# **\*\*Build America Bonds CP\*\***

## **How Build America Bonds Work**

Direct Payment Build America Bonds (BABs) bond that were created as a part of the 2009 Recovery Act (ARRA). BABs allow state and local governments to issue bonds, in the form of their own debt, to investors. The bonds can only be used for public capital projects, such as transportation infrastructure, hospitals, or public schools.

BABs state and local governments finance capital projects at a lower cost due to the government subsidization of interest paid. The interest subsidy is a rate of 35%. The hope is that issuers will create new jobs and stimulate the economy with new projects without having to go into further debt, but rather are profitable for state and local governments because of the low borrowing cost.

\*A subsidy is a sum of money granted by the government or a public body to assist an industry or business so that the price of a commodity or service may remain low or competitive. Note how the subsidy is granted to the investor, not to the states or to the projects themselves.

## **1NCs**

### General

#### Text: The United States federal government should subsidize interest payments for relevant sub-national authorities’ issuance of direct payment bonds for the exclusive financing of <insert>.

#### **BABs give states the capital to rebuild vital infrastructure**

CNN Money 10 (“Another blow to state budgets: Build America Bonds end,” December 22, 2010, http://money.cnn.com/2010/12/22/news/economy/build

\_america\_bonds/index.htm)

Under the Build America Bonds program, the agencies issue taxable bonds with the federal government subsidizing 35% of the interest payments.

The money has been used to rebuild highways, shore up bridges, upgrade rail systems and put up college dormitories.

"In some cases, it allowed them to go ahead with vital infrastructure projects that they needed," said Daniel Berger, senior market strategist at Thomson Reuters Municipal Market Data. "This has given them access to capital to fund these projects."

#### Using BABs for transportation infrastructure is popular

National Journal 11 (“Build America Bonds for Transportation,” March 7, 2011, http://transportation.nationaljournal.com/2011/03/build-america-bonds-for-transp.php)

You've got to give Sen. Ron Wyden, D-Ore., credit for trying. He wants to revive the administration's popular Build America Bonds program, which gave bond issuers generous tax credits and federal subsidies for infrastructure investments before it expired last year. Wyden has proposed limiting the bonds to transportation investments, thinking that a narrowly tailored program would garner bipartisan support and ease the pain of paying for a six-year surface transportation bill. He's gotten some interest from Sen. John Thune, R-S.D. Transportation Secretary Ray LaHood has said he will advocate for such a program with the administration.

#### **BABs can be used to fund all modes of transportation**

Wyden 7 (Ron, Oregon US Senator, “Wyden: "Build America Bonds,”

September 6, 2007, http://www.oregonwatchdog.com/pressrelease/

index.php/324)

As a former Secretary of Transportation, I know how vital it is for states to have adequate transportation infrastructure, said Dole. Increased funding for our roads, bridges, railroads and waterways directly translates into economic growth and more jobs. Even more importantly, it helps ensure that our infrastructure is safe, thereby preventing injuries and deaths.

Build America Bonds would be available to corporate and individual investors for purchase in different denominations, so that all Americans can have the opportunity to support upgrading America's transportation infrastructure. The resulting funds would be controlled by the states and could not be earmarked for Congressional pet projects. The Act ensures that money will be distributed in an equitable manner by requiring that each state receive at least 1 percent of the funds.

The U.S. Department of Transportation estimates that for every $1 billion in new transportation funding nearly 50,000 jobs created and an estimated $5.7 billion in economic activity is generated. In addition to creating jobs and roughly $285 billion in economic activity, the $50 billion infusion of cash from Build America Bonds can be applied to projects on all modes of transportation including roads, rail, ports, waterways and transit.

### HSR

#### Text: The United States federal government should subsidize interest payments for relevant sub-national authorities’ issuance of direct payment bonds for the exclusive financing of an express train infrastructure system.

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#### **BABs could fund HSR**

AHRSA 10 (American High Speed Rail Alliance, “FINANCING,” http://eunicecorbin.com/sample/advocacy/financing.html)

The American High Speed Rail Alliance supports ensuring sustainable funding sources adequate to build and operate a high speed and regional passenger rail network in the United States, including, but not limited to, a combination of federal, state and local funding, public/private partnerships, government-backed bonds, tax credits, tax incentives, and private sector investments.

The American High Speed Rail Alliance advocates for robust federal investment in building a high speed rail network in the United States. The Alliance defines high speed rail consistently with federal statute and the Federal Railroad Administration’s strategic plan for high speed rail.

(49 USC §26106(b)(4)) and Federal Railroad Administration, Vision for High-Speed Rail in America, April 2009, p.2)

Specifically, the Alliance will leverage its resources and relationships to:

Support a Major Investment in High Speed Rail in Surface Transportation Authorization

Modify Existing Funding & Financing Programs to Facilitate High Speed Rail

Support Enactment of Freight Rail Investment Tax Credits That Benefit HSR

Advocate for Annual Appropriations for High Speed Rail

Support a Major Investment in High Speed Rail in Surface Transportation Authorization

The American High Speed Rail Alliance will work with the leadership in the U.S. House of Representatives and the U.S. Senate to improve the High Speed Intercity Passenger Rail grant program in the next surface transportation authorization legislation to encourage high speed rail development in the United States. Modify Existing Funding & Financing Programs to Facilitate High Speed Rail

Modify Existing Funding & Financing Programs to Facilitate High Speed Rail

Rail Line Relocation. The Rail Line Relocation program, authorized at $350 million annually through fiscal year 2009, provides financial assistance to States (or political subdivision of a State) for local rail line relocation and improvement projects for the purpose of mitigating the adverse effects of rail traffic on safety, motor vehicle traffic flow, community quality of life and economic development. In addition, the capital grants program for Class II and Class III railroads, authorized at $50 million annually, provides financing for rehabilitating, preserving or improving railroad track (including roadbed, bridges, and related track structures) used primarily for freight transportation.

Railroad Rehabilitation and Improvement Financing (RRIF) Loans. The RRIF program, authorized to provide up $35 billion in federal loans, allows freight and passenger railroads and rail shippers to receive 35 year loans at federal interest rates. The RRIF program does not require an applicant for a direct loan or loan guarantee to provide collateral and does not require that an applicant seek financial assistance from another source before applying for a RRIF loan. Under the RRIF program, USDOT may defer payments on a loan for up to six years and there is no limit on the amount that can be used for one direct loan or loan guarantee.

The Alliance is proposing language making this program more favorable to HSR projects through modifications to collateral requirements and the credit risk premium.

Build America Bonds. The Build America Bonds program is a financing tool created by the American Recovery and Reinvestment Act to allow state and local governments to obtain funding at lower borrowing costs, for new capital projects such as development of transportation infrastructure, construction of schools and hospitals, and water and sewer upgrades. Build America Bonds, which are taxable bonds, are designed to appeal to a broader set of investors than traditional tax-exempt bonds. Under the Build America Bonds program, the Treasury Department makes a direct payment to the state or local governmental issuer in an amount equal to 35 percent of the interest payment on the Build America Bonds. Potential new investors include pension funds that typically do not hold tax exempt bonds and foreign investors. These investors have been important additions to the market for municipal debt.

The Build America Bonds program expires at the end of 2010. The Alliance supports extending the program and modifying the program to encourage high speed rail development.

### **Army Corps/Ports**

#### Text: The United States federal government should subsidize interest payments for relevant sub-national authorities’ issuance of direct payment bonds for the exclusive financing of waterway development projects.

#### Using BABs for transportation infrastructure is popular

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#### Army Corps ineffective– communication problems

Garrison, 10 (Joey, Nashville City Paper, “Army Corps Acknowledges May Flood communication failures”, 11-23-10, http://nashvillecitypaper.com/content/city-news/army-corps-acknowledges-may-flood-communication-failures)

In a report released nearly seven months after May’s historic flood, the U.S. Army Corps of Engineers admits it failed to communicate effectively with the National Weather Service during critical moments as the disaster unfolded in Middle Tennessee. “That was a blunt, brutal fact,” said Maj. Gen. John Peabody, commander of the corps’ Great Lakes Division, who delivered a similar message during a special U.S. Senate hearing in July on the region’s record flood. The acknowledgement is a recurrent theme among many of the 20 recommendations for improvement found in a 200-page After Action Review Report released on Tuesday by the corps. The study, which tapped corps officials from the Nashville district and outside the area, is a more comprehensive version of a preliminary account of the corps’ actions during May’s flood unveiled over the summer. “This event clearly exposed inadequacies in our system of flood response, primarily but not exclusively in the area of communications,” Peabody said. “I’m responsible for this. We’re going to fix this.”

#### **BABs can be used to fund ports and waterways**

Wyden 7 (Ron, Oregon US Senator, “Wyden: "Build America Bonds,”

September 6, 2007, http://www.oregonwatchdog.com/pressrelease/

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As a former Secretary of Transportation, I know how vital it is for states to have adequate transportation infrastructure, said Dole. Increased funding for our roads, bridges, railroads and waterways directly translates into economic growth and more jobs. Even more importantly, it helps ensure that our infrastructure is safe, thereby preventing injuries and deaths.

Build America Bonds would be available to corporate and individual investors for purchase in different denominations, so that all Americans can have the opportunity to support upgrading America's transportation infrastructure. The resulting funds would be controlled by the states and could not be earmarked for Congressional pet projects. The Act ensures that money will be distributed in an equitable manner by requiring that each state receive at least 1 percent of the funds.

The U.S. Department of Transportation estimates that for every $1 billion in new transportation funding nearly 50,000 jobs created and an estimated $5.7 billion in economic activity is generated. In addition to creating jobs and roughly $285 billion in economic activity, the $50 billion infusion of cash from Build America Bonds can be applied to projects on all modes of transportation including roads, rail, ports, waterways and transit.

### **Disabilities**

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## **Solvency**

### Generic

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### **Airports**

#### **Several airports have already been built using BABs**

USDOT 10 (United States Department of Transportation, “

The Recovery Act also includes provisions for Build America Bonds. These bonds provide funding for state and local governments to complete capital projects at lower borrowing costs through a federal subsidy equal to 35% of interest paid. Again, airports are using reduced interest payments on bonds to extend the improvement power of their capital investments.

Many airports are issuing taxable Build America Bonds instead of traditional municipal tax-free bonds to reduce their debt payments. Between March 2009 and June 2010, 43 airport sponsors issued approximately $14 billion in bonds, and 75% of those bonds benefit from Recovery Act provisions.

#### **BABs solves airport infrastructure**

Principato 11 (Greg, President, Airports Council International-North America, “Extending AMT is an even better idea,” March 7, 2011, http://www.aci-na.org/blog/2011/03/07/extending-amt-is-an-even-better-idea/)

We were pleased to hear Sen. Ron Wyden (D-Ore.) talk about resurrecting the Build American Bonds program for the transportation industry during the Budget Committee’s hearing on Thursday. Airports utilized roughly $2 billion in Build American Bonds for large-scale projects during 2009 and 2010 and would welcome an authorization for the program during 2011. Airports’ use of the Build American Bonds program was limited since these bonds can only be used for projects deemed public purpose. An expansion of the types of infrastructure projects that could be funded by Build American Bonds would also be welcome by the airport community.

Airports are increasingly turning to bonds as a means of financing projects; however, in most cases airports use private activity bonds. During 2009 and 2010, these bonds were exempt from the Alternative Minimum Tax (AMT), which significantly lowered the cost of debt. In fact, over the course of the two years, airports sold over $11 billion in such bonds with savings totaling $1 billion. As Senator Wyden and his collegues look to help the transportation industry leverage bonds, they need to look no further than exempting private activity bonds from the AMT to help build and maintain airport infrastructure.

### Bridges

#### **BABs funded 40-50 bridge repairs three times faster**

CDOT 11 (Colorado Department of Transportation, “CDOT Launches Website for Colorado Bridge Enterprise Projects,” http://www.coloradodot.info/news/2011news/10-2011/cdot-launches-website-for-colorado-bridge-enterprise-projects)

In December 2010, the CBE issued $300 million in federally subsidized Build America Bonds. With the FASTER dollars and bonds, the CBE estimates that it will repair or replace 40-50 bridges by the end of 2013. Without bonding, work would have progressed more slowly as it would be limited to the funding available from the yearly collection of bridge safety registration fees. This pay-as-you-go approach could take two to three times longer.

### **High-Speed Rail**

#### **BABs could fund HSR**

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The Build America Bonds program expires at the end of 2010. The Alliance supports extending the program and modifying the program to encourage high speed rail development.

### **Highways**

#### BABs solve highway upgrades-Illinois proves

FHA 10 (Federal Highway Administration (US Department of Transportation), “Project Finance Primer 2010,” http://www.fhwa.dot.gov/ipd/finance/

resources/general/index.htm#babs)

The Illinois State Toll Highway Authority (ISTHA) issued $780 million in BABs in 2009 (two separate issuance) to finance a portion of its Congestion Relief Program (CRP) Open Roads for a Faster Future. The total cost of the program, which was initiated in 2005, is currently estimated at $6.1 billion (Illinois Tollway, 2009). The plan of finance for the program is $3.5 billion from bond proceeds, all of which have been issued, and the remainder is from authority funds.

CRP investments to the ISTHA system include (a) converting the entire system to open road tolling (complete), (b) adding capacity by widening 88 miles of the system, (c) rebuilding or rehabilitating over 95 percent of existing pavement, (d) extending I-355 south from I-55 to I-80 (complete), and (e) upgrading and adding interchanges to meet the needs of local communities (Loop Capital Partners & J.P. Morgan, 2009).

As of September 2009, $4.7 billion of the program had been awarded, and completion of the program is scheduled for 2016 (Illinois Tollway, 2009). ISTHA's 2010 budget included $227.5 million in expenditures for the CRP in 2010. ISTHA estimates that using BABs resulted in savings of $90 million.

### Public Transit

#### **BABs can be used to fund public bus and rail systems**

Bloomberg 10 (“Dallas Transit Authority's Borrowing Cost May Fall Even After Rating Cut,” September 27, 2010, http://www.bloomberg.com/news/2010-09-27/dallas-transit-authority-s-borrowing-cost-may-fall-even-after-rating-cut.html)

Dallas Area Rapid Transit, which hauls 220,000 passengers a day across 700 square miles, is selling $729 million of taxable Build America Bonds to expand its bus and rail system in the week’s largest municipal bond offering.

