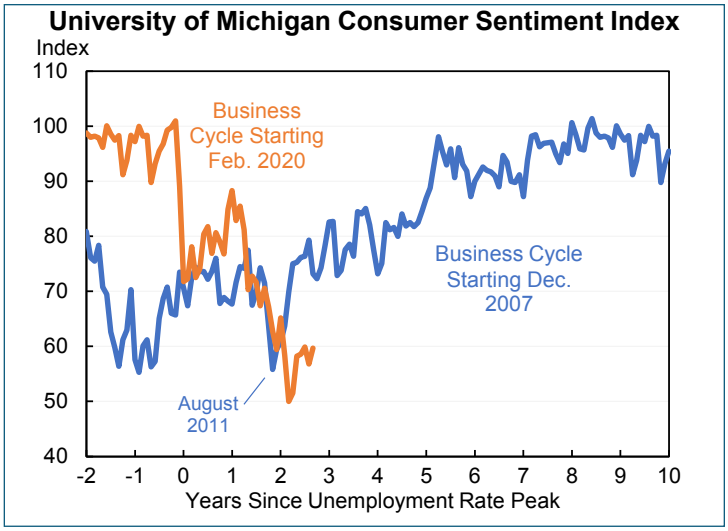
So how do consumers evaluate all of this?

Chart 4 shows U. of M. Consumer Sentiment over the two episodes.

*Note: Working-age is 20-64.
Sources: Realtime Inequality (Blanchet, Saez, Zucman); author's calculations.

Overall consumer sentiment was higher and rising faster following the Financial Crisis

Chart 4:



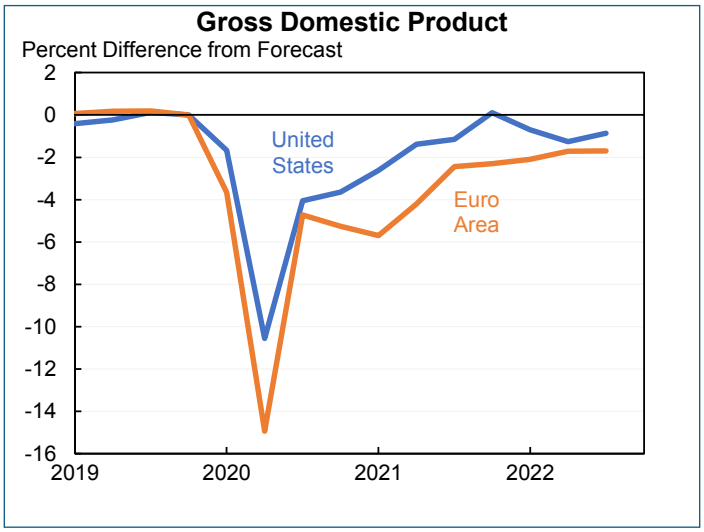
In some ways I look back with envy and wish that we had an unemployment rate of 3.5% in the year 2010. Consumers look like they might have rather had the slow high unemployment recovery from the Financial Crisis rather than the high inflation that exists now. This isn't the perfect measure, but you can look at a variety of survey-based measures of how people feel about the economy and, in general, they seem to report feeling more negative now, the orange line consumer sentiment, than they did then. The blue line, this is imperfect partisanship. All sorts of things show up in this. But for people, it's hardly clearcut that the 3.5% plus higher inflation is better than the 8% unemployment rate plus lower inflation.

Let's now just quickly look at the United States compared with the Euro area.

Chart 5 shows the gap in Real GDP from the forecasts made prior to the Pandemic.

U.S. output recovered faster than European output, but they converged by mid-2022…

Chart 5:



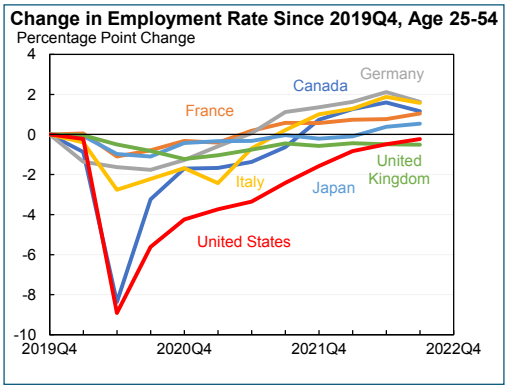
Sources: Bureau of Labor Statistics (BLS); Macrobond.
Bureau of Economic Analysis (BEA); Eurostat; Macrobond; Congressional Budget Office; European Central Bank (ECB); author's calculations.

If the Pandemic hadn't affected the economy, you'd expect to see just a horizontal line. That's what the economy should have done. Instead, it went way down. It recovered and went way up. The United States recovered faster than Europe, but subsequently Europe basically caught up with the United States. And, that's even despite having a much more negative supply shock in the form of the large increases in natural gas and food prices associated with the Russian invasion of Ukraine.

And, in fact, wherever you look, every country in the world basically has recovered pretty well. Some a bit better than others; some worse than others. But no matter what was done in policy when the social distancing lessened or ended what households took away on their own, economies rebounded.

The U.S. has fared relatively poorly in terms of employment

Chart 6:

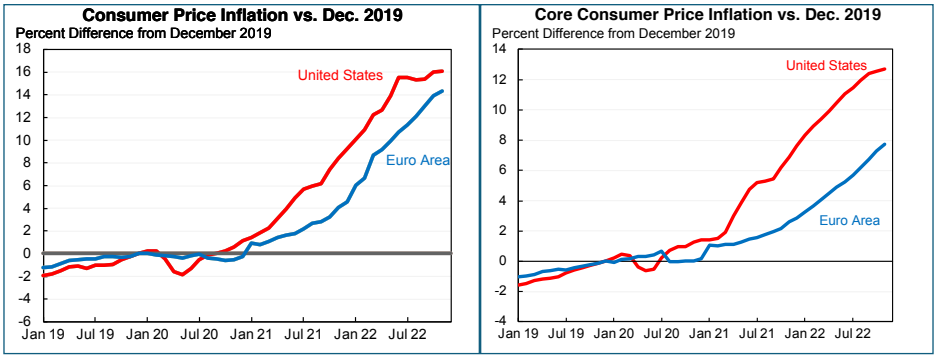


On employment (Chart 6), the United States has actually done worse than almost everywhere except the current basket case of the United Kingdom. The employment rates are generally higher in most other countries than prior to the Pandemic. The employment rate in the United States for prime age workers is still a little bit lower than it was. So you had this thing that we also saw after the Financial Crises, which is that GDP recovered better in the United States than elsewhere. Employment lagged and fell behind where other countries were.

And, then finally there is inflation. If you look at cumulative inflation, Core inflation, taking out Food and Energy, is about four to five percentage points higher in the United States than in the Euro area. Even overall inflation is still a little bit higher in the United States, despite the fact that the Russian invasion of Ukraine had a much bigger impact on the supply side of the European economy through the prices of electricity and the like.

The United States has had more inflation—especially Core inflation

Chart 7:



Sources: Organisation for Economic Co-operation and Development (OECD) via Macrobond; author's calculations
Note: Seasonally adjusted using Macrobond. HICP-U for United States.
Sources: Eurostat; Bureau of Labor Statistics; Macrobond; author's calculations.

So, to summarize the facts before I get to interpretation, this time in the U.S. and elsewhere, there was a faster recovery than after the Financial Crises of 2006-08, a slightly faster GDP recovery than Europe, but a slower employment recovery. And, the United States has considerably more inflation than it did in the Financial Crises or than Europe or really any other country.

So, what's the interpretation of this fact pattern?

There are two broad stories at work and the relative magnitudes of them I'm not entirely sure of, but both of them are quite important!

The first is that last time we had a Financial Crisis, this time we had a Natural Disaster. You tend to recover from natural disasters relatively quickly. A V-shaped Recovery is the norm after a natural disaster. After a Financial Crisis, it's normally sort of an L. The economy goes down in growth and stays down.

You can look at 800 years of history of Financial Crises and countries a decade later tend not to have recovered the per capita GDP they had when the Crisis hit. Natural Disasters are nothing like that!

This hypothesis is consistent with just about every country in the world when their economy re-opened, GDP went back roughly to the track it was on. The other piece of this, though, is the difference in the amount of support given to the economy.

