"Demographics and Retirement Savings: How thy Are Changing Household Demand for Bonds and the Implications for Bond Markets"

US households have accumulated $25 trillion in retirement assets with nearly 60 percent held in defined contribution plans and Individual Retirement Accounts. As aging Baby Boomers manage these assets to and in retirement their demand for bonds and income producing assets will grow and has been a major force behind the $2 trillion investors have placed in bond mutual funds and ETFs in the past decade with implications for the bond markets.
Brian Reid is Chief Economist at the Investment Company Institute. He joined ICI in 1996 and was appointed Chief Economist on December 31, 2004. Reid leads the Institute’s Research Department and oversees all Institute statistical collections and analysis of the mutual fund industry. Prior to joining ICI, Reid was a staff economist in the Monetary Affairs Division of the Federal Reserve Board. He received a B.S. in economics with honors from the University of Wisconsin-Madison, and has a Ph.D. in economics from the University of Michigan.

Thursday, July 18 w/SGE (Chinatown Garden)
Please consult www.national-economists.org for further details on this event as the date nears.

Thursday, July 23 (Chinatown Garden) Click here to register for this event

Robert Young
Chief Economist
American Farm Bureau Federation

Dr. Robert Young is the Chief Economist at the American Farm Bureau Federation, Washington, DC. Earlier he was co-Director of the Food and Agricultural Policy Research Institute, Columbia, MO (1991-2003), and Associate Professor of Agricultural Economics at the University of Missouri. Before that he was the Chief Economist for the Committee on Agriculture in the U.S. Senate (1987-91) and was active in the development of the 1990 Farm Bill. With cold, wet spring weather in the forecast, one leading agricultural economist isn’t worried about spring planting progress. American Farm Bureau Chief Economist & Deputy Executive Director Bob Young said in looking around the country he isn’t surprised that some areas are ahead of schedule while other areas are behind in planting 2015 crops. With the uncertainty of Mother Nature, Young finds there are some producers that haven’t made their final planting decisions yet. Some of that will depend on the weather. Young said farmers shouldn’t be looking at farm programs in making those decisions as he doesn’t find that’s where the support will come from. He recommends farmers look at futures prices, pre-book their inputs and monitor their profitability expectations. Some crops are more expensive to produce than others, so he thinks all of those factors need to go into making those final planting decisions. In looking at the outlook for cattle producers, Young anticipates prices will decline in 2015. He expects herd expansion will continue at similar levels to 2014. With increases in pork and poultry production, he said the competition will get more intense by the third and fourth quarters. Young doesn’t see there will be anyway to hold last year’s third and fourth quarter cattle prices, but he said it’s hard to determine how low cattle and beef prices will go.

**NEC MEMBERS ONLY: Space is limited. Reservations required to attend**

The National Economists Club and the Embassy of Japan cordially invite you to a speech by:
Dr. Randall S. Jones  
Head of Japan/Korea Desk, Economics Department  
Organisation for Economic Co-operation and Development (OECD)

“Japan Must Fully Implement the Three Arrows of Abe-nomics to Revitalize Its Economy: the OECD’s 2015 Economic Survey of Japan”

Bold structural reforms are crucial to boost growth in the face of a rapidly ageing population and very high government debt; effective implementation of all three arrows of Abe-nomics is required; fiscal consolidation is imperative but must be carried out while promoting social cohesion; monetary stimulus should continue until inflation is sustainably at the 2% target. These are the key messages of the latest Economic Survey of Japan published in April 2015 by the Paris-based think tank, the Organisation for Economic Co-operation and Development (OECD). Its main author, Dr. Randall S. Jones, will discuss the main findings and key recommendations of the OECD’s flagship publication.

Dr. Jones is Head of the Japan/Korea Desk, Economics Department of the OECD. Prior to joining the OECD in 1989, he served at various organizations in Washington, D.C., including the U.S. Department of State, the Japan Economic Institute, and the Council of Economic Advisors. Dr. Jones received a PhD in Economics from University of Michigan. He has written numerous publications on the Japanese economy. In recognition of his outstanding contribution to Japan through his economic analysis, the Japanese Government awarded the Order of the Rising Sun, Gold Rays with Rosette to Dr. Jones in April 2015.

Registration is allowed for Japanese Embassy guests and NEC members only.  
To register: Please RSVP to eoj-nec@ws.mofa.go.jp

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**When:** 30 July 2015  
Doors open: 4:45 pm  
Speech and Q&A: 5:00 pm – 6:00 pm  
Networking reception: 6:00 pm – 7:00 pm (courtesy of the Embassy of Japan)

**Location:**  
Embassy of Japan  
2520 Massachusetts Ave., NW, Washington, DC 20008  
Please be prepared to arrive at the Embassy by transportation mode other than private vehicle as parking is not available in the area. The Embassy is about 15 minutes' walk to the north from Dupont Circle metro station.
Registration:
Embassy of Japan guests – Free
NEC member – Free
Open registration – Not allowed
To register: Please RSVP to eoj-nec@ws.mofa.go.jp
Space is limited. Registration will be closed when the event has reached capacity. If you find you are unable to attend after you register, please let the Embassy know by email (eoj-nec@ws.mofa.go.jp) so that someone else can attend in your place.