### Rural Roads

#### **BABs meet specific rural road needs**

CSG 11 (Council of State Governments, “Rural Transportation Needs,” January 2011, http://knowledgecenter.csg.org/drupal/system/files/Rural\_Transportation

\_Needs.pdf)

Funding Transportation: With the continuing erosion of the gas tax as the main revenue source to fund transportation improvements, some states and localities around the country are experimenting with alternative finance. But rural transportation advocates are concerned that some of the most commonly mentioned ones—tolling, congestion pricing, public-private partnerships and vehicle miles traveled charges—might not work for rural states and communities. Collection costs and the lack of traffic density in rural states make it unlikely that they would be able to raise significant funds from tolling unless tolls were set very high, in which case motorists would likely divert to other roads. For the same reasons, private companies would not be able to get a return on investment from funding toll road projects in these areas as part of public-private partnerships. Charging motorists a fee for each mile they travel—rather than each gallon of gas they buy— would also be problematic for rural states because of the long distances residents must often travel. From a new federal authorization bill, rural states will seek proportionate funding growth, increased funding, greater flexibility on the use of federal funds and more programs like Build America Bonds, which stand to benefit both urban and rural areas.

### Water Pipelines

#### BABs awarded more than $100 million to water pipelines

ENR Mountain States 4/23 (news corporation serving Colorado, Idaho, Montana, Utah and Wyoming, “Southern Delivery System Pipeline Working Its Way Toward Colorado Springs,” April 23, 2012, http://mountainstates.construction.com/

mountainstates\_construction\_projects/2012/0423-water-supply-boostfor-southern-colorado.asp)

The SDS will bring Arkansas River water stored in the Pueblo Reservoir, located west of the city of Pueblo, north to Colorado Springs by means of a 62-mile underground steel pipeline. That water will serve the cities of Colorado Springs, Fountain, Security and Pueblo West.

More than 100 Colorado companies are already at work on the project, which is owned by Colorado Springs Utilities (CSU), and more than $100 million in contracts have been awarded. Funding comes from Build America Bonds and rate hikes for area water users.

## **BABs Good**

#### Despite not being extended, still bipartisan support for BABs

USCM 11 (United States Conference of Mayors, “Support Grows to Revive Build America Bonds Program,” February 14, 2011, http://www.usmayors.org/usmayor

newspaper/documents/02\_14\_11/pg11\_bonds.asp)

Approved two years ago as part of the economic stimulus package, the BAB program proved to be very popular among mayors and other local officials in that it provided a direct federal subsidy to local governments equal to 35 percent of their interest payments. This not only reduced their borrowing costs but in many cases enabled local governments to take action on large'scale infrastructure projects while creating hundreds of thousands of jobs. Over $181 billion in BABs have been issued since 2009 to help build or renovate critical infrastructure at the local level including hospitals, schools, bridges, roads, water and sewage systems and transit projects.

Because the program was so successful, several attempts were made to extend it. President Barack Obama included language in his 2011 budget request to make the program permanent, the House passed two separate jobs bills last year extending the program and ten Democratic Senators urged that language be included in the tax extenders legislation that passed at the end of last year. But due to strong opposition led by Senator Jon Kyl (AZ), the extension was not approved, so the program expired on December 31, 2010.

Although partisan politics played a role in blocking an extension of the program, it has for the most part enjoyed strong bipartisan support in the past. It appears for now that bipartisan support is building to reinstate the program.

#### **Key support for reviving BABs**

Office of Congressman Connolly 12 (“Release: Congressman Connolly Introduces Build America Bonds Bill in House of Representatives to Spur Infrastructure Investment and Job Creation,” February 10, 2011, http://connolly.house.gov/news/

release-congressman-connolly-introduces-build-america-bonds-bill-in-house-of-representatives-to-spur-infrastructure-investment-and-job-creation/)

Congressman Gerry Connolly today introduced legislation to reinstate the Build America Bonds program to help state and local governments finance infrastructure improvements, including roads, transit, water systems, hospitals, and bricks and mortar projects, and create private-sector jobs.

Connolly’s legislation – H.R. 11 – would revive for two years the highly-successful bond program that expired at the end of 2010. Connolly noted that the public dollars invested in the bonds don’t reflect the actual value of the bonds, which are leveraged with private-sector funds to provide as much as 40 times their face value for infrastructure funding, and to create jobs.

The bill has the support of business, the construction industry, state and local governments, and the administration. Time Magazine called the program “one of the economic recovery effort’s biggest successes,” while the Wall Street Journal labeled the program a “success story.”

## Foreign Investors NB

#### **Foreign investor’s interest in BABs is growing**

Reuters 10 (http://www.reuters.com/article/2010/06/17/us-property-summit-buildamerica-bonds-idUSTRE65G5G520100617)

Over the last seven or eight months, foreign investors' interest has grown too, Brett said. A foreign investor's BABs inquiry jump-started a nearly $1 billion California deal last November, according to Brett.

Now investors in Europe, Asian financial centers such as Hong Kong and even the Middle East are looking into the bonds, including sovereign funds and central banks, he added.

The initial focus has been on big muni issuers such as Illinois and California, the leading BABs-sellers, mostly because deals totaling more than $250 million are the most cost-effective to sell abroad, Brett said.

Another California BABs deal of a total $3.4 billion in March saw "significant demand" from Europe and Asia, Brett said, adding that Citigroup had marketed the deal in 29 countries.

Overseas demand is ramping up despite political impasses over dealing with big budget holes in several states, including California, Illinois and New York.

#### **Foreign investors will invest in US infrastructure if bonds are created**

AGC of America 11 (Associated General Contractors of America, “THE CASE FOR INFRASTRUCTURE & REFORM,” May 20, 2011, http://www.agc.org/galleries/news/Case-for-Infrastructure-Reform.pdf)

International commercial banks, pension funds, life insurance companies and other similar institutions that cannot benefit from and/or hold tax-exempt private activity bonds have billions of dollars that they would love to invest in U.S. infrastructure. Given the overall economic, political and legal stability within the U.S., infrastructure investments represent the kind of guaranteed, low risk, long-term returns these institutions crave. Establishing Public Benefit Bonds would allow these institutions to invest their billions in U.S. infrastructure, instead of in overseas infrastructure projects, as many of them currently do.

### China

#### **China looking to invest in U.S. infrastructure**

Reuters 11 (“Foreigners want America’s public assets,” December 5, 2011, http://blogs.reuters.com/muniland/2011/12/05/foreigners-want-americas-public-assets/)

It seems like foreign governments and corporations are craving U.S. public assets like toll roads, electrical grids and railways. In the case of our largest creditor, the Chinese government, they don’t want any more U.S. Treasuries, but they do want to own the hard assets that comprise our nation’s infrastructure.

Reuters Beijing bureau reported:

China may channel part of its huge pool of foreign exchange reserves into investment in U.S. infrastructure, including rail and transportation networks, Commerce Minister Chen Deming said on Friday.

“China is unwilling to take on too much U.S. government debt. We are willing to turn that money into investment,” he told U.S. Ambassador to China Gary Locke and U.S. businessmen.

Chen did not elaborate on how China might channel some of the country’s war chest of $3.2 trillion foreign currency reserves to invest in U.S. infrastructure, such as rail and transportation systems.

#### Increased foreign investment safeguards US-China conflict and increases relations

Rosen and Hanemann 11(Daniel H., Adjunct Associate Professor at Columbia University on the Chinese economy at the School of International and Public Affairs, and Thilo, Research Director at the Rhodium Group focusing on China’s macroeconomic development and the implications for global trade and investment flows, “An American Open Door? Maximizing the Benefits of Chinese Foreign Direct Investment,” May 2011, http://www.ogilvypr.com/files/anamerican

opendoor\_china\_fdi\_study.pdf)

In the liberal worldview, FDI fosters economic interdependence between countries and, by aligning economic interests, makes conflict less likely. Firms can stop trading with one another, and short-term portfolio investments can be withdrawn, but direct investments in factories and warehouses cannot be moved quickly. From this perspective, the likelihood of conflict between two countries is lower if there are high cross-border holdings of FDI. 66 Exchange between firms and people in one another’s economies, instead of through trade relations, fosters 62 trust and understanding. Perceptions of Japan in the United States morphed from “yellow peril” to reliable long-term partner as Toyota, Sony, and many other companies invested in communities instead of just exporting to U.S. households. In this sense, Chinese investment in the United States has great potential to promote better bilateral relations. Consider the efforts of American multinationals with operations in China in lobbying Washington for moderate China policies, and imagine a future in which Chinese multinationals do the same in Beijing to protect the value of their U.S. operations.

#### **Relations prevent war over Taiwan**

Desperes 1 (Senior Fellow at the RAND Corporation (John, China, the United States, and the Global Economy, p. 227-8)

Nevertheless, America's main interests in China have been quite constant, namely peace, security, prosperity, and a healthy environment. Chinese interests in the United States have also been quite constant and largely compatible, notwithstanding sharp differences over Taiwan, strategic technology transfers, trade, and human rights. Indeed, U.S.-Chinese relations have been consistently driven by strong common interests in preventing mutually damaging wars in Asia that could involve nuclear weapons; in ensuring that Taiwan's relations with the mainland remain peaceful; in sustaining the growth of the U.S., China, and other Asian-Pacific economies; and, in preserving natural environments that sustain healthy and productive lives. What happens in China matters to Americans. It affects America's prosperity. China's growing economy is a valuable market to many workers, farmers, and businesses across America, not just to large multinational firms like Boeing, Microsoft, and Motorola, and it could become much more valuable by opening its markets further. China also affects America's security. It could either help to stabilize or destabilize currently peaceful but sometimes tense and dangerous situations in Korea, where U.S. troops are on the front line; in the Taiwan Straits, where U.S. democratic values and strategic credibility may be at stake; and in nuclear-armed South Asia, where renewed warfare could lead to terrible consequences. It also affects America's environment. Indeed, how China meets its rising energy needs and protects its dwindling habitats will affect the global atmosphere and currently endangered species. China’s economic growth has slowed, while its social and environmental challenges have continued to mount. It faces difficult choices. The gains from economic liberalization have been waning. Painful institutional and political changes will be needed to sustain growth. Most immediately, political leaders will need to dismantle their counterproductive controls over the allocation of scarce capital, particularly through the state banking system. To restrain corruption, reform the tax system, and raise the revenues needed to pay for essential public works and services, China’s political leaders, lawmakers, regulators, and other officials will need to be made more openly and directly accountable to the people whose interests they claim to serve.

#### Conflict over Taiwan will escalate to global nuclear war

**Hunkovic 9** – American Military University [Lee J, 2009, “The Chinese-Taiwanese Conflict

Possible Futures of a Confrontation between China, Taiwan and the United States of America”, http://www.lamp-method.org/eCommons/Hunkovic.pdf]

A war between China, Taiwan and the United States has the potential to escalate into a nuclear conflict and a third world war, therefore, many countries other than the primary actors could be affected by such a conflict, including Japan, both Koreas, Russia, Australia, India and Great Britain, if they were drawn into the war, as well as all other countries in the world that participate in the global economy, in which the United States and China are the two most dominant members. If China were able to successfully annex Taiwan, the possibility exists that they could then plan to attack Japan and begin a policy of aggressive expansionism in East and Southeast Asia, as well as the Pacific and even into India, which could in turn create an international standoff and deployment of military forces to contain the threat. In any case, if China and the United States engage in a full-scale conflict, there are few countries in the world that will not be economically and/or militarily affected by it. However, China, Taiwan and United States are the primary actors in this scenario, whose actions will determine its eventual outcome, therefore, other countries will not be considered in this study.

### US Economy

#### Foreign investment sustains the US economy-increased exports

**Zhang, 5-**

(Kevin, Department of Economics, Illinois State University, “How Does FDI Affect a Host Country’s Export Performance? The Case of China,” <http://faculty.washington.edu/karyiu/confer/xian05/papers/zhang.pdf>)

An empirical assessment of the role of foreign direct investment (FDI) in a host country’s export performance is important, since exports have been for a long time viewed as an engine of economic growth. There is a widely shared view that FDI promotes exports of host countries by (a) augmenting domestic capital for exports, (b) helping transfer of technology and new products for exports, (c) facilitating access to new and large foreign markets, and (d) providing training for the local workforce and upgrading technical and management skills.

#### Economic growth is vital to prevent the collapse of U.S. hegemony.

**Khalilzad 11** — Zalmay Khalilzad, Counselor at the Center for Strategic and International Studies, served as the United States ambassador to Afghanistan, Iraq, and the United Nations during the presidency of George W. Bush, served as the director of policy planning at the Defense Department during the Presidency of George H.W. Bush, holds a Ph.D. from the University of Chicago, 2011 (“The Economy and National Security,” *National Review*, February 8th, Available Online at http://www.nationalreview.com/articles/print/259024, Accessed 02-08-2011)

Today, **economic and fiscal trends pose the most severe long-term threat to the U**nited **S**tates’ **position as global leader. While the U**nited **S**tates **suffers from fiscal imbalances and low economic growth, the economies of rival powers are developing rapidly. The continuation of these** two **trends could lead to a shift from American primacy toward a multi-polar global system, leading** in turn **to increased geopolitical rivalry and** even **war among the great powers**.

The current recession is the result of a deep financial crisis, not a mere fluctuation in the business cycle. Recovery is likely to be protracted. The crisis was preceded by the buildup over two decades of enormous amounts of debt throughout the U.S. economy — ultimately totaling almost 350 percent of GDP — and the development of credit-fueled asset bubbles, particularly in the housing sector. When the bubbles burst, huge amounts of wealth were destroyed, and unemployment rose to over 10 percent. The decline of tax revenues and massive countercyclical spending put the U.S. government on an unsustainable fiscal path. Publicly held national debt rose from 38 to over 60 percent of GDP in three years.

**Without faster economic growth and actions to reduce deficits, publicly held national debt is projected to reach dangerous proportions. If interest rates were to rise significantly, annual interest payments** — which already are larger than the defense budget — **would crowd out other spending or require substantial tax increases that would undercut economic growth**. Even worse, **if unanticipated events trigger** what economists call **a “sudden stop” in credit markets for U.S. debt, the U**nited **S**tates **would be unable to roll over its outstanding obligations, precipitating a sovereign-debt crisis that would almost certainly compel a radical retrenchment** of the United States **internationally**.

**Such scenarios would reshape the international order**. It was the economic devastation of Britain and France during World War II, as well as the rise of other powers, that led both countries to relinquish their empires. In the late 1960s, British leaders concluded that they lacked the economic capacity to maintain a presence “east of Suez.” Soviet economic weakness, which crystallized under Gorbachev, contributed to their decisions to withdraw from Afghanistan, abandon Communist regimes in Eastern Europe, and allow the Soviet Union to fragment. **If the U.S. debt problem goes critical, the U**nited **S**tates **would be compelled to retrench, reducing its military spending and shedding international commitments**.