Hypothesis 1 for the difference: U.S.—Smaller vs. larger fiscal support

Chart 8:

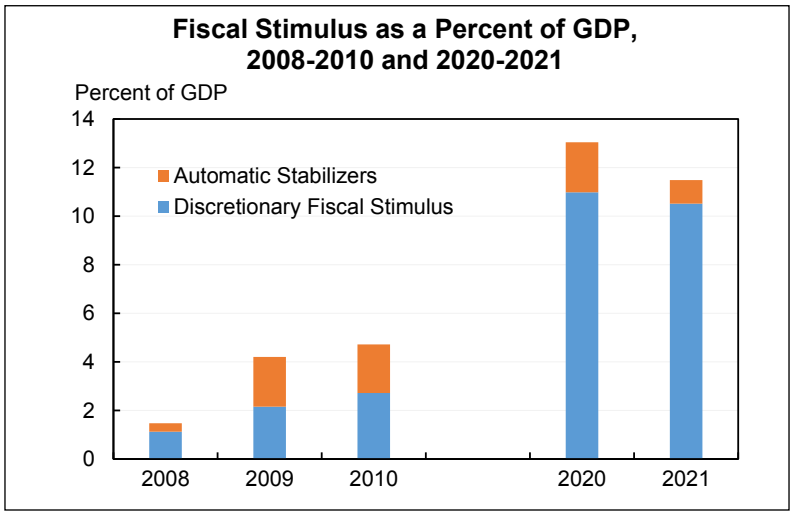


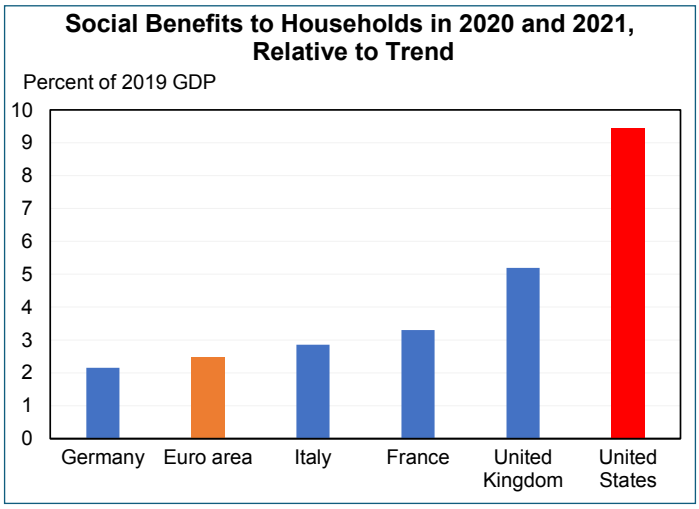
Chart 8 shows fiscal stimulus as a percent of GDP. It was much bigger in 2020 and 2021 than in the Financial Crises. Now it was the Financial Crises, I used to brag and correctly so, that provided the largest discretionary countercyclical fiscal response to a Recession the United States has ever mounted. I never thought it was large enough, but we had never done anything so large as those left-hand side bars. We did something way larger this time, larger than ever outside of World War II. The United States' response was also considerably larger than what you saw elsewhere.

Note: Calendar year.
Sources: Calculations based on Council of Economic Advisers (2014); Congressional Budget Office; Office of Management and Budget; Bureau of Economic Analysis; Macrobond.

Chart 9 looks at a subset of the fiscal response, social benefits to households in 2020 and 2021 compared with the prior episode, before the Pandemic.

Hypothesis 2 (con't):
Smaller vs. larger support across countries

Chart 9:



This was a combination of discretionary changes where the law was updated and checks sent out and other things that happened automatically. The unemployment insurance system is more generous to begin with in Germany. You can see that the United States was at 9% of GDP, Germany at 2% of GDP. And, this is only a subset of the support, as a whole about 25% of GDP. This doesn't include state and local assistance nor does it include the Paycheck Protection Program (PPP). It doesn't include money spent on the health response and the like. But, there still was quite a large difference in fiscal policies.

I don't have time to go into it now, but for a variety of reasons I think at the margin the first amount of assistance helps GDP, but then you run up against a supply constraint. You can't really expand supply more and so it shows up more in inflation and that's why the gap in inflation rates, for example, between the United States and Europe is a much larger one than the gap between the two economies seen in terms of GDP. We have got sort of, I'm making this up, one extra unit of GDP for four extra units of inflation on the last couple of dollars spent. It should be noted that monetary policy also played a role in bringing us to where we are now.

Actual monetary policy cut short-term interest rates to zero or near-zero. There was an extraordinary expansion in the Federal Reserve's balance sheet that held down long-term interest rates. All that was quite welcome.

But then came 2021. This sort of normal monetary policy rule, a very dovish version of the Taylor rule, was screaming that interest rates should be raised. The Federal Reserve basically took another year before it lifted up the federal funds rate.

I think if you quantify the impact of this on inflation, it's probably smaller than the impact from fiscal policy on inflation. But in some ways, it was also more of an egregious error. Congress, you always expect to make political choices. In March 2021, the economy was still hazy. That June, and in

Note: Trend social benefits spending based on average growth rate for 2018 and 2019.
Sources: Organisation for Economic Co-operation and Development; author's calculations.

September through December 2021, the Federal Reserve should have been a more technocratic institution, had more data at its disposal, and able to move more quickly. But it did not.

So, I have talked about two problems. My important point isn't that these two plagues were on both houses. I think I probably would rather have had this problem, the "too much" problem than the "too little" problem we had last time during the Financial Crises of 2006 – 2009.

But that doesn't mean we shouldn't try to do better than in both of these episodes. Too little is just a big problem. I'm not going to devote much time to it because my guess is people understand and believe it and have internalized it. But a worker that lost a job in the Great Recession, you look at earnings two years later and it's considerably lower than what would have been if they hadn't lost their job. So, this can be scarring and can have long-run impacts; in fact, not just on workers but the economy as a whole.

On the other side though, I think too much can be a problem. I am not going to do justice to everything on this overly tiny print list. But one thought is that some of the temporary employment gains may come from an impermanent inflation loss or be borrowed from future inflation losses. You get more of an employment gain up front and then raise the unemployment rate to get rid of the inflation you got through the lower rate.

When you look at the benefits of low unemployment, I think they are quite large, but I would get more troubled by a half point increase in the unemployment rate than I would be excited about a half point reduction.

I think that if in an involuntary recession, millions of people are thrown out of work simultaneously. In some ways, that's a much bigger problem than getting the unemployment rate a few tenths lower. As I said, for a variety of reasons that I don't have time to go into, I think at the margin, the extra assistance when you make something too large, you're going to get more inflation than output, especially in a severely supply constrained economy that was pretty predictable and predicted for the year 2021.

Real wages may be countercyclical, especially if you have a big burst of inflation.

Do workers have the bargaining power early to say, we had 8% inflation last year, give me an 8% raise? I can tell you I didn't have enough bargaining power to go to my university and get the normal raise I should get relative to inflation. A lot of American workers, unless they switched jobs, had the same experience. There weren't a lot of 10% raises if you stayed with the same employer last year, which means a lot of real wage losses.

Fifth, and this is something that I didn't think so much about two years ago as I do now. The public's assessment is different from what economists think. We're very attuned to inflation illusion. I can go to somebody and say, sure, you lost on real wages, but what about your $200,000 mortgage that now just got $20,000 wiped off? That's like you got $20,000.

Inflation and Inequality—Stimulative Macro Policy Can Offset Inflation's Negative Effect on Inequality

Through first approximation inflation has winners and losers. The losses are more second order than first order. The net loss is second order.

The first order is winners and losers. I've yet to meet somebody that's excited about winnings from inflation. No one thinks they win. No one notices their winnings. No one can be convinced of it. Moreover, inflation affects people across the income distribution quite differently. Unemployment is more concentrated. That's why I care more about unemployment, but the public feels a little bit differently.

Finally, high inflation gives less room for monetary policy flexibility in the future. High debt gives less room for fiscal policy and to some degree, just like I think we did not repeat the mistake of the Financial Crises of doing too little, next time we may make the opposite mistake as this last time. We may say, oh wait, we did too much last time, let's not do that again. And we may end up doing too little and getting a depressed business cycle upswing.

So what does this mean? I think we can do better at getting to something more like Goldilocks. Some of it just comes from quantifying the fiscal side. Part of my passion on this topic is that I was going through really carefully trying to quantify what I thought the size of the fiscal support should be, putting out numbers and ideas on it.

What Congress and frankly originally President Trump, who came up with the idea of $2,000 checks, I don't think the result of careful calculation. It was something else and Nancy Pelosi accepted it for political reasons and then Joe Biden did it. So it's not surprising that it was hardly optimal. So I did this recent set of lessons about the latest experience in an article with Wendy Edelberg and Tim Geithner.[2]

One highlight is that the fiscal response really can protect households. We saw a decent job of that both in the Financial Crises and this time. We can create a wedge if we choose between a Recession and the economy as a whole and how it impacts especially the most vulnerable. I think there is no excuse for people to suffer a lot. It doesn't need to happen. Fiscal and monetary policy really can speed a Recovery. There's no way we would have had a 3.5% unemployment rate today if we didn't have such large monetary and fiscal policy responses. But policymakers can do too much. And you want to ideally sort of quantify it, not just use slogans, go through the numbers.

A big part of quantification would mean to have better automatic state laws, I proposed a set of ideas that would link federal assistance to Medicaid programs and the economic situation in states. If there was a recession in your state, you could get more money for Medicaid so you don't need to cut people off health insurance because of a balanced budget.

If we had had something like that, we could have done more for states and localities after the Financial Crises and we would've done a little bit less now, although hopefully not for cities, just for the terribly hurt states.

[2] April 27, 2022, W. Edelberg, J. Furman, T. F. Geithner, "Lessons Learned from the Breadth of Economic Policy During the Pandemic." Hamilton Project, Ch. I, April 2022.

There is still a lot we need to learn about protecting jobs. I find it really vexing that our jobs went down much more than our GDP went down. The fact that not just Germany, which has very different institutions from the United States, the UK, which has reasonably similar ones, did much better at protecting jobs tells me that may be possible in the future, but we are not all the way there.

And then finally, one way to square, number one, protecting households with number three, avoiding doing too much, is through better targeting. Some of this will involve improving administrative systems and programs before the next recession strikes.