This is a FREE event for NEC Members and Embassy Guests.

NEC ANNUAL MEMBERS DINNER 2015
November 4, 2015

Location: Embassy of Canada
501 Pennsylvania Ave. NW Washington, D.C. 20001-2111

2015 Herbert Stein Memorial Lecture
Stanley Fischer
Vice Chairman
Board of Governors of the Federal Reserve System

Stanley Fischer took office as a member of the Board of Governors of the Federal Reserve System on May 28, 2014, to fill an unexpired term ending January 31, 2020. He was sworn in as Vice Chairman of the Board of Governors on June 16, 2014. His term as Vice Chairman expires on June 12, 2018.
Prior to his appointment to the Board, Dr. Fischer was governor of the Bank of Israel from 2005 through 2013.

From February 2002 to April 2005, Dr. Fischer was vice chairman of Citigroup. Dr. Fischer served as the first deputy managing director of the International Monetary Fund from September 1994 through August 2001. From January 1988 to August 1990, he was the chief economist of the World Bank.

From 1977 to 1999, Dr. Fischer was a professor of economics at the Massachusetts Institute of Technology (MIT). From 1992 to 1995, he was the Elizabeth and James Killian Class of 1926 professor. From 1973 to 1977, Dr. Fischer was an associate professor of economics at MIT. Prior to joining the MIT faculty, Dr. Fischer was an assistant professor of economics and a postdoctoral fellow at the University of Chicago.

Dr. Fischer has published many articles on a wide variety of economic issues, and he is the author and editor of several scholarly books. He has been a fellow at the Guggenheim Foundation, the American Academy of Arts and Sciences, and the Econometric Society, as well as a research associate at the National Bureau of Economic Research and an honorary fellow at the London School of Economics.

Dr. Fischer was born in Lusaka, Zambia, in October 1943. He received his B.Sc. and M.Sc. in economics from the London School of Economics. He received his Ph.D. in economics from the Massachusetts Institute of Technology in 1969.

(Registration will open in September 2015)

THANK YOU TO THE Japan International Cooperation Center (JICE)

NEC Goes to Japan!

Kakehashi Project 2015

From: The National Economists Club

Subject: Opportunity to Participate in a Study Tour to Japan This Fall
The NEC is excited to announce an opportunity for young NEC members to participate in the “KAKEHASHI Project - The Bridge for Tomorrow” program. This program is being hosted by the Japan International Cooperation Center (JICE) and will provide a fully funded short-term study tour to Japan. The purpose of the program is to encourage greater understanding between the youth of Japan and the United States and to provide the opportunity for young American researchers to learn about the Economy and Culture of Japan through meetings with private and public sector organizations and individuals.

The trip is expected to take place in the Fall of 2015 and all travel costs will be covered by the program, including round-trip air transportation, transport costs in Japan, accommodation in Japan, all meals, entrance fees to special attractions and travel insurance.

After participants have been identified, an itinerary for the tour will be developed based on the interests of the NEC participants and in conjunction with the Japanese organizers.

The general guidelines to choosing participants is as follows

Requirements:

- Participants must be members of the NEC.
- Participants must be American citizens or Green Card holders
- Participants should be 35 years old or younger at the time of the trip, and must have a valid passport.

To Apply:
If you meet the requirements and are interested in participating in the study tour, please send a brief letter of interest and resume to Charles Baschnagel at cbaschnagel@national-economists.org and Thomas Oakley at Thomas.Oakley@national-economist.org by close of business on August 3rd, 2015.

The letter of interest should indicate why you would like to join the study tour and what institutions or individuals you would like to visit. Briefly discuss why this trip would help your professional career, what aspects of the Japanese economy you are most interested in learning about, how you would research this aspect before/during/after the trip and why you would make a good candidate. The essay should be no longer than 2 pages. When sending the letter, please also include a CV or resume no longer than 2 pages. The letter of interest will be the primary criteria for selection. Please feel free to email Charles or Tom with any questions during the application process.

Expected Deliverables from Trip Participants:

- Participants must follow the itinerary as a group and must adhere to the itinerary.
- Participants will be expected to post 3/4 short blogs (100 words or less to the NEC Facebook/LinkedIn/NEC website during the trip to inform the NEC membership and JICE stakeholders about the progress of their trip and ongoing findings.
- Upon return to the United States participants are required to prepare a 400-600 word essay based on their experience and present their work through a short presentation to the NEC/KAKEHASHI Project-The Bridge for Tomorrow group here in DC.
We are delighted to have this unique opportunity to build the NEC’s relationship with Japanese institutions, and we look forward to receiving your applications! Please check the NEC website for further updates such as the exact dates of the trip once finalized.