We face this domestic challenge while **other major powers are experiencing rapid economic growth**. Even though **countries such as China, India, and Brazil** have profound political, social, demographic, and economic problems, their economies **are growing faster** than ours, **and** this **could alter the global distribution of power. These trends could in the long term produce a multi-polar world. If U.S. policymakers fail to act and other powers continue to grow, it is not a question of whether but when a new international order will emerge. The closing of the gap between the U**nited **S**tates **and its rivals could intensify geopolitical competition among major powers, increase incentives for local powers to play major powers against one another, and undercut our will to preclude or respond to international crises because of the higher risk of escalation**.

**The stakes are high. In modern history, the longest period of peace among the great powers has been the era of U.S. leadership**. By contrast, **multi-polar systems have been unstable, with their competitive dynamics resulting in frequent crises and major wars among the great powers. Failures of multi-polar international systems produced both world wars**.

**American retrenchment could have devastating consequences. Without an American security blanket, regional powers could rearm in an attempt to balance against emerging threats. Under this scenario, there would be a heightened possibility of arms races, miscalculation, or other crises spiraling into all-out conflict**. Alternatively, in seeking to accommodate the stronger powers, weaker powers may shift their geopolitical posture away from the United States. Either way, **hostile states would be emboldened to make aggressive moves in their regions**.

**As rival powers rise, Asia** in particular **is likely to emerge as a zone of great-power competition**. Beijing’s economic rise has enabled a dramatic military buildup focused on acquisitions of naval, cruise, and ballistic missiles, long-range stealth aircraft, and anti-satellite capabilities. China’s strategic modernization is aimed, ultimately, at denying the United States access to the seas around China. Even as cooperative economic ties in the region have grown, China’s expansive territorial claims — and provocative statements and actions following crises in Korea and incidents at sea — have roiled its relations with South Korea, Japan, India, and Southeast Asian states. Still, the United States is the most significant barrier facing Chinese hegemony and aggression.

**Given the risks, the U**nited **S**tates **must focus on restoring its economic and fiscal condition while checking and managing the rise of potential adversarial regional powers such as China**. While we face significant challenges, the U.S. economy still accounts for over 20 percent of the world’s GDP. American institutions — particularly those providing enforceable rule of law — set it apart from all the rising powers. Social cohesion underwrites political stability. U.S. demographic trends are healthier than those of any other developed country. A culture of innovation, excellent institutions of higher education, and a vital sector of small and medium-sized enterprises propel the U.S. economy in ways difficult to quantify. Historically, Americans have responded pragmatically, and sometimes through trial and error, to work our way through the kind of crisis that we face today.

The policy question is how to enhance economic growth and employment while cutting discretionary spending in the near term and curbing the growth of entitlement spending in the out years. Republican members of Congress have outlined a plan. Several think tanks and commissions, including President Obama’s debt commission, have done so as well. Some consensus exists on measures to pare back the recent increases in domestic spending, restrain future growth in defense spending, and reform the tax code (by reducing tax expenditures while lowering individual and corporate rates). These are promising options.

The key remaining question is whether the president and leaders of both parties on Capitol Hill have the will to act and the skill to fashion bipartisan solutions. Whether we take the needed actions is a choice, however difficult it might be. It is clearly within our capacity to put our economy on a better trajectory. In garnering political support for cutbacks, the president and members of Congress should point not only to the domestic consequences of inaction — but also to the geopolitical implications.

As the United States gets its economic and fiscal house in order, it should take steps to prevent a flare-up in Asia. The United States can do so by signaling that its domestic challenges will not impede its intentions to check Chinese expansionism. This can be done in cost-efficient ways.

While China’s economic rise enables its military modernization and international assertiveness, it also frightens rival powers. The Obama administration has wisely moved to strengthen relations with allies and potential partners in the region but more can be done.

Some Chinese policies encourage other parties to join with the United States, and the U.S. should not let these opportunities pass. China’s military assertiveness should enable security cooperation with countries on China’s periphery — particularly Japan, India, and Vietnam — in ways that complicate Beijing’s strategic calculus. China’s mercantilist policies and currency manipulation — which harm developing states both in East Asia and elsewhere — should be used to fashion a coalition in favor of a more balanced trade system. Since Beijing’s over-the-top reaction to the awarding of the Nobel Peace Prize to a Chinese democracy activist alienated European leaders, highlighting human-rights questions would not only draw supporters from nearby countries but also embolden reformers within China.

**Since the end of the Cold War, a stable economic and financial condition at home has enabled America to have an expansive role in the world. Today we can no longer take this for granted. Unless we get our economic house in order, there is a risk that domestic stagnation in combination with the rise of rival powers will undermine our ability to deal with growing international problems. Regional hegemons in Asia could seize the moment, leading the world toward a new, dangerous era of multi-polarity**.

### **R&D**

#### **FDI increases U.S. research and development-spurs innovation**

Icosa 11 (“Invest in America,” August 2, 2011, http://www.theicosamagazine.com/foreign-direct-investment)

Another significant impact of FDI on the U.S. economy is the continued growth of its assets in research and development (R&D) and innovation. Already a world leader in R&D, the U.S. is further enhanced by FDI occurring in this sector. In 2008, over $40 billion was spent on R&D by U.S. subsidiaries of foreign firms. Recently, the National Science Foundation (NSF) collected business data gathered by the NSF, the U.S. Census Bureau, and the U.S. Bureau of Economic Analysis to find that U.S. affiliates of foreign firms have a growing share of R&D investments in the United States. Firms recognize the hospitable climate the U.S. provides for product research and development, intellectual property rights protection, and commercialization.

#### Increasing the rate of science and tech innovation is key to prevent extinction

Barker 2k [BRENT is manager of corporate communications, having earlier served as manager of strategic and executive communications and for12 years as the Journal's editor-in-chief, Technology and the Quest for Sustainability, EPRI Journal, nexis]