Policy Thoughts

If there is a Recession in 2023. I don't think a large amount of fiscal stimulus will be warranted. It could be a mild Recession. The Federal Reserve probably won't lower short-term interest rates to zero. I think relief will still be very much needed, e.g., expanding unemployment insurance, expanding nutritional assistance, expanding assistance to states and cities that are adversely impacted by it. And, so the way you could have more relief with less stimulus is if you can improve targeting. I think this should be an ongoing discussion. As I said, there's a lot of evidence that we still need to absorb from what's already happened. There's a lot we'll learn from what's to come, but at least for now, that's the way I'm thinking about it.

Allen Sinai: Thank you Jason for that macro look at Inflation, its negative implications, behavior vs. that of the Great Financial Crises, and your perspectives on policy answers.

Our next speaker is Sandy Darity.

Making America Great For the First Time!

William (Sandy) Darity Jr.: I'd like to begin by just making an observation that's connected to Jason's comments about automatic stabilizers. I'd like to just suggest, and this is actually not part of my central presentation, that if we had a federal job guarantee, that would be the most effective automatic stabilizer to address the potential problem of joblessness that's associated with a Recession.

At the request of the organizers, I've been asked to present a set of remarks that are more heavily focused on Inequality than Inflation. But I will have a couple of observations about inflation, nonetheless.

Inequality and the Black and White American Wealth Gap

I'd like to begin with a provocation. I'd like to argue that America never has been a true democracy. Apart from the structural features that embed sustained minority rule into the fabric of our national political process, the persistent exclusion of black Americans from full citizenship mutilates the Democratic ideal. To "Make America Great for the First Time" requires the nation to confront its history of white supremacy.

The racial wealth gap stands as the key economic indicator of the cumulative intergenerational effects of American white supremacy. Closing the racial wealth gap by raising black assets to a level sufficient to match the average net worth of white Americans is the central task needed to produce the material conditions for full citizenship for black Americans.

How Much is the Racial Wealth Gap?

What is the size of this gap? At the median, it is approximately $45,000 per person. At the mean, it exceeds $300,000 per person. And these are comparatively conservative estimates of the magnitude of the per person differential in black and white wealth. I'm going to argue that for purposes of addressing the racial wealth gap, it is far more important to focus on the mean gap rather than the median. That is to say, look at the conventionally interpreted average rather than the middle of the distribution.

Now, folks frequently say you should look at the middle of the distribution because those households or individuals are more representative of the typical experience of members of each of those groups, since the median excludes outlier values. However, I'm going to argue that if we're thinking about the racial wealth gap, we need to look at the mean gap rather than the median.

There are three reasons. The first is the concentration of wealth in the United States—97% of the wealth held by white households is held by those with a net worth above the white median. So, if we were to focus on the median, we will be focusing on a wealth differential that omits an overwhelming amount of the net property value held by white households.

Second, this concentration of wealth at the upper end of the distribution is not exclusively because of a handful of white billionaires. Of course, there is a handful of white billionaires, but that's not the sole reason why we have this huge concentration at the upper end of the distribution. In fact, 25% of white households have a net worth in excess of $1 million, while that's true for only 4% of black households.

And, third, this differential cannot be explained away by class differences between blacks and whites. White working class households have two to three times the net worth of black professional managerial households. This is not a question of sheer class differences across racial lines. This is a matter of racial differences in access to wealth.

And, here's one of my first two remarks about inflation.

First, I want to argue or just put on the table that inflation is peripheral to influencing the racial wealth gap. Controlling inflation is not going to have much effect on the racial wealth gap in either direction. Indeed, the uneven impact of inflation presumably hurts those the most who have the least, but the uneven impact of inflation falls far more heavily on incomes than it does on wealth.

Now let me also add that if we focus on the mean differential in wealth, then if we assign an amount of funds to eliminate that mean differential per person, and I said approximately $300,000, multiply that by the 40 million Black Americans whose ancestors were enslaved in the United States, we come up with a sum that's required to close the racial wealth gap in the vicinity of $13 to $14 trillion.

How was this racial wealth gap created? It was primarily the consequence of a set of policies conducted by the United States Federal Government.

The first of these involves land reform in the late 19th century.

Initially, the newly emancipated, formerly enslaved were promised 40 acre land grants as restitution for their years of bondage. That was a promise not kept. In fact, once the program was underway, President Andrew Johnson actually reversed the policy, and restored the land that had already been distributed to some of the Freedmen back to the former slaveholders. Subsequently no significant allocation of land was made to the Freedmen. At the same time, the Federal Government began distributing 160 acre land grants to one-and-a-half million white Americans under the terms of the Homestead Act of 1862. Trina Shanks Williams, a scholar at the University of Michigan, estimates that at least 45 million living white Americans continue to be beneficiaries of the Homestead Act land patents.[3]

Following that initial phase of racially uneven land distribution a set of massacres took place dating from the Civil War to World War II.

100 of these massacres took place with perhaps the most notorious occurring in Tulsa, Oklahoma in 1921.

In the year 1919 alone, 35 massacres took place. As a consequence, the year became known as the Red Summer. It's interesting to note that Louisiana is the state that probably had the largest number of these white terrorist attacks on black communities or on black elected officials.

[3] Trina William Shanks, "The Homestead Act: A Major Asset-Building Policy in American History" in M. Sherraden (Ed.), Inclusion in the American Dream: Assets, Poverty, and Public Policy. New York: Oxford University Press 2005 pp. 20-41.

1866 in New Orleans, 1868 in St. Bernard Parish, 1873 in Colfax, Louisiana, 1874 in Coushatta. And the New Orleans, Colfax and Coushatta massacres all functioned effectively as coup d'états, where there was the murder or ouster of elected officials who were objectionable to the former Confederates. 1900 in New Orleans again, 1910 in Shreveport and 1919, Bogalusa, Louisiana. The latter was during the Red Summer.

Now, what's significant about these massacres in the context of establishing or perpetuating the racial wealth gap is the fact that not only were black lives lost but the Federal Government didn't intervene, and in some instances was fully complicit as the source of the arms used by white terrorists.

The third set of federal policies involves the fact that in the 20th century, the Federal Government moved away from land distribution as a mechanism for asset building and towards subsidizing home ownership. It did so, in part, under the aegis of the Federal Housing Administration (FHA), but then subsequently under provisions of the GI Bill. And, in both cases, resources for home ownership that supported the creation of a white middle class in the United States did not have the same effect on black America because of the discriminatory application of these measures.

The final set of policies I'd like to mention also are anchored in the 20th century, the 1950s and 1960s, where the expansion of the Federal Highway system was conducted frequently by running freeways through the heart of black communities, in the process destroying black owned businesses in black business districts.

So, what's the solution to a problem that was created by federal policies?

I would argue that it is the provision of a new set of federal policies. This set of federal policies would fall under the orbit of a National Reparations Plan, which would have four characteristics.

The first is that the plan would establish who is eligible to receive compensation associated with the reparations program. In the work I've done with Kirsten Mullen and with Dania Francis, we established two criteria for eligibility.[4] The first is what we refer to as a lineage criteria: an individual would have to establish that they have at least one ancestor who was enslaved in the United States of America. The second is an identity standard: an individual would have to demonstrate that they self-identified on a legal document as black negro African-American or Afro-American for at least 12 years before the enactment of a Reparations Plan or the enactment of the Study Commission for a Reparations Plan.

The premise here is that black Americans whose ancestors were enslaved in the United States should be the recipients of reparations of this type. This is because the debt owed to them began with the failure to distribute the land grants under the 40 acres plan to their ancestors. Moreover, the national policies I have described here created the wealth deficit. Those policies are not the source of any wealth differential that might exist between white Americans and more recent black immigrants to the United States.

The second characteristic of a Plan must be establishing the amount. And as I said earlier, the amount that would be required to eliminate the racial wealth gap is approximately $13 to $14 trillion. That should set the baseline for an appropriate reparations program in terms of the sum of money that would be needed.

[4] William A. Darity Jr. and A. Kirsten Mullen, "From Here to Equality: Reparations for Black Americans in the Twenty-First Century." Chapel Hill; University of North Carolina Press 2020, pp. 258-59, and William Darity Jr. and Dania Frank, "The Economics of Reparations," American Economic Review (Proceedings), May 2003, pp. 326-29.

Now is my second comment about inflation. An expenditure of that magnitude does of course carry with it an inflation risk and so, as a consequence, an appropriate reparations plan must be designed in such a way that minimizes the prospects of producing significant inflation. This can be accomplished by taking two significant steps. The first step is not to provide compensation solely in the form of cash transfers, but in the form of less liquid assets like endowments, trust funds or annuities to reduce the pace at which people would be spending the funds.

The second dimension that could minimize inflation is to spread the payments over several years. In our book From Here to Equality, Reparations for Black Americans in the 21st Century, we recommend doing it for no longer than a decade. These are two ways which you could minimize the inflation risk of what is a relatively substantial expenditure.[5]

The third dimension of a Reparations Plan concerns who would be responsible for paying it. In our plan, it's the Federal Government. This is because of the Federal Government's culpability, outlined previously in my remarks in explaining the range of policies that have generated the racial wealth gap in the United States. The Federal Government also is the only party that has the capacity to meet a debt of $14 trillion. The combined budgets of all the states and municipalities in the United States amount to less than $5 trillion. There are a host of initiatives being taken by some cities and some states to do something they are calling "reparations." But it's impossible for them to produce the program that would effectively eliminate the racial wealth gap, given the resources they have and that they are severely tax constrained.