Yours sincerely,

*Thomas E. Oakley*

President, The National Economists Club

**NOTE:** Exceptional candidates up to age 39 will be considered but the target applicant is 35 years old or younger.

http://www.national-economists.org/Podcast/

As part of our update of the website, we are pleased to announce the resumption of our podcasts. Please be patient as we are reconstituting this offering.

If you need help or assistance, please email us at manager@national-economists.org.
KEEP YOUR RECORD INFORMATION CURRENT!!

Database System for NEC and Membership Renewal

http://national-economists.org/
(click on Member Login at the top right corner of the page)

You may do this in our system by logging in and “viewing” your profile. See instructions below.

- Generate a copy of the Members Directory for viewing
- Please check the status of your membership prior to renewing. You may already have renewed!! (ex. Currency, up to date Db information, expiration date)
- Features of your record include the standard information but also things like website, photo, organization logo, sites like Facebook, Twitter, LinkedIn, etc. You may edit the information!!
- Check for upcoming events, register and pay via credit card or manually by mailing a check
- Access past event information, Rapporteur Summaries and Podcasts (working currently to restore this feature) and Newsletters
- http://www.national-economists.org, Click the tab the tab on the left “Member Log In”—on the next screen, look at the top right hand corner of the screen and use the email address that is recognized by the system (Check your SPAM file if you requested a password recovery email; contact us, manager@national-economists.org if you still have problems!)

Notices are sent out via email several times prior to expiration we also do a postcard mailing notifying you if your membership has expired. Please take the necessary steps to keep your membership current. Directions are listed above that direct you as to how to access your record to determine if you are one of these members. Remember, this is what someone will see about you when the directory is generated. Keep the information current!!

NABE

http://www.nabe.com
SAVE THE DATE: 2015 NABE TRANSFER PRICING SYMPOSIUM, JULY 21-23
Join us for the 5th annual NABE Transfer Pricing Symposium, July 21-23, 2015. We will be returning this year to the Four Seasons hotel, located in the Georgetown area of Washington, DC! Save the date and plan to join your Transfer Pricing colleagues in Washington, DC to network, collaborate, and share the latest insights and ideas within the Transfer Pricing industry. Program details including keynote speakers, panel discussions, and workshops will be released in the coming weeks. Share this message with a friend or a Transfer Pricing colleague at your firm and stay tuned!

NABE CALENDAR
- Jul 20-21 NABE Foundation Economic Measurement Seminar, Washington, DC
- Jul 21-23 NABE Transfer Pricing Symposium, Washington, DC
- Jul 22-24 CBE Courses: Writing Skills for Business Economists and Analysts (Jul 22); Communications and Presentation Skills for Business Economists and Analysts (Jul 23-24)
- Oct 10-13 NABE Annual Meeting, Washington, DC

More NABE and Chapter Events on the full NABE Calendar
Members Only: Podcast recordings of past NABE webinars

Other Items of Interest
http://www.national-economists.org/

LINKED IN Networking Opportunity
The NEC **Linked In** group is only for current NEC members. If you are interested in joining the group, please go to: [http://www.linkedin.com/e/gis/819767](http://www.linkedin.com/e/gis/819767). You will click on the link stating that you want to join the group, and assuming that your membership is up-to-date, someone will approve your entry into the NEC Linked In group.

**Wharton Club**

Wharton Club and NEC partner for some events. This allows them to attend our events and us to attend theirs at either Member rates or preferential rates. Please check their website for any offerings open to NEC Members.  [http://www.whartondc.com/](http://www.whartondc.com/)  Click on Events.

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**INSTITUTIONAL MEMBERS FOR 2015**

- **The Heritage Foundation**, [http://www.heritage.org](http://www.heritage.org)
- **Nathan Associates, Inc.**, [http://www.nathaninc.com](http://www.nathaninc.com)
- **District of Columbia Office of Revenue Analysis** [http://cfo.dc.gov/cfo/site/default.asp](http://cfo.dc.gov/cfo/site/default.asp)
- **Investment Company Institute** [http://www.ici.org](http://www.ici.org)
- **The Group of Thirty** [http://www.group30.org](http://www.group30.org)
- **National Association of Realtors** [http://www.realtor.org](http://www.realtor.org)
- **Manufacturers Alliance/MAPI** [http://www.mapi.net/](http://www.mapi.net/)
- **George Mason University, School of Public Policy** [http://policy.gmu.edu/](http://policy.gmu.edu/)
PROFESSIONAL OPPORTUNITIES

(You will need your login information to access the Members’ Only area in this part of the site www.national-economists.org (Click the tab for Member Log In on the left side of the page)

Please see the website for positions available. We make every effort to ensure timeliness and accuracy of the positions posted. You may also view below.

(Current as of 6-1-15)

Research Economist Opportunity at the SBA Office of Advocacy's Office of Economic Research

The Office of Economic Research (OER) within SBA’s Office of Advocacy is currently looking for a Research Economist. Candidates with doctoral degrees in Economics or a similar field are preferred but both masters and doctoral candidates with applied economics experience are encouraged to apply.