Sustainability has been the subject of much discussion and a steady stream of policy forums since the World Commission on Environment and Development, headed by Dr. Gro Brundtland, put it on the world stage in 1987. The Brundtland Commission defined sustainable development as growth that meets the needs of the present generation without compromising the ability of future generations to meet their needs. Assuch, sustainability carries with it the distinct feeling of a modern problem. But it is not. We have been on a seemingly unsustainable course for hundreds of years, but the rules, stakes, and speed of the game keep changing, in large part because of our ability to use technology to extend limits and to magnify human capabilities. As long as the population continues to consume a finite store of resources, we must continue to change our course or fail. If, with the global population approaching 9-10 billion people by midcentury, we were to lock in current technologies and development patterns, we would likely find ourselves heading toward environmental disaster or worse. Our best hope--perhaps our only hope--is to evolve rapidly enough, using our ingenuity, our technology, and our growing ethical framework of inclusiveness and respect for the diversity of life, to stay ahead of the proverbial wolf. Despite the environmental pessimism of the current age, there are a handful of signs that suggest we are struggling in fits and starts in the right direction, possibly even gaining more ground than we are losing. Farm productivity is one of the most significant of the great reversals in human fortune that have occurred in recent times, reversals that offer both hope and strategic guidance. Largely as a result of crop yields growing at 1-2% per year, the millenniaold pattern of clearing forests and grassland for farms and pastures has begun to be reversed in some regions of the world. According to one of the world's leading scholars on technological change, Arnulf Grubler of the International Institute for Applied Systems Analysis, some 18 million hectares (45 million acres) of cropland in Europe and North America have been reconverted to forest and grassland between 1950 and 2000, while agricultural output in those regions has continued to grow. Great reversals are also beginning to occur in areas as diverse as population, resource utilization, energy, and transportation. Fertility rates continue to drop below the replacement level (2.1 children per woman) in affluent nations. First evident in France more than a century ago, the preference for smaller families is spreading throughout the world as economic development expands. As a result, roughly 90% of the population growth in the next 50 years will occur in today'spoorest nations. Overall, we are looking at a new demographic dynamic in which population is exploding in some parts of the world while imploding in others. Nevertheless, it is significant that year after year the United Nations continues to crank down its projection of global population in the twenty-first century, suggesting greater certainty that the population is leveling off. Although the consumption of resources continues to grow with population and economic prosperity in all parts of the world, there are some intriguing counter-trends. Technology continues to expands [sic] the menu of material resources--for example, alloys, composites, and ceramics--as well as to increase the efficiency with which we use them. Both trends help keep resource depletion at bay Moreover, usage patterns are now rapidly shifting, at least in the developed nations, toward lighter materials (aluminum, plastics, paper) and toward the recycling of heavier materials (steel, copper, zinc) and of manufactured components. Perhaps most important for the future, however, is the trend toward the "immaterial." The information age is rapidly knitting together a new economy based on immaterial, knowledge-based assets, electronic commerce, and virtual transportation--an economy that is growing much faster than the old economy. We can barely glimpse the networked world of the future, but we can assume it will be much less dependent on natural resources. The reversal in energy use is more clearcut. Energy is in the middle of a 300-year trend away from fossil fuels. After more than 100,000 years of wood use, the global energy system began in the nineteenthcentury to move toward progressively cleaner, less carbon-intensive fuels (shifting from wood to coal to oil to gas). In fact, the decarbonization of the global energy system has been systematically proceeding at an average rate of 0.3% per year for the last 150 years, whilethe economic productivity of energy use has been improving at a rateof about 1% per year. The combined result (1.3% per year) is a healthy rate of reduction in the carbon used (and emitted) in producing a dollar of goods and services around the world. Even though the energy productivity improvements have thus far been eclipsed by the growth in energy consumption (as more people engage in more economic activity), the trend is telling. The eventual result may be the same as in agriculture, with productivity improvements overtaking aggreg ate demand. In terms of decarbonizing the energy system, the transition is likely to be complete sometime in the next 75-150 years, depending on how fast we push the innovation process toward a clean, electricity- and hydrogen-based system. We would eventually get there even without a rigorous push, but as we will see later, the urgency of the climate change issue may force us to speed up the historical trend by a factor of 2 or 3. The power of technology These historical trends in agriculture, land use, resource consumption, and energy use point to some profound opportunities for the future. There are at least four major ways in which technology has great potential for helping us achieve a sustainable balance in the twenty-first century The first area of opportunity for technology is in the acceleration of productivity growth. In agriculture, for example, corn yields in the world today average only about 4 tons per hectare, while the United States averages 7 tons per hectare and the best Iowa farmer can get 17 tons. Simply bringing the world as a whole up to today's best practices in the United States would boost farm productivity to unprecedented heights, even without considering what the biological and genetic revolutions may hold in store for agriculture in the next century As for the overall productivity growth rate in industry and business, we are finally starting to register an increase after nearly 30 years of subpar performance at around 1% growth per year. Computerization appears to be taking hold in the economy in new and fundamental ways, not just in speeding up traditional practices but in altering the economic structure itself. One historical analogy would be the introduction of electric unit drives just after World War I, setting in motion a complete reorganization of the manufacturing Floor and leading to a surge in industrial productivity during the 1920s. In the twenty-first century, industrial processes will be revolutionized by new electrotechnologies, including lasers, plasmas, microwaves, and electron beams for materials processing, as well as electrochemical synthesis and electroseparation for chemical processing. Manufacturing will be revolutionized by a host of emerging technology platforms--for example, nanotechnology, biotechnology, biomimetics, high-temperature superconductivity, and network technology including the combining of advanced sensors with information technology to create adaptive, intelligent systems and processes. Future industrial facilities using advanced network technologies will be operated in new ways to simultaneously optimize productivity energy use, materials consumption, and plant emissions. Optimization will extend beyond the immediate facility to webs of facilities supporting industrial and urban ecology with the waste of one stream becoming the feedstock of the next. In the aggregate, the penetration of all the emerging tech nologiesinto the global economy should make it possible to sustain industrial productivity growth rates above 2% per year for many decades. The same technology platforms will be used to improve the efficiency of land, energy and water use, For example, distributed sensors and controls that enable precision farming can improve crop yields and reduce land and water use. And doubling or even tripling global energy efficiency in the next century is well within our means. Given the inefficiencies that now exist at every stage in the process--from mining and drilling for fuel through the use of energy in automobiles, appliances, and processes--the overall efficiency of the energy chain is only about 5%. From a social standpoint, **accelerating productivity is not an option but** rather **an imperative for the future**. It is necessary in order to provide the wealth for environmental sustainability, to support anaging population in the industrialized world, and to provide an economic ladder for developing nations. The second area of opportunity for technology lies in its potential to help stabilize global population at 10-12 billion sometime in the twenty-first century, possibly as early as 2075. The key is economics. Global communications, from television to movies to the Internet,have brought an image of the comfortable life of the developed worldinto the homes of the poorest people, firing their own aspirations for a better quality of life, either through economic development in their own country or through emigration to other countries. If we in the developed world can make the basic tools of prosperity--infrastructure, health care, education, and law--more accessible and affordable, recent history suggests that the cultural drivers for producing large families will be tempered, relatively quickly and without coercion. But the task is enormous. The physical prerequisites for prosperity in the global economy are electricity and communications. Today, there are more than 2 billion people living without electricity, or commercial energy in any form, in the very countries where some 5 billion people will be added in the next 50 years. If for no other reason than our enlightened self-interest, we should strive for universal access to electricity, communications, and educational opportunity. We have little choice, because the fate of the developed world is inextricably bound up in the economic and demographic fate of the developing world. A third, related opportunity for technology is in decoupling population growth from land use and, more broadly, decoupling economic growth from natural resource consumption through recycling, end-use efficiency, and industrial ecology. Decoupling population from land use is well under way. According to Grubler, from 1700 to 1850 nearly 2 hectares of land (5 acres) were needed to support every child born in North America, while in the more crowded and cultivated regions of Europe and Asia only 0.5 hectare (1.2 acres) and 0.2 hectare (0.5 acre) were needed, respectively. During the past century, the amount of land needed per additional child has been dropping in all areas of the world, with Europe and North America experiencing the fastest decreases. Both crossed the "zero threshold" in the past few decades, meaningthat no additional land is needed to support additional children andthat land requirements will continue to decrease in the future. One can postulate that the pattern of returning land to nature will continue to spread throughout the world, eventually stemming and then reversing the current onslaught on the great rain forests. **Time is critical** if vast tracts are to be saved from being laid bare, and success will largely depend on how rapidly economic opportunities expand for those now trapped in subsistence and frontier farming. In concept, the potential for returning land to nature is enormous. Futurist and scholar Jesse Ausubel of the Rockefeller University calculates that if farmers could lift average grain yields around the world just to the level of today's average U.S. corn grower, one-half of current global cropland--an area the size of the Amazon basin--could be spared. If agriculture is a leading indicator, then the continuous drive to produce more from less will prevail in other parts of the economy Certainly with shrinking agricultural land requirements, water distribution and use around the world can be greatly altered, since nearly two-thirds of water now goes for irrigation. Overall, the technologies of the future will, in the words of Ausubel, be "cleaner, leaner, lighter, and drier"--that is, more efficient and less wasteful of materials and water. They will be much more tightly integrated through microprocessor-based control and will therefore use human and natural resources much more efficiently and productively. Energy intensity, land intensity, and water intensity (and, to a lesser extent, materials intensity) for both manufacturing and agriculture are already heading downward. Only in agriculture are they falling fast enough to offset the surge in population, but, optimistically, advances in science and technology should accelerate the downward trends in other sectors, helping to decouple economic development fromenvironmental impact in the coming century. One positive sign is the fact that recycling rates in North America are now approaching 65% for steel, lead, and copper and 30% for aluminum and paper. A second sign is that economic output is shifting away from resource-intensive products toward knowledge-based, immaterial goods and services. As a result, although the U.S. gross domestic product (GDP) increased 200-fold (in real dollars) in the twentieth century, the physical weight of our annual output remains the same as it was in 1900. If anything, this trend will be accelerating. As Kevin Kelly, the editor of Wiredmagazine, noted, "The creations most in demand from the United States [as exports] have lost 50% of their physical weight per dollar of value in only six years.... Within a generation, two at most, the number of people working in honest-to-goodness manufacturing jobs will beno more than the number of farmers on the land--less than a few percent. Far more than we realize, the network economy is pulling us all in." Even pollution shows clear signs of being decoupled from population and economic growth. Economist Paul Portney notes that, with the exception of greenhouse gases, "in the OECD [Organization for Economic Cooperation and Development] countries, the favorable experience [with pollution control] has been a triumph of technology That is, the ratio of pollution per unit of GDP has fallen fast enough in the developed world to offset the increase in both GDP per capita and the growing number of 'capitas' themselves." The fourth opportunity for science and technology stems from their enormous potential to unlock resources not now available, to reduce human limitations, to create new options for policymakers and businesspeople alike, and to give us new levels of insight into future challenges. Technically resources have little value if we cannot unlock them for practical use. With technology, we are able to bring dormant resources to life. For example, it was only with the development of anelectrolytic process late in the nineteenth century that aluminum--the most abundant metal on earth--became commercially available and useful. Chemistry unlocked hydrocarbons. And engineering allowed us to extract and put to diverse use untapped petroleum and gas fields. Over the course of history, technology has made the inaccessible accessible, and resource depletion has been more of a catalyst for change than a longstanding problem. Technology provides us with last-ditch methods (what economists would call substitutions) that allow us **to circumvent** or leapfrog over **crises of our own making**. Agricultural technology solved the food crisis of the first half of the nineteenth century. The English "steam crisis" of the 1860s, triggered by the rapid rise of coal-burning steam engines and locomotives, was averted by mechanized mining and the discovery and use of petroleum. The U.S. "timber crisis" that Teddy Roosevelt publicly worried about was circumvented by the use of chemicals that enabled a billion or so railroad ties to last for decades instead of years. The great "manure crisis" of the same era was solved by the automobile, which in a few decades replaced some 25 million horses and freed up 40 million hectares (100 million acres) of farmland,not to mention improving the sanitation and smell of inner cities. Oil discoveries in Texas and then in the Middle East pushed the pending oil crisis of the 1920s into the future. And the energy cr isis of the 1970s stimulated the development of new sensing and drilling technology, sparked the advance of non--fossil fuel alternatives, and deepened the penetration of electricity with its fuel flexibility into the global economy Thanks to underground imaging technology, today's known gas resources are an order of magnitude greater than the resources known 20 years ago, and new reserves continue to be discovered. Technology has also greatly extended human limits. It has given each of us a productive capability greater than that of 150 workers in 1800, for example, and has conveniently put the power of hundreds of horses in our garages. In recent decades, it has extended our voice and our reach, allowing us to easily send our words, ideas, images, and money around the world at the speed of light. But globalsustainability is not inevitable*.* In spite of the tremendous promise that technology holds for a sustainable future, there is the potential for all of this to backfire before the job can be done. There are disturbing indications that people sometimes turn in fear and anger on technologies, industries, and institutions that openly foster an ever-faster pace of change. The current opposition to nuclear power genetically altered food, the globalization of the economy and the spread of American culture should give us pause. Technology has always presented a two-edged sword, serving as both cause and effect, solving one problem while creating another that was unintended and often unforeseen. We solved the manure crisis, but automotive smog, congestion, and urban sprawl took its place. We cleaned and transformed the cities with all-electric buildings rising thousands of feet into the sky. But while urban pollution was thereby dramatically reduced, a portion of the pollution was shifted to someone else's sky. Breaking limits "Limits to growth" was a popular theme in the 1970s, and a best-selling book of that name predicted dire consequences for the human race by the end of the century. In fact, we have done much better than those predictions, largely because of a factor the book missed--the potential of new technology to break limits. Repeatedly, human societies have approached seemingly insurmountable barriers only to find the means and tools to break through. This ability has now become a source of optimism, an article of faith, in many parts of the world. Today's perceived limits, however, look and feel different. They are global in nature, multicultural, and larger in scale and complexity than ever before. Nearly 2 billion people in the world are without adequate sanitation, and nearly as many are without access to clean drinking water. AIDS is spreading rapidly in the regions of the world least able to fight it. Atmospheric concentrations of greenhouse gases are more than 30% greater than preindustrial levels and are climbing steadily. Petroleum reserves, expected to be tapped by over a billion automobiles worldwide by 2015, may last only another 50-100 years.And without careful preservation efforts, the biodiversity of the planet could become as threatened in this coming century as it was at the end of the last ice age, when more than 70% of the species of large mammals and other vertebrates in North America disappeared (along with 29% in Europe and 86% in Australia). All these perceived limits require innovation of a scope and intensity surpassing human kind's current commitment. The list of real-world problems that could thwart global sustainability is long and sobering. It includes war, disease, famine, political and religious turmoil, despotism, entrenched poverty, illiteracy, resource depletion, and environmental degradation. Technology can help resolve some of these issues--poverty and disease, resource depletion, and environmental impact, for example--but it offers little recourse for the passions and politics that divide the world. The likelihood is that we will not catch up and overtake the moving target of global sustainability in the coming century, but given the prospects for technology, which have never been brighter, we may come surprisingly close. **We should put our technology to work,** striving to lift more than 5 billion people out of poverty while preventing irreversible damage to the biosphere and irreversible loss of the earth's natural resources. We cannot see the future of technology any more clearly than our forebears did--and for much the same reason. We are approaching the threshold of profound change, moving at great speed across a wide spectrum of technology, ranging today from the Internet to the Human Genome project. Technology in the twenty-first century will be turning toward biological and ecological analogs, toward microminiature machines, toward the construction of materials atom by atom, and toward the dispersion of microprocessor intelligence into everyday objects subsequently linked into neural networks. Computing power continues to double every 18 months, as postulated in Moore's law, promising to enableus to create much more powerful tools for everyday tasks, optimize business services and processes along new lines, understand complex natural phenomena like the weather and climate, and design technical systems that are self-diagnostic, self-healing, and self-learning. The networked, digital society of the future should be capable o f exponential progress more in tune with biological models of growth than with the incremental progress of industrial societies. If history tells us anything, it is that in the long term we are much more likely to underestimate technology than to overestimate it. We are not unlike the excited crowds that in 1909 tried to imagine the future of flight as they watched Wilbur Wright loop his biplane twice around the Statue of Liberty and head back to Manhattan at the record-breaking speed of 30 miles per hour. As wild as one's imagination and enthusiasm might have been, it would have been inconceivable that exactly 60 years later humans would fly to the moon and back. Electricity's unique role Electricity lies at the heart of the global quest for sustainability for several reasons. It is the prerequisite for the networked world of the future. It will be the enabling foundation of new digital technology and the vehicle on which most future productivity gains in industry, business, and commerce will depend. And to the surprise of many, it will remain the best pathway to resource efficiency, quality of life, and pollution control. In fact, the National Academy of Engineering just voted the "vast network of electrification" the single greatest engineering achievement of the twentieth century by virtue of its ability to improve people's quality of life. It came out ahead of the automobile, the airplane, the computer, and even health care in its impact on society. The electricity grids of North America, Europe, and Japan are said to be the most complex machines ever built. Although they are not yet full networks--that is, not every node is connected to every other node--these networks have been sufficiently interconnected to become the central enabling technology of the global economy. They will have to be even more interconnected and complex to keep pace with the microprocessors and digital networks they power. In the developed world, electricity has become almost a transparent technology lost in the excitement surrounding its latest progeny--electronics, computers, the Internet, and so forth. Still, its role should be as profound in this century as it was in the last. "How and in what form global electrification goes forward in the next 50 years will determine, as much as anything, how we resolve the global 'trilemma' posed by population, poverty and pollution," says Kurt Yeager, president and CEO of EPRI. "This trilemma is destined to become a defining issue of the twenty-first century" Chauncey Starr, EPRI's founder, has captured the strong historical correlation between access to electricity economic prosperity and social choices. A large majority of the world's population is now trapped at a low economic level, where the focus of everyday life is on survival and on acquiring the basics now taken for granted in developed nations. As Starr shows, only after electricity consumption reaches a threshold of approximately 1000 kWh per capita do people turn their attention from the basics of immediate survival to the level of "amenities," including education, the environment, and intergenerational investment. Given the chicken-and-egg nature of the process of social advancement, it is not possible to point to electricity as the initial spark, but it is fair to say that economic development does not happen today without electricity. Electricity has been extended to more than 1.3 billion people over the past 25 years, with leveraged economic impact. In South Africa, for example, 10 to 20 new businesses are started for every 100 homes that are electrified. Electricity frees up human labor--reducing the time people spend in such marginal daily tasks as carrying water and wood--and provides light in the evening for reading and studying. These simple basics can become the stepping stones to a better life and a doorway to the global economy. Because electricity can be effectively produced from a wide variety of local energy sources and because it is so precise at the point of use, it is the ideal energy carrier for economic and social development. Distributed electricity generation can be used to achieve basic rural electrification goals in the developing world, thereby helping to counteract the trend toward massive urbanization. People in rural areas and villages need to have access to the opportunities and jobs that are now attainable only by migrating to large cities. Electrification should also help with efforts to improve deteriorating urban air quality in the growing megacities of the world. Mortality from respiratory infections may be as much as five times higher in developing countries than in developed countries. The health costs can be debilitating; it is estimated, for example, that the total health cost of air emissions in Cairo alone now exceeds $1 billion per year. How global electrification proceeds--on a large or a small scale, with clean or dirty technology--will influence the planet socially economically and environmentally for centuries. Ultimately our success or failure in this endeavor will bear heavily on whether we can effectively handle the issues of the habitability and biodiversity of the planet. Ironically, electricity may also become the focal point for growing animosity in the coming century, for the simple reason that it is taking on more and more responsibility for society's energy-related pollution. Electricity accounted for only about 25% of the world's energy consumption in 1970. Today in the developed countries, its share of energy consumption is nearly 40%, and by 2050 that figure may reach60-70%. If transportation is fully electrified through fuel cells, hybrids, and the like, electricity's energy share could climb even higher. This growth accentuates the need to ensure that future electricity generation and use are as clean and efficient as possible and thatbest practices and technologies are available to developing countries as well as affluent ones. Fortunately for the world, electricity has the greatest potential of all the energy forms to deliver in the area of environmental stewardship. Roadmap's call to action The Electricity Technology Roadmap Initiative, which was launched by EPRI in 1998, began by bringing representatives of more than 150 diverse organizations together in a series of workshops and meetings to explore ways to enhance the future value of electricity to society. They staked out some ambitious destinations through time, leading tothe ultimate destination of "managing global sustainability." They also established some specific goals to ensure that the tools will be in hand by 2025 to reach various sustainability targets, including universal global electrification, by midcentury. Among these goals are the acceleration of electricity-based innovation and R&D and the benchmarking of our progress toward sustainability. Universal global electrification means bringing everyone in the world to at least the "amenities" level defined by Starr. At this level, it becomes more likely that the rich and poor nations will find common ground for pursuing sustainability policies. The roadmap stakeholders are calling for a bare minimum of 1000 kWh per person per year to be available by 2050. This would raise the average in today's developing countries to around 3000 kWh per person per year in 2050, just above the level in the United States a century earlier, around 1950. Moreover, projections suggest that it will be possible to reduce the energy intensity of economic growth by at least 50% over the next 50 years through universal electrification, with about half the reduction resulting from end-use efficiency improvements. Consequently, the 3000 kWh of 2050 will go much further in powering applications--lighting, space conditioning, industrial processes, computing, communications, and the like--than an equivalent amount of electric energy used in the United States in 1950. Already, for example, the manufacturing and widespread application of compact fluorescent lightbulbs has become a priority in China for reasons of both energy efficiency and export potential. Even with the large efficiency improvements that are anticipated in electricity generation and end use, building enough capacity to supply 9-10 billion people with power will be an enormous challenge. Total global generating capacity requirements for 2050 could reach a daunting 10,000 GW--the equivalent of bringing on-line a 1000-MW power plant somewhere in the world every two days for the next 50 years. This is a tall order, and achieving it affordably and with minimal environmental impacts will require an unusual degree of dedicated R&D, supported through public and private collaboration, to accelerate the current pace of technological development. According to the roadmap stakeholders, reaching the destinations that they have defined calls for at least an additional $4 billion peryear in electricity-related R&D by the United States alone. One of the key destinations, resolution of the energy-environment conflict, would in itself require an additional $2 billion per year in U.S. R&D over the next 10 years to speed up the development of clean power generation. This is more than double the nation's current level of funding in this area from both the public and private sectors. **The rate of innovation is especially critical to sustainability.** The roadmap participants have concluded that a "2% solution" is needed to support a sustainable future. By this, they mean that productivity improvements in a range of areas--including global industrial processes, energy intensity, resource utilization, agricultural yield, emissions reduction, and water consumption--have to occur at a pace of 2% or more per year over the next century. If the advances are distributed on a global basis, this pace should be sufficient to keep the world ahead of growing social and environmental threats. It will also generate the global wealth necessary to progressively eliminate the root cause of these threats and will provide the means to cope with the inevitable surprises that will arise. For example, a 2% annual increase in global electricity supply, if made broadly available in developing countries, would meet the goal of providing 1000 kWh per year to every person in the world in 2050. This means extending the benefits of electricity to 100 million new users every year. Maintaining a 2% pace in productivity improvements for a century will be formidable. It is in line with the cumulative advancement in the United States during the twentieth century, but at least twice the world average over that period. The disparity has been particularly great in the past 25 years, as population growth has outstripped economic development in many parts of the world. The result has been massive borrowing to maintain or enhance short-term standards of living. Staying ahead of population-related challenges is now in the enlightened self-interest of all the world's peoples, and the 2% solution offers a benchmark for success. Sustaining efficiency gains of 2% per year throughout the twenty-first century would allow essential global economic development to continue while sparing the planet. This pace, for example, should help stabilize world population (to the extent that wealth is a primary determinant of population growth), limit atmospheric levels of greenhouse gases to below agreed-upon strat egic limits, provide sufficient food for the bulk of the world's people (as well as the wherewithal to buy it), and return significant amounts of land and water to their natural states. Roadmap participants envision technology and the spread of liberal capitalism as powerful agents for the 2% solution in that they can stimulate global development and foster worldwide participation in market economies. However, the participants have also expressed some concern and caution about unbridled globalization overrunning local cultures and societies and creating instability, unrest, and conflict. Atits worst, globalization could lock weaker nations into commodity-production dependencies, leading to a survival-of-the-fittest global economy in which the rich get richer and most of the poor stay poor. Establishing greater dialogue and cooperation among developed and developing nations is therefore considered critical to ensuring that globalization delivers on its promise to be a vehicle of worldwide progress that honors the diversity of nations and peoples. Targets of sustainability There is no single measure of sustainability; rather, it will require continued progress in a wide variety of areas that reflect the growing efficiency of resource utilization, broad improvements in the quality of life for today's impoverished people, and acceleration of the historical shift away from resource-intensive economic activity. The roadmap's sustainability R&D targets provide a first-order approximation of what will be required. In many cases, the targets represent a significant stretch beyond today's levels, but they are all technologically achievable. The roadmap sets an optimistic course, certain that **with accelerated R&D and a much stronger technological foundation in hand by 2025, the world could be well on a path to economic and environmental sustainability** by midcentury. The goals for sustainability are simply too far-reaching to be achieved solely through governmental directives or policy. Rather, they will be reached most readily via a healthy, robust global economy in which accelerated technological innovation in the private sector is strongly encouraged and supported by public policy. The challenges of bringing the world to a state of economic and environmental sustainability in the coming century are immense but not insurmountable. Technology is on the threshold of profound change, quite likely to be broader, faster, and more dramatic in its impact than that which we experienced in the twentieth century. Fortunately, the impact appears to be heading in the right direction. Much of the leading-edge technology is environmentally friendly and, from today's vantage point, is likely to lead to a global economy that is cleaner, leaner, lighter, and drier; many times more efficient, productive, and abundant; and altogether less invasive and less destructive of the natural world. History teaches us that technology can be a liberating force for humanity, allowing us to break through our own self-made limits as well as those posed by the natural world. The next steps will be to extend the benefits of innovation to the billions of people without access and, in the words of Jesse Ausubel, to begin "liberating the environment itself." This entails meeting our needs with far fewer resources by developing a "hydrogen economy, landless agriculture, and industrial ecosystems in which waste virtually disappears....and by broadening our notions of democracy, as well as our view of the ethical standing of trees, owls, and mountains." In many ways, the material abundance and extended human capabilities generated through hundreds of years of technology development have led us to a new understanding and heightened respect for the underlying "technologies of life." Offering four billion years of experience, nature will become one of our best teachers in the new century; we are likely to see new technology progressively taking on the character and attributes of living systems. Technology may even begin to disappear into the landscape as microminiaturization and biological design ensue. Still, **though technology is heading in the right direction, what remains principally in question is whether the pace of innovation is adequate to stay ahead of the curve of global problems and whether new advances in technology can be quickly brought down in cost** and readily distributed throughout the world. Can we achieve the 2% solution of progressive improvement in economic productivity, land and water use, recycling, emissions reduction, and agricultural yield, year after year, decade after decade, in nation after nation? It's a formidable challenge, but with better tools we just might be able to pull it off, If so, the key to success will not be found in one small corner of the world. The challenge will be met by making the basic building blocks of innovation--education, R&D, infrastructure, and law--available in full measure to future generations everywhere in the world. That future begins now.