The fourth and final characteristic of the Reparations Plan is the form that payments should take and whether or not those payments are cash transfers or less liquid assets. They should constitute direct payments to the eligible recipients. The eligible recipients should have full discretion over the use of the funds just as eligible recipients have had full discretion over the use of funds received in other instances of reparative justice. One of the key examples is the payments made by the U.S. Government to Japanese Americans who were subjected to mass incarceration during the course of World War II.

The final point is that establishing a project of this type could finally lead to closure on the harms and damages of the nation's racial history. It would mean that black Americans who are descendants of persons enslaved in the United States would have no further claims for race specific restitution from the United States Government. This is so long as there is no renewal of the atrocities that have taken place in the past.

Allen Sinai: Thank you, Sandy, for that striking and well-researched presentation on fixing the racial wealth gap, "Making America Great for the First Time." Now, Professor Joe Stiglitz.

[5] Darity and Mullen, Ibid., pp. 265-67.

Inequality and Inflation

Joseph Stiglitz: I am going to talk more about the inflation side of Inflation and Inequality, but I will come towards the end of my talk to the inequality side and the interaction between the two.

I agree with most of what Jason said and particularly his conclusions about most of the lessons to be learned. But I'm going to take a very different interpretation of the inflation that we face and more particularly about the policies we ought to have in response to that inflation, with a particular view that the policies we are currently adopting actually risk exacerbating inequality without having as much effect on inflation as might be hoped.

The beginning of what I'm going to talk about has basically four or five ideas.

First is trying to understand the underlying drivers, disturbances to the economy causing this period of very high inflation that we are experiencing.

One of the important things that we should have learned from the 1970's episode of inflation and what happened to inequality is it's not inflation that necessarily causes the inequality. It's the underlying disturbances that give rise to inflation.

The price of oil went up hugely in the 1970s. That was a major change in the production possibilities of the West. It was a cost of product, of what had to be paid for a critical input. The West was poorer and that was an External Shock to the economy. The particular ways we dealt with that was what led to the inflation and to more inequality. But many of the things experienced in the 1970s were caused by the underlying shock to the change in the terms of trade for the price of oil and not really a result of the inflation.

Lots of policy changes occurred, especially tight and tighter monetary policy in responses that exacerbated the inequality.

That means questions about what we want or whatever is the source of the inflation need to be thought about and how policies should respond to that underlying driver.

The main point I want to make about today's inflation is that the focus of monetary policy is wrong! It will worsen inequality and do little to tame inflation, unless we push tight monetary policy to unacceptable levels with long-run consequences. There are a host of better ways that would do a better job of taming inflation, that will have less deleterious effects on inequality, and that are better suited to a particular aspect of the situation we face now.

In thinking about the right policy, we need to recognize that in almost any episode of this kind we face a great deal of uncertainty. We all know we don't know, say, how long the war in Ukraine will last nor how quickly the supply-side problems confronted in the post-Pandemic world will last. There are some things that we might do that no matter what the outcome of our interpretations or disputes on the nature of inflation will be good for the economy.

[6] Much of this talk is based on a subsequently published paper, which contains references and sources for the data: "The Causes of and Responses to Today's Inflation," with Ira Regmi, The Roosevelt Institute, December 2022. https://rooseveltinstitute.org/publications/the-causes-of-and-responses-to-todays-inflation/

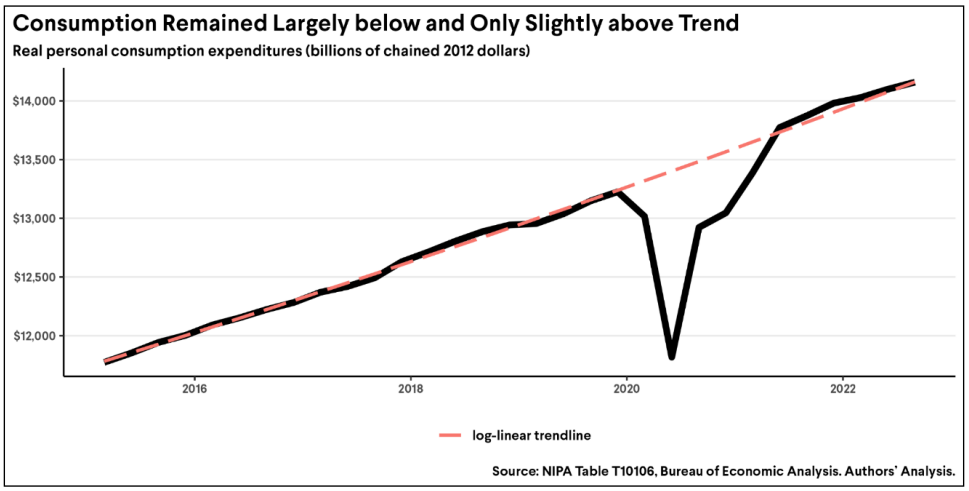
There are some other things that can occur such that if one interpretation turns out right and the other one wrong, there will be very adverse effects for a very long period of time. What I'm going to argue is that monetary policies of the kind we seem to be pursuing, if my interpretation is correct, are going to be very adverse and that there are other policies that are such so even if I'm wrong will still have benefits to our society.

I'm going to begin by talking about the underlying drivers of the high inflation that has emerged. The basic argument is that this inflation is not fundamentally excess aggregate demand. It is the supply shocks that were related to the Pandemic and the shifts in demand related to the Pandemic and some of the interactions between the two that are giving rise to inflation.

I'm also going to argue that the excess savings was not primarily caused by excess Pandemic spending and that those savings are not being spent down very quickly so are not really the source of today's inflation. An underlying theme is that the macroeconomics of the form that's been done generally is only of limited help when you have a sectoral shock like a Pandemic or oil price shocks of the sort often we've seen. In other words, standard macroeconomics uses an aggregate production function; it is as if there is just one sector. You don't focus on what happens to differing sectors. That is adequate a lot of the time. But some of the time, like this external shock, that kind of macroeconomic analysis is misleading and I would say even dangerous.

So, I'm going to go very quickly through some Charts here. They show that consumption largely remained below the trend it had before the Pandemic and War. So, the pandemic savings and the pandemic spending helped a lot, but even with that, aggregate consumption wasn't above trend or above it very significantly.

Chart 1:

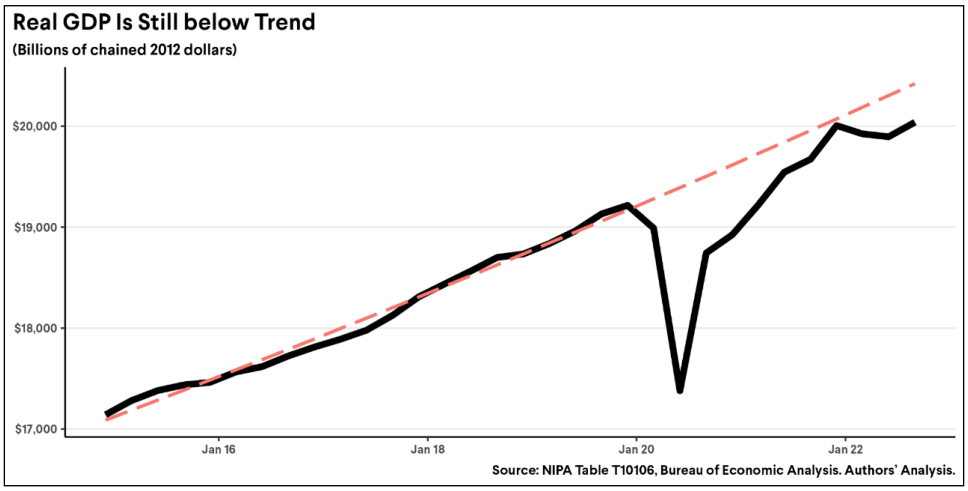


You want to look not only at consumption but business investment, government expenditures, and net exports.

Looking at all of those, total aggregate demand was actually below trend all the time and significantly below trend most of the time of Covid-19 and the Pandemic, including the period when inflation took off. This tells you that aggregate demand is not likely to have been the major source of the inflation that occurred.

[5] Darity and Mullen, Ibid., pp. 265-67.

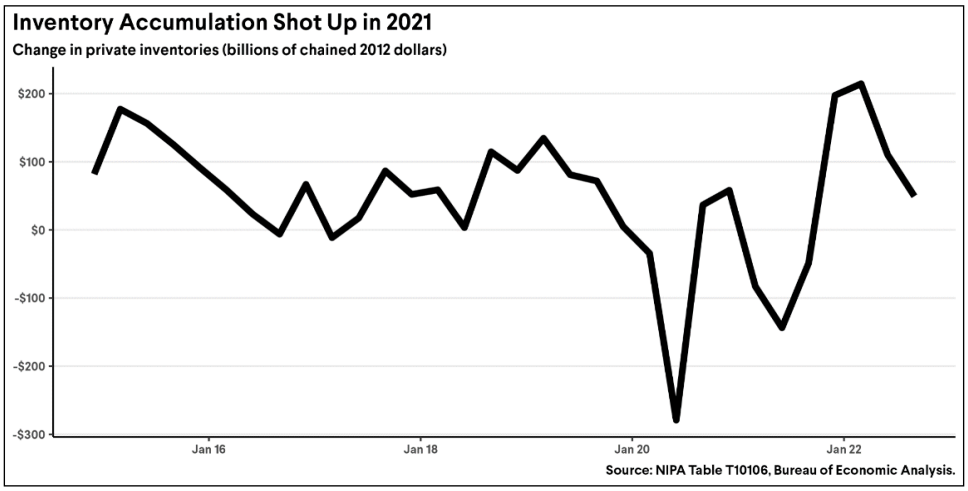
Chart 2:



Another way of looking at this is how aggregate demand compares with the Congressional Budget Office (CBO) estimate of potential output. This is the estimate done after the Pandemic, looking back, taking into account the shock of the Pandemic. Looking at it from a macroeconomic perspective, what is clear is that inflation was not driven by aggregate demand being greater than aggregate supply. Consistent with that is large inventory accumulation. When there are excess demands, inventories are decumulated. The data suggest otherwise.