The Office of Advocacy of the U.S. Small Business Administration is the small business watchdog of the federal government. As federal representative of the nation's 29 million small businesses, Advocacy works to reduce the burden of federal policies on small firms and encourages policies that support small businesses. The office examines the role and status of small business in the economy and presents their views to federal agencies, Congress, and the White House. The office is the source for small business research and statistics, and it funds research into small business economic issues.

Appointed by the President and confirmed by the Senate, the Chief Counsel for Advocacy directs the office. As a representative for the nation’s small businesses, the Chief Counsel independently advocates on issues identified through economic research, policy analyses, and outreach. The Chief Counsel is supported by a team of economists, lawyers, and communications professionals in Washington, D.C., plus 10 regional advocates located around the U.S.

Office of Economic Research. The Office of Economic Research is one of Advocacy’s five sub-offices. OER’s economists conduct research documenting the importance of small businesses to the United States economy, assess economic and policy issues of relevance to small firms and their owners, and provide economic analysis of proposed federal regulations. Research Economists report to the Director of Research / Chief Economist.

Responsibilities of the Research Economist include:
Communicating authoritative analyses to senior leadership of Advocacy and/or outside constituents on economic issues salient to small businesses
THE NATIONAL ECONOMISTS CLUB                                           July 2015
Conducting independent research, creating research topics for, and/or coordinating the work of contractors on projects involving economic and/or federal regulatory analysis
Creating economic research products such as research reports, research summaries, data tabulations, fact sheets, talking points, and briefing papers
Disseminating research results by presenting at briefings and conferences, providing testimony, etc.
Working independently or with other economists on a wide-breadth of self-conceptualized small business research issues publishable through the Office of Advocacy and/or in academic journals.

Required skills for the Research Economist include:
Strong analytical, research, and methodological skills
Strong understanding of economic concepts and their application to policy
Ability to obtain, analyze, and interpret diverse information from complex data sources
Experience with statistical and presentation software including Stata, Excel, and PowerPoint
Ability to complete quick-turnaround assignments in a dynamic work environment

Why Advocacy?
Advocacy values career growth and will support your professional development.
Advocacy encourages economists to attend research conferences, makes extensive training available, and offers the option develop your own professional development plan
We have great work-life balance at the Office of Advocacy.
Advocacy respects your time and encourages teammates to work efficiently not endlessly.
Your work environment will include friendly colleagues and a supportive leadership team.
Advocacy prides itself in its unique structure and open environment that allows every team member to have a say – it is the sum of all of our parts that make Advocacy effective

Applicants should send a resume and cover letter to Natalyn Tart at natalyn.tart@sba.gov. Please put ‘Research Economist’ in the subject line of your email. (03/15)

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Petroleum Economist

Responsibilities will include:

• Formulate and conduct objective economic analysis and research on energy related issues affecting the petroleum industry to inform senior management, to support a range of internal clients, and to support company/industry positions.

• Assist in preparing presentation materials for internal and external meetings, projects and conferences.

• Translate complex analysis into clear and concise assessments.

• Provide commercial support to corporate projects.

Qualifications:

Required Education: Minimum of Master’s Degree in Economics, energy economics or relevant discipline.

Required Experience: 5-7 years experience in Oil and Gas Industry.

Other Skills:
• Demonstrated knowledge/expertise in downstream operations and policy issues is required.

• Demonstrated knowledge of crude oil and refined product market dynamics

• Excellent interpersonal skills and intellectual curiosity.

• Strong initiative/self-motivation

• Attentive to detail, good problem-solving skills, thorough understanding of economic principles, and the ability to apply these principles and know-how to forecasting, market analysis and policy evaluation.

• Excellent written and oral communication skills.

• Ability to handle multiple issues concurrently, prioritize, coordinate efforts among teams, segments, and departments.

Application Link:


(0315)
**NEC Welcomes New Members**

*New NEC Members since publication of the June 2015 Newsletter:*

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Organization</th>
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<tbody>
<tr>
<td>Douglas Hurst</td>
<td>Economic Advisor</td>
<td>Institute for Military Support to Governance</td>
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<tr>
<td>Jared Fronk</td>
<td>Financial Economist</td>
<td>FDIC</td>
</tr>
<tr>
<td>David Ballard</td>
<td>Sr Economist (Aviation)</td>
<td>GRA, Inc</td>
</tr>
<tr>
<td>Robert Ebel</td>
<td>Consultant</td>
<td>Self Employed</td>
</tr>
<tr>
<td>Drew Driscoll</td>
<td>Financial Analyst</td>
<td>FDIC</td>
</tr>
<tr>
<td>Brooke Ousterhout</td>
<td>Student</td>
<td>University of Illinois-Chicago</td>
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"Does Fiscal Policy Matter?"

Summary of Remarks by
Bill Hoagland
Senior Vice President, Bipartisan Policy Center
March 26, 2015

Budget resolutions have been and will likely always be a political document, the future of the 40 year old process, might verge even further away from guiding serious fiscal policy decision-making and lean even more into the political messaging arena.