## Private Investor NB

#### **Direct grants necessitate federal oversight alienating private investors-only tax credit bonds solve**

NTL 7 (National Transportation Library, “Analysis of Alternative Financing Mechanisms and Institutional Options,” January 10, 2007, http://ntl.bts.gov/lib/33000/33400/33441/final\_report/volume\_3\_html/technical\_issues\_papers/paper152d.htm?name=5a\_14)

Historically much of the investment in goods movement has been provided by the private sector. In the case of freight rail, for example, there is no existing program through which the government provides significant grant assistance, as is the case with other transportation modes. And the private rail carriers have been reluctant to seek traditional federal grants because of the concern about bureaucratic interference and other federal requirements that accompany direct government grants. Instead, they seek indirect assistance that would subsidize their high cost of capital investment.

### Warming

#### Private investors key to solve U.S. competitiveness and climate change

Puentes, senior fellow at the Brookings Institution, 8/23/2010

(Robert, “New Partnerships for Accelerating Infrastructure Investments,” Testimony for Mayor of Los Angeles and Senator Barbara Boxer, [http://www.brookings.edu/research/testimony/2010/08/23-los-angeles-puentes](http://www.brookings.edu/research/testimony/2010/08/23-los-angeles-puentes" \t "_blank))

The 30/10 plan is a prime example of the kind of 21st century compact that this country needs. It at once challenges our nation’s state and metropolitan leaders to develop deep and innovative visions to solve the most pressing transportation problems. At the same time, the federal government must become a permissive partner that also holds these places accountable for advancing their tailor-made, bottom-up vision. The reauthorization of the nation’s surface transportation law presents an important opportunity to put in place several key components of this new partnership.

There are also several megatrends that make this a salient and critical conversation today:

Our national economy is in the midst of broad and intensive restructuring. This is partially unintentional and precipitated by the most severe economic crisis in more than a generation. The reverberations from the Great Recession are still strongly felt. In response, major attention is being given to moving away from the over-leveraged, consumption-driven economy that preceded the recession to one focused on globalization, technology, and production.[1] Los Angeles exemplifies this trend with its post-recession emphasis on exports, low carbon infrastructure, and innovation.[2]

At the same time, the U.S. is undergoing the most remarkable socio-demographic changes it has seen in nearly a century. The number of seniors and boomers already exceeds 100 million, and racial and ethnic minorities accounted for 83 percent of our population growth this last decade. But unlike our international counterparts in Europe and parts of Asia, the U.S. is also growing rapidly overall. Our population exceeded 300 million in 2006, and we are on track to hit 350 million in the next 15 years.[3]

Cities and large metropolitan areas—Los Angeles, in particular—are leading this transformation and will, in many ways, determine the path forward. America's 100 largest metros already account for two-thirds of our population and generate 75 percent of our gross domestic product. Comparing Los Angeles’ metro economy to that of other entire nations, it is just about the size of Turkey: the world’s 17th largest.[4] What is more is that most of the future growth of the U.S. is expected to occur in these places. About 60 percent of the future residential growth will be in just the 50 largest metros. Any path to prosperity will run directly through our metropolitan areas.[5]

The challenge is for us to connect this macro vision to metro reality, the macro to the metro. We need to leverage the market energy and creativity found in our metros **with smart**, **game-changing federal** and state **actions**. Because how, where, and in what form we build in the future carries far-reaching implications **for** the health of **our** **environment**, our **energy** and economic**security**, and will continue to be a barrier to our metropolitan areas' **economic success and** our**ability to compete globally**.

But it also demands that we follow a different path than the one pursued in the past decade.Significant new constraints have emerged that will require us to throw out the old 20th century playbook and devise f**undamentally new approaches** for how we think about the built environment, growth and development patterns, and the quality of place.

One is the imperative of lower carbon. The world economy is rapidly moving away from carbon-based fuels and towards new sources of energy, driven in part by state, national, and international goals and agreements. Current discussions are too narrow have obscured how profound and market-driving a transition this will be.

Another is our nation’s current fiscal situation. After several years of national economic uncertainty, a tense new climate of austerity has sharpened debates over government spending, economic development, and the physical growth of states and metropolitan areas. Leaders in this environment are eager for fiscally prudent ways to simultaneously invest in what matters, stimulate their economies, create and retain jobs, and operate smarter and more efficiently.

The U.S. is also facing unprecedented constraints when it comes to its natural resources. Driven by cheap land, abundant water, and low cost energy, American development patterns over the last several decades followed the same sprawling, consumption-oriented style as our national economy. Accommodating future growth will require a l**ong-time partnership of all relevant actors**—**public**, **private**, and non-profit—to design the kinds of accessible and sustainable communities the market is increasingly demanding.

#### The CP becomes a model for all infrastructure investments- furthers warming solvency

Marks, guest editor of Infrastructure Journal and partner in Milbank Tweed Hadley and McCloy’s Global Project Finance, 4/11/2011

(Allan, “U.S. Infrastructure: Challenges, Politics and Opportunities,” [http://www.milbank.com/images/content/6/6/6634/MARKS-US-Infrastructure-Infrastructure-Journal-04-11-2011-.pd.pdf](http://www.milbank.com/images/content/6/6/6634/MARKS-US-Infrastructure-Infrastructure-Journal-04-11-2011-.pd.pdf" \t "_blank))

The federal government through TIFIA today provides not just a source of funding for infrastructure projects but also general expertise in the PPP area. This knowledge is largely wasted and should be compiled and disseminated in a more coherent way. No national center of expertise exists in the United States (compared to, say, Canada or the United Kingdom) to foster PPPs. Because the federal government has the experience of witnessing infrastructure deals made across the country, it is in an ideal position to accumulate best practices. Complete standardization of the types of deals that merit approval based on a “value for money” analysis or other rubric would not be desired. Regional experimentation and innovation are critical. However, at a minimum, identifying best practices and establishing model templates and suggested procedures for state and local governments would streamline the PPP procurement and contacting process and avoid having to reinvent the wheel each time new enabling legislation or a new project at the state or local level is on the table. Aside from providing expertise on the PPP process in general, the federal government can facilitate the building of infrastructure by stepping up its role in encouraging states to look more seriously at PPPs. While TIFIA has sometimes been the last resort for states that have been unable to secure funding elsewhere for their projects, the statute can be an even more effective tool for bridging the “investment gap” for states. With some expansion of the current provisions of TIFIA, and an increase in its capital, PPPs can become more of a part of institutional knowledge and more widely used to move state infrastructure projects forward by leveraging private capital to lower life cycle costs.

#### Warming is real, anthropogenic, and happening now.

Braganza 11(Karl, Manager, Climate Monitor at the Bureau of Meteorology in Australia, The Bureau presently operates under the authority of the Meteorology Act 1955, which requires it to report on the state of the atmosphere and oceans in support of Australia's social, economic, cultural and environmental goals. His salary is not funded from any external sources or dependent on specially funded government climate change projects. Karl Braganza does not consult to, own shares in or receive funding from any company or organisation that would benefit from this article, and has no relevant affiliations “The greenhouse effect is real: here’s why,” http://theconversation.edu.au/the-greenhouse-effect-is-real-heres-why-1515, AM)

In public discussions of climate change, the full range and weight of evidence underpinning the current science can be difficult to find. A good example of this is the role of observations of the climate system over the past one hundred years or more. In the current public discourse, the focus has been mostly on changes in global mean temperature. It would be easy to form the opinion that everything we know about climate change is based upon the observed rise in global temperatures and observed increase in carbon dioxide emissions since the industrial revolution. In other words, one could have the mistaken impression that the entirety of climate science is based upon a single correlation study. In reality, the correlation between global mean temperature and carbon dioxide over the 20th century forms an important, **but very small part of the evidence for a human role in climate change.** Our assessment of the future risk from the continued build up of greenhouse gases in the atmosphere is even less informed by 20th century changes in global mean temperature. For example, our understanding of the greenhouse effect – the link between greenhouse gas concentrations and global surface air temperature – **is based primarily on our fundamental understanding of mathematics, physics, astronomy and chemistry.** **Much of this science is textbook material that is at least a century old and does not rely on the recent climate record**. For example, it is a scientific fact that Venus, the planet most similar to Earth in our solar system, experiences surface temperatures of nearly 500 degrees Celsius due to its atmosphere being heavily laden with greenhouse gases. Back on Earth, that fundamental understanding of the physics of radiation, combined with our understanding of climate change from the geological record, clearly demonstrates that increasing greenhouse gas concentrations will inevitably drive global warming. The observations we have taken since the start of 20th century have confirmed our fundamental understanding of the climate system. While the climate system is very complex, observations have shown that our formulation of the physics of the atmosphere and oceans is largely correct, and ever improving. Most importantly, the observations have confirmed that human activities, in particular a 40% increase in atmospheric carbon dioxide concentrations since the late 19th century, have had a discernible and significant impact on the climate system already. In the field known as detection and attribution of climate change, scientists use indicators known as of climate change. These fingerprints show the entire climate system has changed in ways that are consistent with increasing greenhouse gases and an enhanced greenhouse effect. They also show that recent, long term changes are inconsistent with a range of natural causes. A warming world is obviously the most profound piece of evidence. Here in Australia, the decade ending in 2010 has easily been the warmest since record keeping began, and continues a trend of each decade being warmer than the previous, that extends back 70 years. Globally, significant warming and other changes have been observed across a range of different indicators and through a number of different recording instruments, and a consistent picture has now emerged. Scientists have observed increases in continental temperatures and increases in the temperature of the lower atmosphere. In the oceans, we have seen increases in sea-surface temperatures as well as increases in deep-ocean heat content. That increased heat has expanded the volume of the oceans and has been recorded as a rise in sea-level. Scientists have also observed decreases in sea-ice, a general retreat of glaciers and decreases in snow cover. Changes in atmospheric pressure and rainfall have also occurred in patterns that we would expect due to increased greenhouse gases. There is also emerging evidence that some, though not all, types of extreme weather have become more frequent around the planet. These changes are again consistent with our expectations for increasing atmospheric carbon dioxide. Patterns of temperature change that are uniquely associated with the enhanced greenhouse effect, and which have been observed in the real world include: greater warming in polar regions than tropical regions greater warming over the continents than the oceans greater warming of night time temperatures than daytime temperatures greater warming in winter compared with summer a pattern of cooling in the high atmosphere (stratosphere) with simultaneous warming in the lower atmosphere (troposphere). By way of brief explanation, if the warming over the 20th century were due to some deep ocean process, we would not expect to see continents warming more rapidly than the oceans, or the oceans warming from the top down. For increases in solar radiation, we would expect to see warming of the stratosphere rather than the observed cooling trend. Similarly, greater global warming at night and during winter is more typical of increased greenhouse gases, rather than an increase in solar radiation. There is a range of other observations that show the enhanced greenhouse effect is real. The additional carbon dioxide in the atmosphere has been identified through its isotopic signature as being fossil fuel in origin. The increased carbon dioxide absorbed by the oceans is being recorded as a measured decrease in ocean alkalinity. Satellite measurements of outgoing long-wave radiation from the planet reveal increased absorption of energy in the spectral bands corresponding to carbon dioxide, exactly as expected from fundamental physics. It is important to remember that the enhanced greenhouse effect is not the only factor acting on the climate system. In the short term, the influence of greenhouse gases can be obscured by other competing forces. These include other anthropogenic factors such as increased industrial aerosols and ozone depletion, as well as natural changes in solar radiation and volcanic aerosols, and the cycle of El Niño and La Niña events. By choosing a range of indicators, by averaging over decades rather than years, and by looking at the pattern of change through the entire climate system, scientists are able to clearly discern the fingerprint of human-induced change. The climate of Earth is now a closely monitored thing; from instruments in space, in the deep ocean, in the atmosphere and across the surface of both land and sea. It’s now practically certain that increasing greenhouse gases have already warmed the climate system. That continued rapid increases in greenhouse gases will cause rapid future warming is irrefutable