Large inventory accumulation sign of weak aggregate demand

Chart 3:

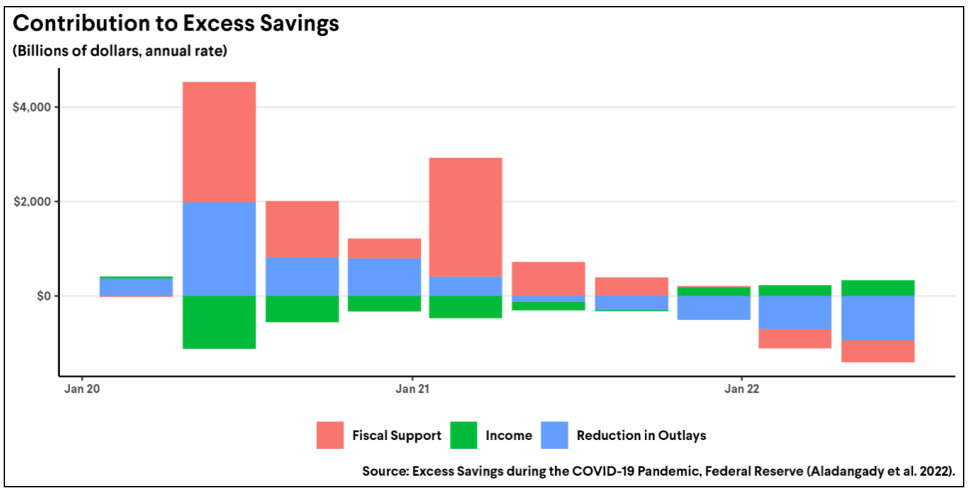


Now, this next Chart, Chart 4, was not done by me, but someone in the Federal Reserve System. Calculated is the various sources of excess savings, the savings that were above the level that would normally have been expected.

[6] Much of this talk is based on a subsequently published paper, which contains references and sources for the data: "The Causes of and Responses to Today's Inflation," with Ira Regmi, The Roosevelt Institute, December 2022. https://rooseveltinstitute.org/publications/the-causes-of-and-responses-to-todays-inflation/

High fiscal spending only partly the cause of excess savings

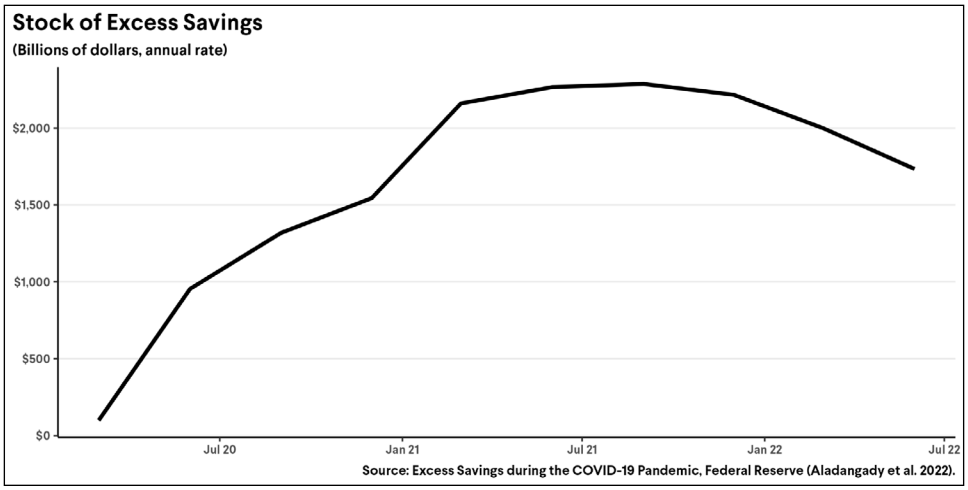
Chart 4:



What it shows is that in most of it, the pandemic spending did play a role, but a lot had to do with the fact that during the Pandemic people were sitting at home and not consuming. Interestingly, some of the consumption that did occur was consumption of tradable goods, not services; because those were disproportionately imported goods. The percentage increase in the demand was smaller and therefore the inflationary effect weaker.

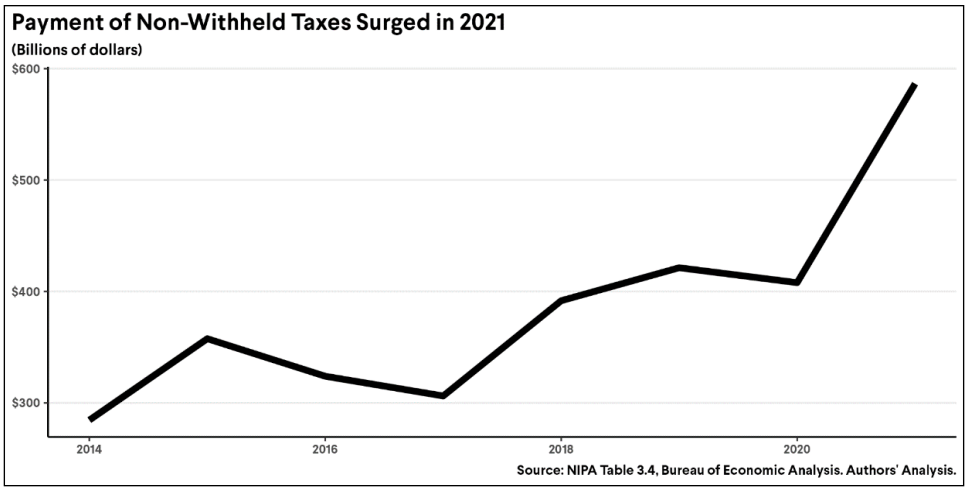
Finally, or almost so, excess savings has only been spent down very gradually.

CHART 5:



There is a good reason for this. There was a lot of uncertainty, meaning a higher demand for precautionary savings that haven't been spent down. Even this is a little bit misleading because much of the spending down of those excess savings went to pay taxes that were not withheld. There was less withholding than normal during the Pandemic.

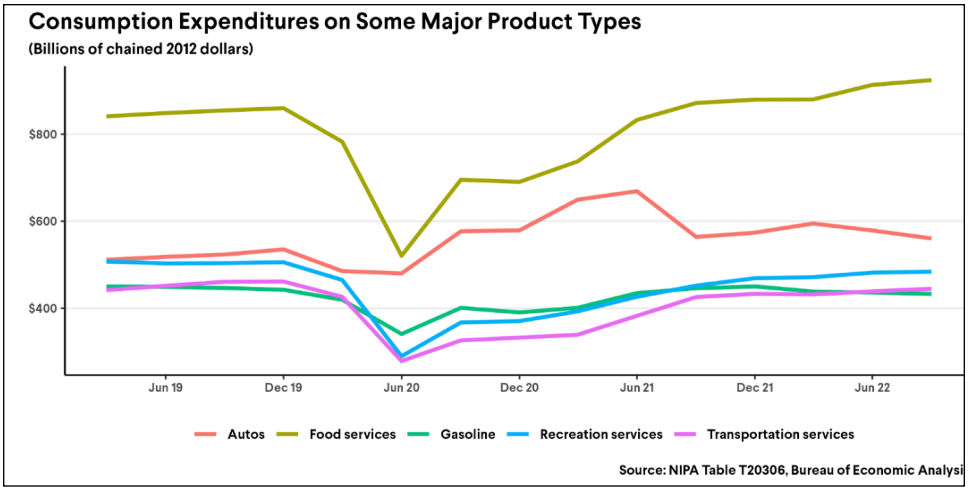
CHART 6:



Even the consumption of non-traded goods, which is the sector that you think would be most sensitive to excess spending, did not surge very much.