Mr. Hoagland stated he was not sure that political posturing via budget resolutions is the best formula for setting fiscal policy for those outside the beltway. He asked whether the political system is capable of making changes that will ensure continued success in a world of greater global competition and technological change and “is there a crisis in democracy?”

The message that Congress is sending as it adopts these current budget resolutions:

1. Republicans in control of Congress can pass a budget, while Democrats could not over the last five years.
2. Republicans will balance the budget in 10 years or less without increasing taxes.
3. The economy will grow and expand with this budget in place.
4. Importantly, Republicans will repeal the Affordable Care Act – Obamacare.

The message may also get a little confused when you understand that the budgets effectively undoes the 2011 Budget Control Act’s touted spending caps on national security by nearly $100 billion without any offsets.

Mr. Hoagland stated he truly believes that a majority of the Congress believes that fiscal policy matters and that the need to reduce our public debt long-term is essential for our economic future. They just cannot agree on a realistic path forward, at what pace and to what a prudent level of official debt to GDP should be?

The fiscal path we are on – while significantly improved following the 2008-09 meltdown – is still a path of increasing public deficits and debt.

The GOP budget correctly focus on the broad category of spending that must be addressed if this level of debt is to be reduced in the future – entitlements.

The economic benefits of reducing debt and deficits, the dynamic scoring issue. In the aggregate the CBO/JCT model estimates that both the House and Senate resolutions would in the long-run have a positive impact on the economy.
However, the same model indicates that in the near term thru 2018, the resolutions would actually have a negative impact on the economy adding nearly $50 billion to debt and deficits.

For all practical purposes the budget resolutions do not directly address but simply set up what are called “reserve funds” – if you like sense of the Congress that the issue should be addressed with one stipulation that the fix not add to debt or deficits. The hard decisions are effectively not addressed but delayed to a later time.

G. William Hoagland joined the Bipartisan Policy Center (BPC) in September 2012 as senior vice president. In this position he helps direct and manage fiscal, health, and economic policy analyses for BPC. Before joining BPC, he served as CIGNA Corporation’s vice president of public policy beginning in 2007 working with CIGNA business leaders, trade associations, business coalitions, and interest groups to develop CIGNA policy on health care reform issues at both the federal and state levels.

Prior to joining CIGNA Hoagland completed 33 years of federal government service, 25 spent as staff in the U.S. Senate. From January 2003 to January 2007, he served as the director of budget and appropriations in the office of Senate Majority Leader Bill Frist, M.D. (R-TN). In this role he served as a liaison to the leadership of the U.S. Senate and House of Representatives. He assisted in evaluating the fiscal impact of major legislation and helped to coordinate budget policy for the Senate leadership.

From 1982 until 2003, Hoagland was a staff member of the U.S. Senate Budget Committee, serving as that committee’s staff director from 1986 to 2003, reporting to Senate Pete V. Domenici (R-NM), chairman and ranking member during this period. He participated in major federal budget legislation including the 1985 Gramm-Rudman-Hollings Budget Deficit Reduction Act, the 1990 Omnibus Budget Reconciliation Act and the historic 1997 Balanced Budget Agreement.

In 1981 he served as the administrator of the Department of Agriculture’s Food and Nutrition Service and as a special assistant to the Secretary of Agriculture. He was one of the first employees of the then newly created Congressional Budget Office in 1975, working with its first director, Alice Rivlin.

The 1997 and 2005 National Journal listed him as one of the Washington 100 Decision Makers and referred to him as a “bottom-liner who in not a hard-liner.” Roll Call, the daily publication of Capitol Hill consistently named Hoagland as one of the top 50 Hill Staffers. In 2002, he received the James L. Blum Award from Distinguished Service in Budgeting. The National Association of State Budget Officers honored him in 2004 with its Leadership in Budgeting Award and in 2006 he was inducted as a fellow in the National Academy of Public Administration.

Hoagland is an affiliate professor of public policy at the George Mason University and a board member of the Committee for a Responsible Federal Budget; the National Academy of Social Insurance; and the National Advisory Committee to the Workplace Flexibility 2010 Commission. In 2009 he was appointed to the Peterson-Pew Commission on Budget Reform examining the overall structure of the budget, authorization, and appropriations process and was a member of the Bipartisan Policy Center’s Debt Reduction Task Force that published “Restoring America’s Future” in November 2010.

Rapporteur: Donald Cotchen
"BP Energy Outlook"

Summary of Remarks by
Mr. Mark Finley,
General Manager, Global Energy Markets
British Petroleum (BP)
April 9, 2015

Mr. Finley summarized the most recent annual BP Energy Outlook. By 2035, the world’s population is projected to reach 8.7 billion, which means an additional 1.6 billion people will need energy. GDP is expected to more than double, with non OECD Asia contributing nearly 60% of that growth.

China and India are key drivers of non OECD growth and are projected to grow by 5.5% per annum (p.a.) between 2013 and 2035. Primary energy consumption increases by 37% between 2013 and 2035, with growth averaging 1.4% p.a.. Virtually all (96%) of the projected growth is in the non OECD, with energy consumption growing at 2.2%.