#### Warming causes Extinction

**Tickell 08** (Oliver Tickell, British journalist, author and campaigner on health and environment issues, and author of the Kyoto2 climate initiative “On a planet 4C hotter, all we can prepare for is extinction,” The Guardian, 8-11-08 http://www.guardian.co.uk/commentisfree/2008/aug/11/climatechange)

We need to get prepared for four degrees of global warming, Bob Watson told the Guardian last week. At first sight this looks like wise counsel from the climate science adviser to Defra. But the idea that we could adapt to a 4C rise is absurd and dangerous. Global warming on this scale would be a catastrophe that would mean, in the immortal words that Chief Seattle probably never spoke, "the end of living and the beginning of survival" for humankind. Or perhaps the beginning of our extinction. The collapse of the polar ice caps would become inevitable, bringing long-term sea level rises of 70-80 metres. All the world's coastal plains would be lost, complete with ports, cities, transport and industrial infrastructure, and much of the world's most productive farmland. The world's geography would be transformed much as it was at the end of the last ice age, when sea levels rose by about 120 metres to create the Channel, the North Sea and Cardigan Bay out of dry land. Weather would become extreme and unpredictable, with more frequent and severe droughts, floods and hurricanes. The Earth's carrying capacity would be hugely reduced. Billions would undoubtedly die. Watson's call was supported by the government's former chief scientific adviser, Sir David King, who warned that "if we get to a four-degree rise it is quite possible that we would begin to see a runaway increase". This is a remarkable understatement. The climate system is already experiencing significant feedbacks, notably the summer melting of the Arctic sea ice. The more the ice melts, the more sunshine is absorbed by the sea, and the more the Arctic warms. And as the Arctic warms, the release of billions of tonnes of methane – a greenhouse gas 70 times stronger than carbon dioxide over 20 years – captured under melting permafrost is already under way. To see how far this process could go, look 55.5m years to the Palaeocene-Eocene Thermal Maximum, when a global temperature increase of 6C coincided with the release of about 5,000 gigatonnes of carbon into the atmosphere, both as CO2 and as methane from bogs and seabed sediments. Lush subtropical forests grew in polar regions, and sea levels rose to 100m higher than today. It appears that an initial warming pulse triggered other warming processes. Many scientists warn that this historical event may be analogous to the present: the warming caused by human emissions could propel us towards a similar hothouse Earth.

### **US Economy**

#### **P3s spur economic growth**

Shediac et al 08 (consultants for Booz & Company-the leading global management consulting firm, helping the world’s top businesses, governments, and organizations, “Public–Private Partnerships A New Catalyst for Economic Growth,” http://www.booz.com/media/uploads/Public-Private-Partnerships.pdf)

Infrastructure PPPs can be a significant force for powering economic growth and development. PPPs have proven an effective means of bridging the gaps between demand and resources, quality and accessibility, and risk and benefit. The ability to share risk with the private sector, tap external financial resources, and profit from private-sector investments and intellectual capital gives public-sector policymakers greater flexibility in allocating both human and financial resources. Emerging and rapidly growing economies, especially in the MENA region, stand to benefit from the economic development that is generated by infrastructure PPPs.

**Economic growth is vital to prevent the collapse of U.S. hegemony.**

Khalilzad 11 — Zalmay Khalilzad, Counselor at the Center for Strategic and International Studies, served as the United States ambassador to Afghanistan, Iraq, and the United Nations during the presidency of George W. Bush, served as the director of policy planning at the Defense Department during the Presidency of George H.W. Bush, holds a Ph.D. from the University of Chicago, 2011 (“The Economy and National Security,” *National Review*, February 8th, Available Online at http://www.nationalreview.com/articles/print/259024, Accessed 02-08-2011)

Today, **economic and fiscal trends pose the most severe long-term threat to the U**nited **S**tates’ **position as global leader. While the U**nited **S**tates **suffers from fiscal imbalances and low economic growth, the economies of rival powers are developing rapidly. The continuation of these** two **trends could lead to a shift from American primacy toward a multi-polar global system, leading** in turn **to increased geopolitical rivalry and** even **war among the great powers**.

The current recession is the result of a deep financial crisis, not a mere fluctuation in the business cycle. Recovery is likely to be protracted. The crisis was preceded by the buildup over two decades of enormous amounts of debt throughout the U.S. economy — ultimately totaling almost 350 percent of GDP — and the development of credit-fueled asset bubbles, particularly in the housing sector. When the bubbles burst, huge amounts of wealth were destroyed, and unemployment rose to over 10 percent. The decline of tax revenues and massive countercyclical spending put the U.S. government on an unsustainable fiscal path. Publicly held national debt rose from 38 to over 60 percent of GDP in three years.

**Without faster economic growth and actions to reduce deficits, publicly held national debt is projected to reach dangerous proportions. If interest rates were to rise significantly, annual interest payments** — which already are larger than the defense budget — **would crowd out other spending or require substantial tax increases that would undercut economic growth**. Even worse, **if unanticipated events trigger** what economists call **a “sudden stop” in credit markets for U.S. debt, the U**nited **S**tates **would be unable to roll over its outstanding obligations, precipitating a sovereign-debt crisis that would almost certainly compel a radical retrenchment** of the United States **internationally**.

**Such scenarios would reshape the international order**. It was the economic devastation of Britain and France during World War II, as well as the rise of other powers, that led both countries to relinquish their empires. In the late 1960s, British leaders concluded that they lacked the economic capacity to maintain a presence “east of Suez.” Soviet economic weakness, which crystallized under Gorbachev, contributed to their decisions to withdraw from Afghanistan, abandon Communist regimes in Eastern Europe, and allow the Soviet Union to fragment. **If the U.S. debt problem goes critical, the U**nited **S**tates **would be compelled to retrench, reducing its military spending and shedding international commitments**.

We face this domestic challenge while **other major powers are experiencing rapid economic growth**. Even though **countries such as China, India, and Brazil** have profound political, social, demographic, and economic problems, their economies **are growing faster** than ours, **and** this **could alter the global distribution of power. These trends could in the long term produce a multi-polar world. If U.S. policymakers fail to act and other powers continue to grow, it is not a question of whether but when a new international order will emerge. The closing of the gap between the U**nited **S**tates **and its rivals could intensify geopolitical competition among major powers, increase incentives for local powers to play major powers against one another, and undercut our will to preclude or respond to international crises because of the higher risk of escalation**.

**The stakes are high. In modern history, the longest period of peace among the great powers has been the era of U.S. leadership**. By contrast, **multi-polar systems have been unstable, with their competitive dynamics resulting in frequent crises and major wars among the great powers. Failures of multi-polar international systems produced both world wars**.

**American retrenchment could have devastating consequences. Without an American security blanket, regional powers could rearm in an attempt to balance against emerging threats. Under this scenario, there would be a heightened possibility of arms races, miscalculation, or other crises spiraling into all-out conflict**. Alternatively, in seeking to accommodate the stronger powers, weaker powers may shift their geopolitical posture away from the United States. Either way, **hostile states would be emboldened to make aggressive moves in their regions**.

**As rival powers rise, Asia** in particular **is likely to emerge as a zone of great-power competition**. Beijing’s economic rise has enabled a dramatic military buildup focused on acquisitions of naval, cruise, and ballistic missiles, long-range stealth aircraft, and anti-satellite capabilities. China’s strategic modernization is aimed, ultimately, at denying the United States access to the seas around China. Even as cooperative economic ties in the region have grown, China’s expansive territorial claims — and provocative statements and actions following crises in Korea and incidents at sea — have roiled its relations with South Korea, Japan, India, and Southeast Asian states. Still, the United States is the most significant barrier facing Chinese hegemony and aggression.

**Given the risks, the U**nited **S**tates **must focus on restoring its economic and fiscal condition while checking and managing the rise of potential adversarial regional powers such as China**. While we face significant challenges, the U.S. economy still accounts for over 20 percent of the world’s GDP. American institutions — particularly those providing enforceable rule of law — set it apart from all the rising powers. Social cohesion underwrites political stability. U.S. demographic trends are healthier than those of any other developed country. A culture of innovation, excellent institutions of higher education, and a vital sector of small and medium-sized enterprises propel the U.S. economy in ways difficult to quantify. Historically, Americans have responded pragmatically, and sometimes through trial and error, to work our way through the kind of crisis that we face today.

The policy question is how to enhance economic growth and employment while cutting discretionary spending in the near term and curbing the growth of entitlement spending in the out years. Republican members of Congress have outlined a plan. Several think tanks and commissions, including President Obama’s debt commission, have done so as well. Some consensus exists on measures to pare back the recent increases in domestic spending, restrain future growth in defense spending, and reform the tax code (by reducing tax expenditures while lowering individual and corporate rates). These are promising options.

The key remaining question is whether the president and leaders of both parties on Capitol Hill have the will to act and the skill to fashion bipartisan solutions. Whether we take the needed actions is a choice, however difficult it might be. It is clearly within our capacity to put our economy on a better trajectory. In garnering political support for cutbacks, the president and members of Congress should point not only to the domestic consequences of inaction — but also to the geopolitical implications.

As the United States gets its economic and fiscal house in order, it should take steps to prevent a flare-up in Asia. The United States can do so by signaling that its domestic challenges will not impede its intentions to check Chinese expansionism. This can be done in cost-efficient ways.

While China’s economic rise enables its military modernization and international assertiveness, it also frightens rival powers. The Obama administration has wisely moved to strengthen relations with allies and potential partners in the region but more can be done.

Some Chinese policies encourage other parties to join with the United States, and the U.S. should not let these opportunities pass. China’s military assertiveness should enable security cooperation with countries on China’s periphery — particularly Japan, India, and Vietnam — in ways that complicate Beijing’s strategic calculus. China’s mercantilist policies and currency manipulation — which harm developing states both in East Asia and elsewhere — should be used to fashion a coalition in favor of a more balanced trade system. Since Beijing’s over-the-top reaction to the awarding of the Nobel Peace Prize to a Chinese democracy activist alienated European leaders, highlighting human-rights questions would not only draw supporters from nearby countries but also embolden reformers within China.

**Since the end of the Cold War, a stable economic and financial condition at home has enabled America to have an expansive role in the world. Today we can no longer take this for granted. Unless we get our economic house in order, there is a risk that domestic stagnation in combination with the rise of rival powers will undermine our ability to deal with growing international problems. Regional hegemons in Asia could seize the moment, leading the world toward a new, dangerous era of multi-polarity**.

## California Economy NB

#### **Failure to extend BABs causes California economy collapse**

Business Insiders 10 (“Build America Bonds Are Officially A California Subsidy,” November 10, 2010, http://articles.businessinsider.com/2010-11-30/news/29996839\_1\_bush-tax-cuts-muni-market-tax-rate)

The Build America Bond program will be a topic of discussion today when Obama meets with Congressional Republicans. Like the Bush tax cuts the enabling legislation for BABS is set to expire in a month. I don’t think the BABs extension is going to meet with any opposition. While it is a side show to the tax issue; BABs is probably more important. If it isn't extended there is going to be a blowout in the tax-exempt Muni market. Should that happen you can kiss off any hopes of extending the economic recovery. Failure to extend BABs would trigger a (new) fiscal crisis for California. That would quickly spread to a few other key states.

#### California economy key to the global economy

Ross 9 (Jean, executive director of the California Budget Project, a nonpartisan public policy research group, “A bailout for California?

Yes: The state means too much to the nation,” June 5, 2009, http://www.utsandiego.com/news/2009/jun/05/lz1e5ross21510-bailout-california/)

Yet the rest of the country cannot afford to stand by idly as the Golden State drowns in red ink. In the same way that the federal government has deemed Chrysler, General Motors and the nation's largest banks and financial corporations too big to fail, California – the world's eighth largest economy – is too big and too important to the nation for failure to be an option. Since World War II, the state has been an economic driver of the country. A fiscal meltdown in California would have reverberations throughout the country and the world.

#### Economic decline causes war—empirically proven.

Mead 9 — Walter Russell Mead, Senior Fellow for U.S. Foreign Policy at the Council on Foreign Relations, 2009 (“Only Makes You Stronger,” *The New Republic*, February 4th, Available Online at http://www.tnr.com/story\_print.html?id=571cbbb9-2887-4d81-8542-92e83915f5f8, Accessed 01-25-2009)

None of which means that we can just sit back and enjoy the recession. History may suggest that financial crises actually help capitalist great powers maintain their leads—but it has other, less reassuring messages as well. If financial crises have been a normal part of life during the 300-year rise of the liberal capitalist system under the Anglophone powers, so has war. The wars of the League of Augsburg and the Spanish Succession; the Seven Years War; the American Revolution; the Napoleonic Wars; the two World Wars; the cold war: The list of wars is almost as long as the list of financial crises.

Bad economic times can breed wars. Europe was a pretty peaceful place in 1928, but the Depression poisoned German public opinion and helped bring Adolf Hitler to power. If the current crisis turns into a depression, what rough beasts might start slouching toward Moscow, Karachi, Beijing, or New Delhi to be born?

The United States may not, yet, decline, but, if we can't get the world economy back on track, we may still have to fight.

## A2: Perm do the CP

#### 1. They can’t perm to do the CP because the CP is not USFG investment in transportation infrastructure and the CP and plan are distinctly different

#### The USFG doesn’t invest in the infrastructure they invest in the private companies or foreign investors through the 35% subsidy. The investors buy the bonds from the states as a way of buying that state’s debt. There is no relationship between the USFG and building infrastructure.