Consumption of non-traded goods (sector where prices most likely affected by excessive Pandemic spending) did not surge

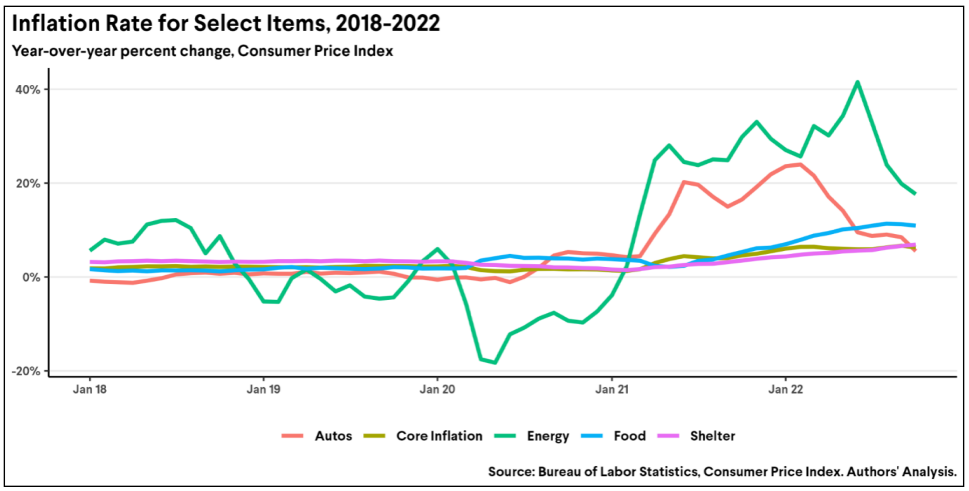
Chart 7:



Jason did point out that US inflation has been higher than Europe's, but this is one of those examples that can be read two ways. Jason reads it as showing that our pandemic spending had a big effect on inflation. But there's another way of looking at this data. We didn't get that much more inflation, and especially since the onset of the War, Europe has been much more affected by the increase in energy prices. Even if there is more inflation in the United States it's hard to be sure what it's attributed to. This is always a problem when there are multiple policy differences. Our labor market policies led to more job separations, contributing to a labor market with more churning—driving labor costs up. Moreover, the Pandemic hit our labor market worse directly: because of deficient health policies. We killed off more than 1 million individuals, many of them workers, more than Europe did. Again, Jason in the beginning of his talk mentioned we don't have random control experiments to test our theories. Actually, in the Pandemic we have many countries trying different policies from which we may be able to make some limited inferences, but in each of these cases we didn't do random controlled experiments.

Price increases centered on certain sectors with the timing not related to the gap between aggregate demand and potential output

Chart 8:

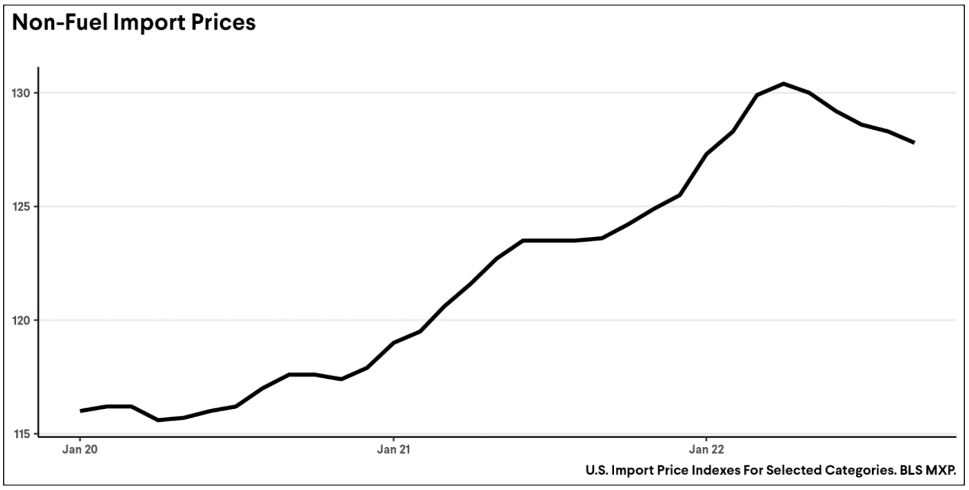


So, inferences are being made with a paucity of data and trying to see how the data fit with alternative hypotheses. The fact that there are such different patterns of prices across different sectors—and that we can understand these patterns by identifying specific sectoral problems—is consistent with our hypothesis of sectoral supply side interruptions/demand shifts as the driving force of the inflation rather than excess aggregate demand. Auto prices increased because of a lack of chips. House prices increased not because of increased aggregate demand for housing—killing off more than 1 million Americans and interrupting the inflow of migrants should have reduced aggregate demand. But there was a shift in where people wanted to live, and asymmetric price responses between places where demand increased and those where it decreased.

What do I think caused the inflation if it's not excess aggregate demand?

There are two major culprits, which I've already hinted at. The Pandemic, with its interrelated, pandemic-induced supply-side shortages (such as chips for automobiles) and demand shifts, induced by the Pandemic, partly induced by large changes in relative prices and supply shortages in other sectors. And all of this was exacerbated by the War. The price increases were centered on certain sectors of the economy and that included imported goods.

Chart 9:



To address the particular sectoral shortages, you would've had to reduce demand enormously. To put it another way, you would've had to cause a very severe economic downturn.

Consider the car shortage caused by a lack of chips. It would take a very big change in aggregate demand to filter down to eliminate that shortage. It was very big. What will eliminate that shortage in a better way than killing the economy? The elimination of the chip shortage. And in today's newspaper there was a discussion of the fact that Samsung is worried about a chip surplus. The price of chips has come down, car inventories are now building up, and the price of cars is beginning to come down.

Early on in the inflation many thought that it would be transitory. There were elements that were very transitory. There were lumber shortages, so the price of lumber went way up. Then we responded by producing more lumber. The price quickly came down. So that led a lot of people to think more generally that the inflation was going to be very transitory. That was a mistake. In an inter-complex, interdependent economy where you are doing just-in-time inventory in many sectors, resolving supply problems takes awhile. Resolving the supply side bottlenecks proved more difficult than most imagined; that kind showed itself less resilient.

As an example, just think about what happened to Southwest Airlines. Back in the early '90s, it was the best run airline, but the best run airline for normal times. That airline really minimized down time. It was the airline version of just-in-time inventory. So very efficient, but not designed for resilience. We were tested on resilience by the Pandemic. It's taken much longer than had been thought to resolve the supply side shortages so it wasn't very transitory, or at least not so transitory as many hoped. But it is transitory—a couple years later, most of the bottlenecks seem to have been addressed.

One of the aspects of this demand shift and unexpected lack of resilience is that there are asymmetries in responses that lead to inflation. Jason talked about some of those asymmetries. There were places where the demand for housing went up and prices went up. And, there were places where housing went down and prices went down, but not symmetrically. The housing price indices are very little related to the actual experience that people have in facing housing costs; housing costs are based on imputed rent, even though almost two-thirds of Americans live in homes they own, so an increase in "rents" doesn't affect them at all. This is especially important, because Housing is such a big part of the CPI.

Another supply side factor that seems to have played out is the exercise of market power. You not only see this in evidence of high markups, all of which would be consistent with supply shortages. But the markups are going up more in sectors and firms that had more market power before the Pandemic, consistent with the interpretation that market power had increased, was being exercised, and contributing to inflation.

There are a number of theories explaining why to expect that. One simple one is the Phelps-Winter customer market, which says that firms are trying to balance an increase in current profits against a loss of future profits. If they increase prices today and make a higher profit today, there is a cost—a loss of profits in the future, because there is a loss of customers.[7]

If there's uncertainty about the future, firms will tend to take the price increase today so that it is inflationary by itself.

[7] Phelps, E.S. and S.G. Winter Jr. (1970), "Optimal Price Policy under Atomistic Competition," in E.S. Phelps, et al, Microeconomic Foundations of Employment and Inflation Theory, New York: Norton. See also Greenwald, Bruce C., and Joseph E. Stiglitz 2003. "Macroeconomic Fluctuations in an Economy of Phelps-Winter Markets" in Knowledge, Information, and Expectations in Modern Macroeconomics: In Honor of Edmund S. Phelps, edited by Philippe Aghion, Roman Frydman, Joseph Stiglitz, and Michael Woodford, 123-136. Princeton, NJ: Princeton University Press.

Monetary Policy Tightening the Wrong Medicine for Supply Side Inflation

There is a debate about what is the role of the labor market. Even if wage increases hadn't initiated the inflation, workers' demands for higher wages might trigger a wage-price inflation spiral.

There were short-term corrections in relative wages, especially significant in, say, the hospitality sector with its underpaid workers. Average wages did go up, but those rates of increase of wages have now come down markedly. And one should see those as a correction to vastly underpaid workers who had a little bit more market power.

Thus, the picture today is very much that inflation is being tamed as the bottlenecks are being resolved. Inflationary expectations remain tame. In fact, one of the concerns is that wages are not keeping up with prices—there is no evidence of a wage-price spiral. And, in fact, and this is an important point, wages can and should increase at a pace faster than is sustainable in the long run, because markups can come down and the relationship between wages and prices is not fixed. We saw markups go up since the pandemic period and, hopefully, now we can see them coming down.

If markups come down, we can restore the pre-Pandemic level of real wages relative to trend. So yes, there's been some price inflation, the sectoral price increases have seeped into core inflation with some knock-on effects on wages, but we are now confronting a disinflationary process from where we were.

As a lot of the shortages, including oil, food, are easing, that disinflationary process will strengthen, with effects eventually seeping into core inflation.

Monetary Policy and Inequality—Other Policies

So, now let me talk about why monetary policy is not the right instrument to reduce inflation.

Because the inflation was not caused by excess aggregate demand, monetary policy doesn't address the underlying source of the problem. In fact, it could make things worse because it discourages the investment required to resolve the supply-side problem. In the customer markets that I mentioned, increases of interest rates actually are themselves inflationary. And, there is some empirical evidence that higher interest rates get passed on into rent, a very big part of the CPI.

Tight monetary policy increases inequality because of increased unemployment, decreased access to credit, and the decline in housing affordability from higher mortgage rates on increased monthly payments and declining real income that often accompanies periods of rising interest rates. The effects globally are even more adverse.