The projected growth rate of global energy consumption is significantly slower than the recent trend (2.4% p.a. for 2000-13). This slowdown is most marked in non OECD Asia. This reflects the end of the phase of rapid growth in energy demand in developing Asia, centered on China, driven by industrialization and electrification.

The fading impact of industrialization is apparent in the split of primary energy consumption by sector. Industry has been the fastest growing sector since 2000, averaging 2.7% p.a., but projected growth slows to 1.4% p.a.

Coal suffers a sharp change in fortunes, from being the fastest growing fossil fuel since 2000 (3.8% p.a.), to the slowest growing fuel from 2013 to 2035 (0.8% p.a.). This reflects the slowing of coal based industrialization in Asia, compounded by the effects of environmental regulations and low gas prices in key markets.

The fastest fuel growth is seen in renewables (6.3% p.a.). Nuclear (1.8% p.a.) and hydroelectric power (1.7% p.a.) grow faster than total energy.

Gas gains share steadily, while the shares of both oil and coal fall. By 2035 all the fossil fuel shares are clustered around 26-28% with no single dominant fuel a first since the Industrial Revolution. Fossil fuels in aggregate lose share but remain the dominant form of energy in 2035 with a share of 81%, down from 86% in 2013.

Among non-fossil fuels, renewables (including biofuels) gain share rapidly, from around 3% today to 8% by 2035, overtaking nuclear in the early 2020s and hydro in the early 2030s. Roughly one third of the increase in energy demand is provided by gas, another third by oil and coal together, and the final third by non-fossil fuels. In the OECD, declines in oil and coal are offset by increases in gas and renewables, in roughly equal parts. Growth in non-OECD energy is evenly spread, with roughly a quarter each for oil, gas, and coal and non-fossil fuels.
Power generation is expected to account for an ever increasing share of primary energy consumption as the world continues on a long term trend of electrification: the share rises from 42% today to 47% by 2035. Power generation is the one sector where all fuels compete and so will play a major role in how the global fuel mix evolves. There have been some rapid shifts in fuel shares in power generation in the past: oil gaining in the 1960s and losing in the 1970s; nuclear picking up in the 1970s/80s and falling in the 2000s; gas rising through the 1990s and 2000s. In the Outlook, the largest shifts are the increase in the renewables share and the decline in the coal share. The outcome by 2035 is a more balanced and diversified portfolio of fuels for power generation. Coal remains the dominant fuel, accounting for more than a third of the inputs to power generation, but that share is down from 44% today and the gap between the shares of coal and of other fuels narrows significantly.

Continuing declines in energy intensity, the broadest indicator of improving energy efficiency across the economy lead to a marked widening in the gap between GDP and energy consumption. Changes in the fuel mix with the shares of gas and renewables increasing also lead to a divergence between energy consumption and emissions, but this gap increases only gradually.

World primary energy production grows at 1.4% p.a. from 2013 to 2035, matching the growth of consumption. Growth is spread across all regions with the exception of Europe. South and Central America shows the fastest rate of growth (2.1% p.a.), while the largest increment comes from Asia Pacific, providing 45% of the increase in global energy production. North America is the second largest source of growth, and remains the second largest regional energy producer. New sources of energy, aided by improved technology and productivity, make a significant contribution to supply growth. Renewables, shale gas, tight oil and other new fuel sources in aggregate grow at 6% p.a. and contribute 45% of the increment in energy production to 2035.

The future growth paths of China and India represent a major source of uncertainty. Our low GDP case assumes China and India grow at an average rate of 4% p.a. over the projection period, compared with 5.5% p.a. in the base case. It also includes the trade and other spill-over effects of lower growth in these two countries on the rest of the world.

In the low growth case, GDP in non OECD Asia is 25% lower than in the base case by 2035, and world GDP is 13% lower. World GDP grows at a little below 3% p.a., compared with 3.5% p.a. in the base case. World energy consumption grows at 1% p.a. rather than 1.4% p.a. By 2035, global energy demand is 8.5% (1.5 billion toe) lower than in the base case. This is roughly equivalent to the total energy demand of the entire European Union in 2035.

Mark Finley directs BP’s long- and short-term analysis of global oil markets. He manages the annual production of the BP Statistical Review of World Energy (now in its 60th year—www.bp.com/statisticalreview). Mr. Finley conducts and manages strategic energy market research; prepares written briefs and presentations for executive management. As well he presents BP’s views on global energy markets to internal and external audiences including governments, BP customers and the media.

Rapporteur: Don Cotchen
"The Supply Side of Health Care"

Summary of Presentation by
Dr. Jeffrey F. Werling, Executive Director
Inforum/University of Maryland
May 14, 2015

There is a common assertion that health care is over one-sixth (or about 17 percent) of the economy. This conclusion, however, is based only on a measure of health care demand. It is much more difficult to identify a corresponding ratio in the supply side data of the economy, that is, in terms of value added and employment.