SIFMA 10 (The Securities Industry and Financial Markets Association, “A New Kind of Bond in the Municipal Bond Market,” http://www.investinginbonds.com/learnmore.asp?catid=8&subcatid=92)

Build America Bonds may attract additional bond investors — including foreign investors such as foreign banks and pension funds — that might have previously been interested only in Treasury, agency or corporate bonds. Pricing is likely to be somewhere between a comparable corporate bond and the tax-equivalent yield of a municipal bond. Most BABs are issued for debt of twenty years and longer. An investor will be purchasing a taxable bond whose interest rates are partially subsidized by the U.S. Government. This can help diversify a portfolio with bonds that have the security of 35 percent of the interest being paid by the federal government; are issued for long term; could provide yield benefit over other bonds in some cases; and in general are considered more secure than conventional municipal bonds with lower default rates than comparable corporate bonds. Some investors may also choose to invest in BABs because they are financing public infrastructure such as roads, bridges and schools. Institutional investors, such as pension plans, money managers and mutual funds, are purchasing BABs due to their long term nature and for situations where they do not need tax-exempt income.

#### The money never goes through the state- USFG to private investors only

Klein 9 (Michael, Senior Vice President of Citi Bank, “ Bonds,” June 11, 2009, http://www.citibank.com/transactionservices/home/securities\_svcs/

docs/taxcreditbonds.pdf)

Build America Bonds. Under the ARRA, issuers can elect to issue either taxable tax-credit in lieu of tax-exempt bonds for governmental purposes for bonds issued in 2009 and 2010. The taxable bond option allows issuers either to receive a 35% reimbursement of interest paid from the federal government or to provide a tax credit to investors equal to 35% of coupon interest. All of the tax laws applicable to tax-exempt bond s apply to the taxable tax-credit governmental bonds.

#### This means even if they win that bonds are a form of investment, the CP is still competitive because the investment is not done by the federal government directly into an infrastructure project.

#### 2. Guaranteeing investment in direct payment bonds steals our DA links, which are key negative ground. If they fiat creating the bonds, we can’t get our spending links. With the CP there’s a risk foreign countries and private investors won’t buy the bonds.

#### 3. Perm severs out of “increase”

#### Increase requires making larger

**Collins English Dictionary, ’09** [Collins English Dictionary - Complete & Unabridged 10th Edition 2009, <http://dictionary.reference.com/browse/increase>]

to make or become greater in size, degree, frequency, etc; grow or expand

#### 4. Perm severs out of transportation infrastructure investment- bonds stimulate investment, they are not innate to investment in infrastructure

#### Using the private sector is classified as negative investment – the aff can’t be the sale of a government asset

Heller, ’09 [July 2009, Peter S. Heller is the Senior Adjunct Professor of International Economics @ Paul H. Nitze School of Advanced International Studies at The Johns Hopkins University, “Public Investment: Vital for Growth and Renewal, but Should it be a Countercyclical Weapon?”, http://www.unctad.org/en/Docs/webdiae20091\_en.pdf]

The challenge of classifying public investment is rendered even more complex in the context of privatization efforts, where the sale of a government asset is classified, in budgetary terms, as a “negative investment”, though in fact the transaction simply represents a reclassification of ownership.2 The complexities of measuring public investment and the changes in the definitions that have occurred over time has led the Organization for Economic Cooperation and Development (OECD), in its recent effort to analyze the linkage between public investment and growth, to rely on indicators of physical stock rather than measures of the financial value of public investment or the net value of its capital stock. Rather than being misled by a narrow budgetary classification, what is important to recognize are the ways in which governments have a responsibility in the creation of capital goods and their need to intervene, particularly when market failure leads to underspending on goods vital for the realization of public policy objectives.

#### 5. Perm severs “its”- cross-apply that the USFG invests in private companies, not the infrastructure. Granting the affirmative private-public partnerships steal negative DA and CP ground, which are uniquely important neg ground for this topic.

#### Its means possession

The American Heritage® Dictionary of the English Language, 2009, Fourth Edition, http://dictionary.reference.com/browse/its

its (ĭts) adj. The possessive form of it. Used as a modifier before a noun: The airline canceled its early flight to New York.

#### 6. Allowing affirmatives to sever out of the ground that competes with the CP means that no CP would ever compete killing key negative ground. Severance is a voter for fairness and ground.

#### 7. Neg interpretation is superior- allowing affirmatives access to these distinctly negative actors and mechanisms explodes the topic to any number of undeniable affirmatives, creates an unbearable neg burden, and allows for effects topical affirmatives.

### **Tax-Credit BABs**

#### Direct Payment BABs are distinct from Tax-Credit BABs

FHWA 6/8 (Federal Highway Administration, US Department of Transportation, “Other Bonding and Debt Instruments,” June 8, 2012, http://www.fhwa.dot.gov/ipd/finance/tools\_programs/federal\_debt\_financing/other\_bonding\_debt\_instruments/build\_america.htm)

Comparison Direct Payment BABs provide a higher subsidy than the Tax Credit BABs (35 percent vs. 26 percent), and are much more readily marketable, as there is no need for investors to ensure they have sufficient tax liability to make the tax credit worthwhile. However, Direct Payment BABs are more limited in purpose because the proceeds are effectively restricted to new construction projects (i.e., no refinancing or working capital). From an investor's perspective, the Direct Payment BAB is indistinguishable from a conventional taxable bond, as the annual return is paid entirely in cash. The diagram below illustrates the two variants of BABs.

## **A2: States will refinance**

#### **States cannot use BABs to refinance**

SIFMA 10 (The Securities Industry and Financial Markets Association, develops policies and practices which strengthen financial markets and which encourage capital availability, job creation and economic growth while building trust and confidence in the financial industry. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (GFMA), “A New Kind of Bond in the Municipal Bond Market,” http://www.investinginbonds.com/learnmore.asp?catid=8&subcatid=92)

Build America Bonds (Direct Payment) are bonds in which the U.S. Treasury Department pays state or local government issuers a payment equal to 35 percent of the coupon interest payments on such bonds. Proceeds of these bonds can be used for expenditures, debt service reserve funds and costs of issuing the bonds but not to refinance capital expenditures, so-called refunding issues. The 35 percent U.S. Federal interest subsidy is deeper than the corresponding 25 percent Federal interest subsidy on Build America Bonds (Tax Credit). Fixed-rate and variable-rate bonds can be issued under this program.

## **A2: Not Enough Money**

#### In 2009, $129 billion were issued in BABs-that’s enough to do your plan at least twice

Center for American Progress 10 (“Why We Need a Permanent Build America Bonds Program,” October 19, 2010, http://www.americanprogress.org/

issues/2010/10/america\_bonds.html)

Direct subsidy Build America Bonds are taxable bonds in which the federal government makes a direct payment to the issuer in order to offset borrowing costs. That is, the government directly subsidizes the issuer in an amount equal to a percent of the interest on the bonds issued. In making direct payments to the issuer the federal government is able to ensure that 100 percent of foregone federal revenue benefits state and local governments alone. Since the program was launched on April 3 of 2009, $129 billion worth of Build America Bonds have been issued and they now constitute 20 percent of the municipal bond market.

### **HSR**

#### A national HSR network only costs $53 billion

Bloomberg 11 (“Obama Seeks $53 Billion Over Six Years To Build High-Speed Rail Networks,” February 8, 2011, http://www.bloomberg.com/news/2011-02-08/obama-seeks-53-billion-over-six-years-to-build-high-speed-rail-networks.html)

President Barack Obama will ask Congress next week to approve a six-year, $53 billion program for construction of a national high-speed and intercity rail network, Vice President Joe Biden said.

### **Waterways**

#### **Waterways cost $380 million per year-BABs could do the plan for the next 339 years**

Waterways Council 5/9 (“Inland Waterways Capital Development Plan,” May 9, 2012, http://www.waterwayscouncil.org/index/capitalplansupport.pdf)

Business leaders and the U.S. Army Corps of Engineers worked together for 18 months to develop a comprehensive, consensus package of recommendations to improve the continued vitality of this critical system. The Capital Development Plan, unanimously endorsed by the congressionally established Inland Waterways Users Board, and included in the WAVE 4 bill (introduced March 30, 2012) will:

 Prioritize the completion of navigation projects across the entire system;

 Improve the Corps of Engineers’ project management and processes to deliver projects on time and on budget;

 Reform project cost allocations;

 Deliver 25 modernization projects and $8 billion of job creation;

 Recommend an affordable user fee funding mechanism to meet the system’s needs, and

 Realize a sustainable annual appropriation of $380 million.

### **Transportation Bill**

#### **The newest transportation bill only appropriated $100 billion for MULTIPLE transportation projects**

Huffington Post 6/29 (“House, Senate Pass Transportation Bill, Extend Current Student Loan Rates,” June 29, 2012, http://www.huffingtonpost.com/2012/06/

29/transportation-bill-student-loans\_n\_1638116.html)

The bill sent for President Barack Obama's signature enables just over $100 billion to be spent on highway, mass transit and other transportation programs over the next two years, projects that would have expired Saturday without congressional action. It also ends a bare-knuckle political battle over student loans that raged since spring, a proxy fight over which party was best helping voters muddle through the economic downturn.

## Aff

BABs create more state debt, a bigger burden on the federal government, and drain resources from the private sector

Mitchell 10 (Daniel, top expert on tax reform and supply-side tax policy at the Cato Institute, holds a B.A. and masters in economics from the University of Georgia and a Ph.D. in economics from George Mason University. “Killing Obama’s ‘Build America Bonds’ Is a Big Reason to Like the Tax Deal,” December 11, 2010, http://www.cato-at-liberty.org/killing-obamas-build-america-bonds-is-a-big-reason-to-like-the-tax-deal/)

Build America Bonds are a back-door handout for profligate state and local governments, allowing them to borrow more money while shifting some of the resulting interest costs to the federal government.

But states already are in deep trouble because of too much spending and debt, so encouraging more spending and debt with federal tax distortions was a very bizarre policy.

Moreover, the policy also damaged the economy by creating an incentive for investors to allocate funds to state and local governments rather than private sector investments.That’s a very bad idea, unless you somehow think (notwithstanding all the evidence) that it is smart to make the public sector bigger at the expense of the private sector.

In one fell swoop, Build America Bonds increased the burden of the federal government, encouraged a bigger burden of state and local government, and drained resources from the productive sector of the economy.

That’s stupid, even by Washington standards. So whatever we think of the overall package, let’s savor the death of this destructive provision.

## **BABs Suck**

### General

#### **BABs are a bailout, not stimulus – makes states dependent**

Seeking Alpha 10 (provides potential investors with information abou investment options, “Uncertain Future for Build America Bond ETFs,” November 17, 2010, http://seekingalpha.com/article/237350-uncertain-future-for-build-america-bond-etfs)

Opponents of an extension for the Build America Bond program argue that the subsidies should be reeled in and could perhaps be put to better use elsewhere. David Reilly writes:

The best course would be for legislators to end what is essentially just another bailout. State and local governments need incentives to get their financial houses in order, as painful as that might be. By subsidizing the cost of borrowing with this program, the federal government reduces the incentive to do so.

According to the Congressional Budget Office, the program was expected to cost $36 billion in the ten years following its creation. But some have argued that the actual cost will be much higher due to the holding of BABs by tax deferred or tax exempt investors–reducing government collections stemming from the projects. Others have argued that local governments don’t create the types of jobs that foster economic recovery.

#### **BABs put states into further debt will collapse once investors lose interest**

Miller 11 (Girard, Public Money columnist for GOVERNING and a senior strategist at the PFM Group, “Are Build America Bonds Up for Grabs?,” http://www.governing.com/columns/public-money/build-america-bonds-up-grabs.html)

So what's the catch? Not everybody loves BABs. Influential Republican Sen. Charles Grassley doubts the wisdom of encouraging more state and local debt on general conservative principles. He became especially exorcised when he learned that BABs bond underwriters were pulling down large concessions and spreads in the earliest issuances. Given the public's antipathy toward Wall Street investment bankers, it was an easy issue to demagogue. However, he was inarguably right that there was some profiteering from "flipping BABs" in the early days when these taxable bonds first hit the market -- a time when investors were still shell-shocked from the market meltdown of 2008-09.

On the issuers' side, there are still a number of skeptical local government officials who worry that there will come a day when the cash-strapped U.S. government loses the confidence of investors globally, moves toward extreme austerity and begins to cut back on popular subsidies --from entitlement programs such as Medicare and Medicaid to BABs subsidies. There is no constitutional guarantee that subsidies will continue, even on deals already sold. It would arguably be easier to pull the plug on BABs subsidies to states and localities than the tax exemptions enjoyed by traditional muni bond investors who vote and make big campaign contributions.

#### BABs increase state debt – distances investors

Malanga 10 (Steven, senior fellow at the Manhattan Institute, The 'Build America' Debt Bomb,” November 22, 2010, http://online.wsj.com/article/SB1000142

4052748704648604575621062239887650.html)

But the BAB program hasn't been the unqualified success its advocates claim. While the original municipal bond crisis in late 2008 was attributed to the meltdown of other credit markets, it has since become clear that investors retreated from municipal debt as much because of the poor fiscal practices of many local governments. BABs have only contributed to the problem, increasing state and local debt even when the market has signaled that it considered some municipal borrowers overextended.

### Direct Payment

#### **Federal subsidies risk bailout – unpopular with voters**

Malanga 10 (Steven, senior fellow at the Manhattan Institute, The 'Build America' Debt Bomb,” November 22, 2010, http://online.wsj.com/article/SB1000142

4052748704648604575621062239887650.html)

The Obama administration believes the BABs' direct federal subsidy is a more efficient way to raise money than traditional tax-free municipals. But when money that would otherwise go to private business flows into subsidized government activities, resources are misallocated.

This is no idle speculation: The financial press is full of stories of investment managers recommending BABs over corporate bonds with similar ratings, thanks to the advantage of federal subsidy. There is also a future bailout risk, given that the federal government might not allow a state or local government to default on a Build America Bond. None of this is what voters signed up for on Nov. 2.

#### **BABs props of Wall Street execs at the expense of taxpayers**

Grassley 10 (Chuck, US Senator-Iowa, “Grassley: Build America Bonds Program Keeps Getting Richer for Wall Street, Harder on Taxpayers,” March 16, 2010, http://www.grassley.senate.gov/news/Article.cfm?customel\_dataPageID\_1502=25758)

Bloomberg News reported that large Wall Street investment banks were charging 37 percent higher underwriting fees on Build America Bonds deals than on tax-exempt bond deals.

Therefore, American taxpayers appear to be funding huge underwriting fees for large Wall Street investment banks as part of the Build America Bonds program.

A Wall Street Journal article dated March 10, 2010, stated that Wall Street investment banks have made over $1 billion in underwriting fees on Build America Bonds in less than one year.