Let me just conclude by saying there are alternative policies that are real supply side policies, e.g., increasing green energy through investments in renewables that will lower energy prices; increasing food production by reversing agricultural policies of the past fifty years that have been aimed at restricting production, and instead encouraging production, leading in turn to lower prices; increasing labor supply with better healthcare, childcare, family leave policies, and changing immigration policies, thereby alleviating labor shortages, if they exist; stronger and better enforcement of antitrust policies, which will bring down mark-ups, lowering prices.

I've argued that there are disinflationary processes already at work. Some of these policies will reduce inflation further, and more quickly. But inflation will likely remain elevated from levels that we've experienced prior to the Pandemic. There is no wage-price spiral leading to explosive price dynamics; but there is some inflationary momentum so inflation won't come down to 2% quickly, unless monetary authorities take excessively contractionary measures. In the meanwhile, we need better protection policies that could be financed by a windfall profits tax.

Many of these policies have long-term benefits. This is true even if inflation turns out to be more transitory than seems the case now.

Discussion and Question and Answer Period

Allen Sinai: Let's now move to the Q. and A. and Discussion portion of this Session on "Inflation and Inequality." Let's follow with some quick comments from me, some discussion, and then some questions.

Starting from Joe's last comments, the point of redressing the wage share of national income is a very important part of the process that's going on. This is hard.

That's very important in the addressing of inequality. Monetary Policy—I am totally in agreement with Joe and Jason that it is the wrong policy for dealing with Inequality. And, for other reasons tight monetary policy alone takes a long, long time for any solution even if aggregate demand is the driving source of the surge in inflation.

History suggests that interest rates alone do not bring down inflation, but rising rates and their derivative effects can bring crunches, credit issues, bank failures, and the like as the price paid to weaken the economy enough, i.e., a Recession, to bring inflation down.

It doesn't matter where the inflation came from. The Federal Reserve missed it by being too late and indeed aiding and abetting higher inflation in its Forward Guidance, which opened the door for higher inflation, keeping low, near zero, interest rates for too long, and for the very rich to get richer. The policy of adding to the Federal Reserve's balance sheet supported excessive buying of stocks, investing in IPOs and the like, and mini-bubbles in financial market assets. The rich have lost some of that, but they are too smart as investors to stick around for any comeuppance. Their actions now are part of the current Bear Market in Equities, having walked away with mega-profits, much richer. There are more billionaires now than ever.

Now what do we do with these billionaires?

We should tax them. That would be quite logical and fair. And, some of the things you talked about at the end of your talk, Professor Stiglitz, would be very important to reduce inequality. Micro type policies can be financed by a small wealth tax. I don't believe that in this day and age we can't calculate wealth and enforce a billionaire tax if we have the political will.

Jason, what I would say about you and your presentation, you admit it, is changing one's mind often is a virtue. Who said that? What very famous person?

Jason Furman: James?

Allen Sinai: No, Winston Churchill. It was Winston Churchill. What was he referring to? Because he probably had a few drinks when he said it; he did drink a lot. You changed your mind and recanted—the Fed overdid it. The Federal Reserve is part of the pricing problem.

But what happens if you are walking across the street and a truck smashes into you and you collapse looking dead? If you were in bad shape to begin with, which the United States was in the Financial Crises of 2006-2009, then you don't get up very fast. But in this situation, the patient, the economy, was in excellent shape underneath and bounced up from the External Shock quickly, after having totally shut-down. Pentup Demands were then unleashed with medical science rather quickly

providing workable vaccines. This revived the patient and the unleashing of Pentup Demands revived the economy.

But in this situation, the patient, that is the economy, was in excellent shape underneath and bounded up quickly post-COVID-19.

Pentup Demands unleashed then added to the aggregate demand from the Ultra-Easy Federal Reserve policy response and was part of the surge and the inflation spiral upward.

The increases in aggregate demand against a Pandemic-constrained supply-side of the economy, labor and in the global supply chain, left oil, energy and food price inflation, and wages to shoot upward. Dynamic systems across all fields are very similar. Indeed, I think very much the same.

On the COVID-19 External Shock that shut-down the economy, i.e., flattened the patient, "paramedics," i.e., "first responders" appeared on the scene. Among the paramedics were monetary policy people. They did what they thought they had to do to save a potentially dead person. The patient, aka the economy, had shut down. The emergency medicine to pick it up was full-force Ultra-Easy Monetary Policy. This involved a quick move to a zero federal funds rate, another round of Quantitative Easing, i.e., adding more assets to an already very enlarged Federal Reserve balance sheet, and even setting up direct lending from the Federal Reserve to businesses, bypassing financial institutions, truly a "lender of last resort" function.

Fiscal policy, massive fiscal policy stimulus, was the other "paramedic" on the scene of the possibly dead patient, aka the economy. From five programs under the Trump and Biden Administrations some 25% of GDP, even bigger than the shift of fiscal policy in World War II, stimulated and revived the patient.

The fiscal stimulus was mostly transfers from the federal government to individuals and states and localities. The Transfers are working through the system, including what you see in New Orleans. It's a good thing for New Orleans, because you are constructing infrastructure that very likely was in terrible shape before the stimulus. Transfers at the government level take a long, long time to show up in purchases, at least two to as much as four years.

So good, Jason, that you changed your mind and are on the right track.

In retrospect, the Federal Reserve overdid it, as you indicated. And, it's good that the fiscal stimulus is being tuned back down because it, too, was overdone in the name of saving the patient. Monetary policy was post-emptive on price inflation—essentially "letting inflation run well above a 2% inflation target" on purpose to be sure the previous period of too low inflation was permanently over.

Without knowing it, that announced Fed policy, post-emption, was a license to gains for the rich, the reason being essentially enhanced asset price inflation supported and almost fully guaranteed by the Federal Reserve.

This was a huge policy error by the Federal Reserve, although with good intentions, opening the door to a massive demand-driven price inflation process as a consequence, started by the COVID-19

External Shock and the responses of Ultra Easy Monetary Policy and Massive Fiscal Policy stimulus. This aided and abetted the unexpected surge upward in price inflation.

Sandy, on your incredibly well-structured, totally persuasive presentation, the question I have is how to get it done? How are you going to get Establishment America, White or Black, to sign on to $13 trillion of Repatriations, Making America Great For the First Time. I'm with you. Am I white? What color am I? I'm with you on that. And, for you, as well, the Mayor of New Orleans, a wonderful and so well-articulated presentation.

LaToya Cantrell: I'm Black, I'm old.

Allen Sinai: You got everything going for you now.

The questions that I have for you, I hope you'll answer them. I think you are doing it better in New Orleans than the Federal Government and I applaud you.

My question is—do you think that on-the-ground local initiatives like yours that you are running from local government and your operation will get better results, faster, than the Federal Government? Take your fighting for the money the Federal Government didn't give you? Now, this is just meant to start the discussion. Let's lock the doors and not let anybody out , getting your questions and answers, and then the Panel will come back in response.

Question 1: I have one for Jason and Joe.

Both of you talked in some depth about the macro aggregate responses. But other than I believe one of Jason's slides, neither of you really broke down the responses by income group and especially heterogeneity in both labor market responses and wage responses. And so I'm curious, I mean my impression, Jason, is that your talk was titled something like "A Progressive Case for Inflation Reduction." And Joe, I know you're famously a progressive commentator on the dynamics of the economy. I'm curious whether either of you see the heterogeneous response that involves typically low income workers earning the biggest real wage gains over the last couple of years as influencing your perception of how this response functions and your perception of what we should do now and into the future.

Allen Sinai: Let's take two more questions and then collect them and make sure the answers are brief.

Question 2: For Professor Stiglitz. Most of your solutions seem to be rather long-term. And I understand all of your arguments against monetary policy interventions like the unemployment issue to fix an inflationary dynamic that's not driven by aggregate demand. Do you think that any steps are necessary in the short-term to at least display to consumers that action is being taken? Or is that not necessary if the long-term investments are being made?

Allen Sinai: There is one more in the row in front of you.

Question 3: My question's mostly for the Mayor, but I assume the whole Panel. We talked about inflation, we talked about inequality and the intersection. What are your constituents saying about whether inflation is making inequality worse? What does the Panel say about this? Is the inflation making inequality worse?

Joseph Stiglitz: One of the terrible things about the Pandemic was that it affected various groups differently. And as we said, it exposed inequalities in the country and exacerbated them. Also, what was interesting, some very micro data shows how the pandemic spending affected different income groups. That could be done by looking at ZIP codes where people live with different incomes. One of the striking things was that lower income people spent essentially all the pandemic money they received—they needed it to survive. And one of the things we didn't talk about, in a sense, they actually spent more than what was given because there was short-run eviction protection. So they could go into debt; because it wasn't that they were forgiven on their rent, they just couldn't be evicted. If they didn't pay their rent, they had more money to spend during the pandemic, but this was money they would have to pay back. That was something happening in the lower half of the population, which would have a dampening macroeconomic effect post-pandemic.

The upper half of the income distribution, we didn't target it as well as we should have done, so money went to people who added it to their cash balances. But if you had a choice about doing something in a rush and you couldn't fine tune the policy vs. not doing anything, it was the right thing to do; and as I've said, I think the evidence is that it hasn't caused the inflation because a lot of it just wound up in excess savings. We don't have the full counterfactual to test this, but I think it's pretty clear.
In terms of the labor market, the first thing I want to say is that the unemployment rate may not be the best measure of the state of the labor market. And that was one of the graphs that Jason displayed on employment rates, still below where they were pre-Pandemic.