Dr. Werling described his team’s work that reconciled information about the supply and demand sides of the national health sector. His team used input-output techniques to link the final demand values from the National Health Expenditure Accounts (NHEA) to domestic production and imports of commodities, industry value added, and industry employment. They translated NHEA levels by spending categories (hospitals, physicians, drugs, devices, insurance, construction, investment, research, etc.) into equivalent National Income and Product (NIPA) final demand concepts and then translated these products and services expenditures into final demand by commodity. Input-output accounting was used to determine, by sector, the total output, value added, and employment levels required to satisfy health care demand. The value added and employment levels are identified not only for medical service sectors but also for medical manufacturing industries and for supporting sectors such as distribution, support services, and government production. It was found that in 2012, health care production required about 15.4 percent of total value added and 18.7 percent of civilian employment. In addition, domestic health care demand required about 1.5 percent of GDP in imports.

There are a number of possible applications of this supply side data that would be useful to study. It would be interesting to examine the historical period in greater detail to investigate further the types of jobs and wages for workers who produce health care. For example, it may be possible to provide an employment breakdown by occupation. Also, industry employment data could be combined with health care industry spending estimates and price deflators to generate estimates of health care labor productivity. Dr. Werling and his team at Inforum also plan to use their approach, CMS’s annual short-run NHE projections, and the LIFT model projections to evaluate the labor needed to support their health spending projection over the next 10 years. Finally, their approach and the LIFT model could be used to evaluate the long-run (75 years) health spending projections and the implications on potential U.S. economic growth. The work appeared in the April 2014 Survey of Current Business, the journal of the U.S. Bureau of Economic Analysis. It is available at: http://www.bea.gov/scb/pdf/2014/04%20April/0414_supply_side_of_health_care.pdf

Jeff Werling is Executive Director of Inforum which is a Research Center within the Department of Economics at the University of Maryland at College Park, MD. In addition to managing the day-to-day activity at Inforum, he serves as principal investigator for special projects applying Inforum modeling systems. He has completed recent studies on the economic implications of energy policy, immigration, exchange rate fluctuations, and port disruptions due to terrorist strikes. Jeff also teaches an undergraduate course in economic development. Previously, he held positions as an international and industry economist with the National Electrical Manufacturers Association (NEMA), the Manufacturers Alliance (MAPI), and the WEFA Group (now Global Insight). Jeff received a PhD in economics from the University of Maryland in 1992.

Rapporteur: Nasir Khilji
"Bitcoin and Other Currencies Based on Block Chains"

Summary of Remarks by
Norbert Michel, Ph. D.
Research Fellow in Financial Regulations
Thomas A. Roe Institute for Economic Policy Studies
The Institute for Economic Freedom and Opportunity
The Heritage Foundation

May 28, 2015

Bitcoin is the first successful digital privately issued currency in part because its underlying technology precludes the reuse or copying of individual bitcoins. A decentralized network effectively maintains a database that authenticates all bitcoin transactions. The database is referred to as the “block chain”. The block chain authenticates each transaction to ensure that there is no double spending. Every bitcoin in existence is associated with an address derived from a public key with a private key pairing which is what is owned. This authentication process is also referred to as “mining” because the process also creates new bitcoins for people who maintain the network. They are rewarded with new bitcoins.

With annual global remittances of more than $430 billion annually it is easy to see how Bitcoin has grown. Prior to Bitcoin’s block chain, anyone who wanted to send money to another person via the Internet had to use a third party such as PayPal or MasterCard; a formal banking-type relationship. Bitcoin’s underlying technology allows electronic transfer of funds without a trusted third party and without some of the fees associated with those third parties.

Dr. Michel argues that what makes “policy-people” nervous about Bitcoin is that Bitcoin is a medium of exchange. There is an instinct to assume that “government” needs to be the only source of money. Dr. Michel suggests that this assumption needs to be rationally balanced by the desire for economic freedom. Dr. Michel asserted that: “Mutually beneficial exchange is the central element of economic freedom, and this centrality extends to the right to choose a preferred medium of exchange.”

Bitcoin is not legal tender. In many cases monies were common tender before they were legal tender. Legal tender laws often came after common tender to protect government monopolies. The central argument for competing currencies stems from the argument for free enterprise and economic freedom.

Most of the federal regulations that apply to Bitcoin are the same BSA and AML that apply to other financial institutions. Fin CEN (financial crimes enforcement network) has made it clear that they will treat bitcoin transfers just like any other electronic funds transfer. Dr. Michel argues that regulations should be activity specific rather than technology specific. The nonprofit organization Coin Center has proposed such a framework that serves as an excellent guide for both state and federal regulators.

The current regulatory framework has allowed people to start Bitcoin related businesses and has not stopped people from using bitcoins. Regulators are not currently treating individuals as money transmitters but there is
no guarantee that that will continue. Long term policymakers should ensure that financial firms are not forced to act as federal law enforcement officials.