So, our labor market isn't really recovered, despite the large declines of the unemployment rate. One way we measure unemployment is are you actively looking for a job? And there are many reasons why you might not be. What really concerns me is that we know that different groups are affected very differently by an increase in unemployment. So when you callously say, "Oh, we're going to increase the unemployment rate to 5.1% or 5.5%," what you're saying is, "We're going to increase the unemployment rate of African-American males, young males to 20%." That is a very different picture and presents a fundamental social problem. To me, that is probably one of the most important aspects of trying to cure today's inflation by increasing unemployment.

Now, there is a question about long-term versus short-term. Childcare provisions, changes in family leave policies, all those things would enable women to immediately join the labor force. That would have a major effect in the short run and over the long-term would have even a bigger effect.

One of the things we should have done is use the Defense Production Act (DPA) that we used for vaccines to increase renewable energy. And, that I think could have had a substantial effect on the supply of energy and energy prices.

There are other actions we could have done in the short-run. We could have used the DPA in other ways that would've alleviated inflation and its effects on inequality, even in the short-run.

Jason Furman: I'll be very brief. The Pandemic's impact was really regressive. The most vulnerable were those who lost jobs and suffered the most. The policy response was very progressive. It disproportionately gave money to the most vulnerable. When you look at the net o f those, if you just look at data on aftertax incomes, 2020 and 2021 are an extraordinary period of low poverty and a dramatic reduction in aftertax inequality. If you look at the recovery period, you're seeing the fastest wage growth for workers at the bottom than the top. For the bottom two quartiles, wage growth is out-pacing inflation. For the top two quartiles of workers, it's not. But, if you compare with

where we were before the Pandemic, yes it is outpacing inflation but only by a little bit. And prior to the Pandemic, it was by a lot.

So we were actually starting in 2015 seeing a reduction in wage inequality. That reduction in wage inequality has continued to enable the most vulnerable to see wage gains in excess of prices, which is not as much in excessive prices as they were before.

Allen Sinai: The last word, it certainly should go to a woman because women in my life, always have the last word.

Sandy Darity: Yeah, just very briefly, I agree with Jason's assessment on the differential back of inflation. As I said, the impact is primarily on incomes and does not have a significant set of implications for the wealth gap. Regardless of whether or not it's disproportionately affecting the wealth position of Blacks or Whites, the effects are so marginal that it's not going to have any strong implications for the differential in wealth.

And then, Allen, you asked about how you actually build the political foundation for getting Reparations to become a reality. That's a very challenging question. But I will say that the current environment is more propitious than at any other moment in my lifetime.

A research study that was done based upon survey data collected in the year 2000 found that 4% of White Americans endorsed monetary payments as reparations for Black Americans. By the year 2018, that figure had risen to about 15%. And at the midpoint of 2021, a UMass Amherst Survey indicated that proportion was closer to 30%. So the big issue is whether or not that trajectory can be sustained and what are the steps to be taken to sustain that trajectory. But I'll have to say whether or not it happens in my lifetime, it's closer to happening than at any point since the Reconstruction Era.

Allen Sinai: I share that this is a moment in history. It happened for me with the Election of Joe Biden, believe it or not. I think he has to run again, he has to win, and he has to have a Democratic House. And, if so, then a lot of things, more things, will happen and a lot has happened, progressive Democratic Party stuff, long overdue on a societal basis. Thus, this is a moment of time. Professor Darity, you gave a really incredibly well-structured presentation on Reparations and the rationale for Reparations. Getting it done is the big issue, but probably only with the running and reelection of President Biden.

Finally, I'm going to hand the microphone to Mayor Cantrell. You are the hostess here. I'm going to hand the microphone to the mayor who obviously gets things done here in New Orleans. And, you listened to us and our discussions, much very academic. Thank you for staying and your patience.

I think you got something from we academics. But what I got from you is that you get it done. Below your level, your people are getting it done. And with results that matter and help those at the bottom of the income and wealth distributions.

LaToya Cantrell: Well, I think that during this Pandemic it was very clear that mayors were on the front line and have been on the front line in advocating not only for what our constituencies need, but also in getting it done. And so I think that, yeah, the only way we were able to see a direct allocation from the Federal Government is because mayors who have been screwed by their states stood up and said, "Hey, our money isn't hitting the ground where the needs are the greatest. It's being redirected." So it was mayors who fought the fight and mayors who brought the dollars home so that we can

help our cities and our people.

Question 4: Mayor Cantrell, can I ask you while we have everyone here just to explain what happened? Because I'm not sure everybody knows about what happened with the implementation that well.

LaToya Cantrell: Well, here in New Orleans and the Federal Government in creating the CARES Act and the resources that would flow from it, those resources were sent to the state and the states then had to send money to the cities. Each state is different based on their own set of politics. And in Louisiana, we are a Red State. New Orleans is the Democratic city in the State of Louisiana. We are the backbone of this state. We carry it, but also we get the black eye. And with that we beat back Covid-19. As I mentioned at Hotspot, we led, we did everything right. We spent over $132 million as a city beating back Covid-19. And as a result of that, we sent our invoices and expenses, the invoices to the State of Louisiana. Every invoice was approved so that we did the right thing—money was spent the correct way, but we were not fully reimbursed our $132 million.

We were short-changed some $70 million. And the reason they said, "Huh?"

Well first of all, on the front end, since we were the hotspot, "New Orleans, you must not be doing things right because you are the hotspot." "It's only in New Orleans, Covid. It's only there."

Okay, so then we focused on doing the work, led out of this Covid, through it. And then it was, "Oh, you're not getting fully reimbursed because we have Covid in other parishes and now they're suffering." Well, damn!

So we got penalized for doing the job, saving not only our city, but the State of Louisiana because we are the backbone with our hospitality and leisure, tourism. So it was like we did the right thing. It was used against us, short-changed $70 million. That $70 million was used, meaning our public safety team, police, fire, EMMS, all when I talk about the $132 million was our response to Covid and our teams on the ground doing the work.

Fast forward, violent crime, "Oh, it's out of control." Well hell, if we would've gotten our $70 million when we needed it most, then we could have easily directed those dollars to help build our capacity relative to our public safety team. So it's like every step you take, you feel like you're getting beat back as well. That's what caused me to take on and fight single-handedly in my state for direct allocation, because our city got screwed. Art, what else?

Arthur Walton: I think it's important to know, and I'm the biggest fan in here. The Federal Government, when they sent the CARES Act money, there was a 500,000 population threshold. So if your city didn't have 500,000 people, the money went to the state. The mayor realized early on we weren't getting the money. The question was how do we solve that? So the mayor joined with the mayor from Miami. They wrote an editorial in the New York Times because Miami got screwed, too.

LaToya Cantrell: Who was a Republican. I'm a Democrat. Who gives a damn, and why should anyone, when we're fighting for our cities and people getting the money?

Arthur Walton: This is the way we work on the ground. We reached out through our lobbyists to Speaker Pelosi. The mayor gets on with Speaker Pelosi, this is what's happening on the ground. So the next help from the Federal Government, they lowered the threshold to 250,000. So it came directly to us.

LaToya Cantrell: And it helps other cities across the country.

Arthur Walton: The lesson...the struggle… If we don't do our job and the mayor doesn't reach out, it's the same thing over and over again.

Allen Sinai: One person over 500,000. You told me that, Arthur, when we first met, I was really appalled when I heard that. Amazing. And the solution you got to is also amazing. Just identify who you are for the audience.

LaToya Cantrell: That's Arthur Walton. He is my Director of Intergovernmental Relations.

Allen Sinai: Okay. Mayor Cantrell, do you have any good advice for us?

LaToya Cantrell: Well, just stay connected. Stay connected to the leaders who are on the ground, that is mayors who are first responders and know best about what their city and constituencies need. I forgot to answer a question that was asked of me. The gentleman back there, you asked me a question?

Question 5: The constituents, what are they saying about the intersection of Inflation and Inequality? What's hurting most?

LaToya Cantrell: Well, those who are the most vulnerable continue to hurt the most. And what they are saying is that while they have seen wage increases for city government, the lack of increases in the private sector is the problem. And, because we are so hospitality driven, it's been hell, I have to say. It's been hell getting industry to increase those wages that our people need. They are working two and three jobs to make ends meet. When they go to the grocery store, prices go up and you know the deal. But the biggest thing is the wage gap.

Allen Sinai: Okay. Well, thank you. The answer, I think, on inflation, it's not going to be solved by tight monetary policy. As we talked about here, monetary policy can affect interest rates but not deal much with inflation. With interest rates rising, it is almost inevitable that there will be casualties in the financial system and reverberations through the whole economy that will be negative. That may help reduce inflation but it will be negative for inequality as we defined it today.
If inflation comes down, it will not be the result of tight monetary policy.

Linda Blimes: I want to thank everyone who has attended and thank you for your patience. If you would like to receive a transcript of the Panel, please see Thea Harvey over here and give us your name. I also want to volunteer, the Mayor said that the Miss Universe pageant is here next week. We have 7,000 economists here. There are many women who might be happy to volunteer as contestants. Thank you very much to our Panelists today and the audience for your questions.

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