Technological innovation and economic freedom can help society progress regardless whether it is for the best goods and services or for best money. Broadly speaking the policy that is relevant to money innovation is to remove all barriers to entry in the market for innovative money.

Norbert J. Michel, PhD the Heritage Foundation’s research fellow in financial regulations, studies and writes about financial markets and monetary policy, including the reform of Fannie Mae and Freddie Mac. Working in Heritage’s Roe Institute for Economic Policy Studies, Michel also focuses on the best way to address difficulties at large financial companies (the “too big to fail” problem). Before rejoining Heritage in 2013, Michel was a tenured professor at Nicholls State University’s College of Business, teaching finance, economics and statistics at the AACSB-accredited school in Thibodaux, La. His earlier stint at Heritage was as a tax policy analyst in the think tank’s Center for Data Analysis from 2002 to 2005. He previously was with the global energy company Entergy, where he built a logistic regression model to help predict bankruptcies of commercial clients. His work allowed Entergy to better monitor monetary losses caused by customers’ delinquent payments.

Michel holds a doctoral degree in financial economics from the University of New Orleans. He received his bachelor of business administration degree in finance and economics from Loyola University. He currently resides in Alexandria, VA.

Two recent relevant articles written by Dr. Michel are: Has Bitcoin's Time Come? The Market--Not Public Policy--Should Decide Are We Ready to Use Bitcoin?

Rapporteur: Tom Trexler
"Enhancing Economic Opportunity for the Middle Class"

Summary of Remarks by
Karen Dynan
Assistant Secretary for Economic Policy and Chief Economist
U.S. Department of the Treasury

June 25, 2015

In her remarks, Dr. Dynan suggested that although the economy has progressed toward recovery from the Great Recession, the stagnation of wages for the middle class remains a critical longer-run challenge. Evidence for this includes:

1. The U.S. has experienced job growth of 255,000 jobs in the past 12 months, compared to 210,000 in the 12 months prior and 190,000 in the 12 months preceding that. During this time, the unemployment rate dropped to 5.5% in May 2015 from its peak of 10.8% in 2009. Consumer sentiment also has rebounded to near pre-recession levels. Additionally, Blue Chip projections expect GDP to rebound after a weak first quarter.

2. Despite economic growth as a whole, the real average income for the bottom 90% in the United States has remained roughly flat since 1970. While Japan and France experienced similar growth trends, other nations such as Sweden and the UK saw more consistent positive income growth, indicating that this is not a universal phenomenon.

3. Contributing to the plight of the middle class is the increase in real total household income volatility over the past decade. Evidence suggests that there will be a further rise in volatility in the near future. Incomes for those who did not complete any college demonstrated the greatest increases in volatility.

4. The U.S. has lower income mobility than many other developed nations, which is problematic due to correlations between higher income and well-being, greater income mobility and social cohesion, and lower inequality and higher economic growth.

Building upon this foundation, Dr. Dynan discussed three potential causes for the stagnation of family incomes. These factors were labor productivity, the relationship between increases in productivity and increases in wages, and labor force participation. She noted that:

1. In the 1970’s real output per hour, and real average wage diverged with output increasing as wages remained flat due to increasing globalization, a declining real minimum wage, falling unionization, and the use of skill-based production technologies.

2. Aging Boomers, cyclical weakness, and longer-term trends led to a decrease in the labor force participation rate during the past decade. Notably, declining participation rates for male workers age...
25-54 have been observed for decades while female participation for the same age group stopped rising over 10 years ago, falling behind other developed countries.

Lastly, Dynan discussed the Treasury Office of Economic Policy’s research on infrastructure, student loans, and occupational licensing that could have positive implications for the middle class.

1. Noting that investment in infrastructure is a key determinant of productivity, Dynan advocated the implementation of public-private partnerships\(^1\).

2. Higher education is a determinant of both productivity and individual opportunity but student loans are growing quickly. Furthermore, delinquency rates for student loans have jumped in the past 5 years. Accordingly, income-based repayment programs can help borrowers.

3. Reforming occupational licensing to reduce unnecessary training and increase the portability of licenses, as outlined in the President’s budget proposal for 2016\(^2\), can lower barriers to employment and increase labor force participation.

Dr. Dynan began her career as a staff member at the Federal Reserve Board, rising to the rank of senior advisor. During her 17 years at the Fed, she worked on macroeconomic forecasting, analysis of household and real estate finance conditions, and the policy response to the recent financial crises. In 1998, she served as a visiting assistant professor at John Hopkins University and from 2003-2004 Dr. Dynan worked as a senior economist at the White House Council of Economic advisors. After leaving the Federal Reserve in 2009, Dr. Dynan served as co-director and vice president of the Economic Studies program at the Brookings Institution. Since 2013 she has lead the Office of Economic Policy at the U.S. Department of Treasury.

\(^1\)In April, the Office of Economic Policy released a white paper titled “Expanding the Market for Infrastructure Public-Private Partnerships”.

\(^2\)Occupational licensing reform information is located on page 7 of the 2016 budget proposal.

**Rapporteur:** Kathryn Bollman