And the Wall Street Journal article, based on data from Thomson Reuters, stated that the underwriting fees on Build America Bonds deals are higher than those for tax-exempt bond deals. That sounds like a great deal for the fat cats on Wall Street, but how about the taxpayers from Main Street who have to pick up the tab?

The Democratic leadership has said the Build America Bonds program is about creating jobs, but I want to know whether it’s about lining the pockets of Wall Street executives. Recently, I asked the CEO of a large Wall Street investment bank a number of questions about these larger underwriting fees that are subsidized by American taxpayers.

### **Bailout**

#### BABs are essentially a bailout-only popular because they mislead investors

Papagianis 10 (Christopher, assistant for domestic policy to President George W. Bush, “Building America's Next Bailout,” October 11, 2010, http://www.weeklystandard.com/articles/building-americas-next-bailout?page=3)

Unfortunately, the rising popularity of BABs could make a federal bailout of the states more likely, because there is now a new class of investors (foreigners) who can reasonably claim to have been misled as to who is ultimately responsible for these debt securities. As with regular municipal debt, BABs are not backed by the federal government. Yet these bonds have the “Build America” brand​—and not the moniker that would be more accurate: “Help deeply indebted states borrow more to build more stuff.”

Not surprisingly, confusion about who stands behind these obligations has contributed to the program’s popularity. The fact that cash-strapped California has issued 22 percent of all BABs since the program’s inception is one of the more troubling signs supporting the hypothesis that foreign investors view these securities as enjoying an “implied” federal guarantee.

#### **Creates more debt-too many bonds get issued**

Buckner 10 (Gail, Retirement and Financial Planning Specialist at Franklin Templeton Investments, “The Big BABs Bailout,” August 2, 2010, http://www.foxbusiness.com/personal-finance/2010/08/02/big-babs-bailout/#ixzz1zcoFPASS)

Among the “extraordinary actions” was the introduction of so-called Build America Bonds. Unlike traditional debt issued by states and municipalities, investors who purchase “BABs” must pay federal income tax on the interest they receive. To make sure cash-strapped local governments can afford to make those payments, the federal government is picking up 35% of the interest for the life of the bond.

The idea was to reduce borrowing costs so that “much needed infrastructure projects can begin to revitalize our communities.” As envisioned by Congress, these would include work on “public buildings, courthouses, schools, roads, transportation infrastructure… environmental projects, energy projects, government housing projects and public utilities.”

It was only supposed to be a temporary help, a two-year crutch to help cities and states get back on their fiscal feet. The Congressional Budget Office [CBO] estimated it would cost the federal government $4.3 billion in interest over 10 years.

However, human nature being what it is, what would you do if you had a rich uncle, let’s call him Sam, picking up more than a third of the cost of your living expenses?

Predictably, state and local officials have rushed to issue far more debt than imagined. According to Dino Mallas, a portfolio manager in the municipal bond department at T. Rowe Price, as of last month, roughly $121 billion in Build America Bonds had been issued.

## **Bonds=Investment**

#### **Bonds are investments**

Investopedia 7/4 (premiere resource for investing education, personal finance, market analysis and free trading simulators, “Bond,” last updated July 4, 2012, http://www.investopedia.com/terms/b/bond.asp#axzz1zbee6Kll)

Definition of 'Bond'

A debt investment in which an investor loans money to an entity (corporate or governmental) that borrows the funds for a defined period of time at a fixed interest rate. Bonds are used by companies, municipalities, states and U.S. and foreign governments to finance a variety of projects and activities

Read more: http://www.investopedia.com/terms/b/bond.asp#ixzz1zcprQnbS

## **A2: Foreign Investors**

### High Now

#### **Foreign direct investment is high now and rising**

O’Brien 4/12 (Economics Editor for the Irish Times, “Foreign investment up 16% in 2011,” April 12, 20120, http://www.irishtimes.com/newspaper/breaking/2012/0412/breaking7.html)

Global foreign direct investment (FDI) rose by 16 per cent last year to an estimated $1.66 trillion, the first time it surpassed pre-crisis levels of 2007, the United Nations Conference on Trade and Development said.

This was the first time that flows surpassed the pre-crisis levels of 2007, the agency’s Global Investment Trends Monitor reported.

#### **Foreign direct investment has maintained steady despite the economic crisis**

Icosa 11 (“Invest in America,” August 2, 2011, http://www.theicosamagazine.com/foreign-direct-investment)

Even through the global economic volatility in recent years, FDI in the United States has remained steady. Preliminary data from the U.S. Bureau of Economic Analysis (BEA) shows that approximately $190 billion in FDI flowed into the United States in 2010, almost a 30 percent increase from 2009. Overall, the $2.3 trillion stock of FDI in the United States is nearly 16 percent of our total GDP. In numerous confidence indices, the U.S. is consistently ranked among the top. A.T. Kearney ranks the U.S. as second in FDI confidence, and the World Economic Forum has ranked the U.S. fourth in global manufacturing competitiveness. Meanwhile, the World Bank names the United States fifth in its “ease of doing business” index. Given the sheer size and industrial diversity of the U.S. economy, it is impressive to secure uniformly high rankings in business benchmarks.

### **Hurts the Economy**

#### **FDI hurts the economy- kills domestic growth and jobs**

Žilinskė 10 (Asta, Kaunas University of Technology, Lithuania, “NEGATIVE AND POSITIVE EFFECTS OF FOREIGN DIRECT INVESTMENT,” June 28, 2010, http://www.ktu.lt/lt/mokslas/zurnalai/ekovad/15/

1822-6515-2010-332.pdf)

Increased competition may be beneficial for the host economy, however, not always. Coming international corporations may push out potentially more productive local business as they are yet not able to compete. In that case many jobs might be lost instead of creating. According to Loungani & Razin (2001) and Kazlauskaite & Buciuniene (2008), therefore government protection of local activities is needed.

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### Economy

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(John, 10/22/08, Journal of the American enterprise institute, Panics and Politics <http://www.american.com/archive/2008/october-10-08/panics-and-politics>)

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### US-China War

No China war - US military deters it  
Ross, 9 – professor of political science at Boston College

(Robert, The National Interest, “Myth”, 9/1, http://nationalinterest.org/greatdebate/dragons/myth-3819)  
  
Yet China does not pose a threat to America's vital security interests today, tomorrow or at any time in the near future. Neither alarm nor exaggerated assessments of contemporary China's relative capabilities and the impact of Chinese defense modernization on U.S. security interests in East Asia is needed because, despite China's military advances, it has not developed the necessary technologies to constitute a grave threat. Beijing's strategic advances do not require a major change in Washington's defense or regional security policy, or in U.S. policy toward China. Rather, ongoing American confidence in its capabilities and in the strength of its regional partnerships allows the United States to enjoy both extensive military and diplomatic cooperation with China while it consolidates its regional security interests. The China threat is simply vastly overrated. AMERICA'S VITAL security interests, including in East Asia, are all in the maritime regions. With superior maritime power, the United States can not only dominate regional sea-lanes but also guarantee a favorable balance of power that prevents the emergence of a regional hegemon. And despite China's military advances and its challenge to America's ability to project its power in the region, the United States can be confident in its ability to retain maritime dominance well into the twenty-first century.

#### No China war – China advancing but not in key areas Ross, 9 – professor of political science at Boston College

(Robert, The National Interest, “Myth”, 9/1, http://nationalinterest.org/greatdebate/dragons/myth-3819)

East Asia possesses plentiful offshore assets that enable the United States to maintain a robust military presence, to contend with a rising China and to maintain a favorable balance of power. The U.S. alliance with Japan and its close strategic partnership with Singapore provide Washington with key naval and air facilities essential to regional power projection. The United States also has developed strategic cooperation with Malaysia, Indonesia and the Philippines. Each country possesses significant port facilities that can contribute to U.S. capabilities during periods of heightened tension, whether it be over Taiwan or North Korea. The United States developed and sustained its strategic partnerships with East Asia's maritime countries and maintained the balance of power both during and after the cold war because of its overwhelming naval superiority. America's power-projection capability has assured U.S. strategic partners that they can depend on the United States to deter another great power from attacking them; and, should war ensue, that they would incur minimal costs. This American security guarantee is as robust and credible as ever. The critical factor in assessing the modernization of the PLA's military forces is thus whether China is on the verge of challenging U.S. deterrence and developing war-winning capabilities to such a degree that East Asia's maritime countries would question the value of their strategic alignment with the United States. But, though China's capabilities are increasing, in no way do they challenge U.S. supremacy. America's maritime security is based not only on its superior surface fleet, which enables it to project airpower into distant regions, but also on its subsurface ships, which provide secure "stealth" platforms for retaliatory strikes, and its advanced command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) capabilities. In each of these areas, China is far from successfully posing any kind of serious immediate challenge. CHINA IS buying and building a better maritime capability. However, the net effect of China's naval advances on U.S. maritime superiority is negligible. Since the early 1990s-especially later in the decade as the Taiwan conflict escalated and following the 1996 U.S.-China Taiwan Strait confrontation-Beijing focused its maritime-acquisitions program primarily on the purchase of modern submarines to contribute to an access-denial capability that could limit U.S. operations in a Taiwan contingency. It purchased twelve Kilo-class submarines from Russia and it has developed its own Song-class and Yuan-class models. These highly capable diesel submarines are difficult to detect. In addition, China complemented its submarine capability with a coastal deployment of Russian Su-27 and Su-30 aircraft and over one thousand five hundred Russian surface-to-air missiles. The combined effect of these deployments has been greater Chinese ability to target an American aircraft carrier and an improved ability to deny U.S. ships and aircraft access to Chinese coastal waters. Indeed, American power-projection capabilities in East Asia are more vulnerable now than at any time since the end of the cold war. We can no longer guarantee the security of a carrier. Nevertheless, the U.S. Navy is acutely aware of Chinese advances and is responding with measures to minimize the vulnerability of aircraft carriers. Due to better funding, improved technologies and peacetime surveillance of Chinese submarines, the American carrier strike group's ability to track them and the U.S. Navy's antisubmarine capabilities are constantly improving. The U.S. strike group's counter-electronic-warfare capabilities can also interfere with the PLA Navy's reconnaissance ability. Improved Chinese capabilities complicate U.S. naval operations and require greater caution in operating an aircraft carrier near the Chinese coast, particularly in the case of a conflict over Taiwan. A carrier strike force may well have to follow a less direct route into the area and maintain a greater distance from China's coast to reduce its vulnerability to Chinese capabilities. But such complications to U.S. operations do not significantly degrade Washington's ability to project superior power into maritime theaters. The United States still possesses the only power-projection capability in East Asia.

#### No US-China war – regional stability

Ackerman 5/10 – quoting former admiral Timothy Keating, the official blog of the Armed Forces Communication and Electronics Association

(Robert, 5/10/11, War Between China, U.S. Not Likely, http://www.afcea.org/signal/signalscape/index.php/2011/05/10/11510/)

The United States and China are not likely to go to war with each other because neither country wants it and it would run counter to both nations’ best interests. That was the conclusion of a plenary panel session hosted by former Good Morning America host David Hartman at the 2011 Joint Warfighting Conference in Virginia Beach. Adm. Timothy J. Keating, USN (Ret.), former head of the U.S. Pacific Command, noted that China actually wants the United States to remain active in the Asia-Pacific region as a hedge against any other country’s adventurism. And, most of the other countries in that region want the United States to remain active as a hedge against China. Among areas of concern for China is North Korea. Wallace “Chip” Gregson, former assistant secretary of Defense for Asian and Pacific Security Affairs, said that above all China fears instability, and a North Korean collapse or war could send millions of refugees streaming into Manchuria, which has economic problems of its own. As for Taiwan, Adm. Keating offered that with each day, the likelihood of a Chinese attack on Taiwan diminishes. Economic ties between the two governments are growing, as is social interaction. He predicts that a gradual solution to reunification is coming. The United States can hasten that process by remaining a powerful force in the region, he added.

#### **No US-China war, too much at stake**

Asia Sentinel 10 - Independent news and analysis about Asia's politics, economics, culture and more

(Ehsan Ahrani, 9/17/10, China, the US and Clashing Aims, http://www.asiasentinel.com/index.php?option=com\_content&task=view&id=2701&Itemid=171)

Despite the rising spirals of competition between them, neither the US nor China appears disposed to seek confrontation that has a high potential of rapidly escalating. Both – especially the latter – have a lot to lose if a war breaks out between the two. China has accomplished much in the past three decades. It is the "world's largest trading nation." In the words of Zheng Bijian of the China Reform Forum, "The most significant strategic choice the Chinese have made was to embrace economic globalization rather than detach themselves from it." And it has not shown any intention of risking such magnificent gains. In view of their clashing aspirations, their mutual ties "will never be warm. But they could well be 'workmanlike."

## A2: Private Investors

### **Warming**

#### Alternate causality—China

Wortzel ‘8 (Former Director of Asian Studies at the Heritage Foundation (Larry et al, Report to Congress of the U.S.-China Economic and Security Review Commission, Nov, p. google)

China argues that developed countries are the primary cause of climate change and therefore places primary responsibility for re ducing emissions on those countries rather than on China and other developing countries, a concept identified as ‘‘common but differentiated responsibilities.’’ 190 The United States *is* the largest historical greenhouse gas emitter and far exceeds China in emissions per capita.191 However, in the past two years China has overtaken the United States in total production of greenhouse gas emissions. **All projections** indicate that, in the absence of major energy consumption changes in China, both China’s aggregate emissions and its share of global emissions will continue to **increase dramatically for the foreseeable future**. The consequent reality is that it will be **impossible** for the international community to resolve the climate change problem by sufficiently reducing emissions **unless China contributes to the effort.** The solution also is unachievable unless the United States—as currently the world’s second largest emitter and the largest historical emitter of greenhouse gases— makes a substantial contribution. Any efforts to address this problem will require global participation by developed and developing nations.

#### Doesn’t cause extinction

Stampf ’7

[Olaf, Staff Writer for Spiegel Online, May 5, “Not the End of the World as we Know it,” http://www.spiegel.de/international/germany/0,1518,481684,00.html]

But even this moderate warming would likely have far fewer apocalyptic consequences than many a prophet of doom would have us believe. For one thing, the more paleontologists and geologists study the history of the earth's climate, the more clearly do they recognize just how much temperatures have fluctuated in both directions in the past. Even major fluctuations appear to be completely natural phenomena. Additionally, some environmentalists doubt that the large-scale extinction of animals and plants some have predicted will in fact come about. "A warmer climate helps promote species diversity," says Munich zoologist Josef Reichholf. Also, more detailed simulations have allowed climate researchers to paint a considerably less dire picture than in the past -- gone is the talk of giant storms, the melting of the Antarctic ice shield and flooding of major cities. Improved regionalized models also show that climate change can bring not only drawbacks, but also significant benefits, especially in northern regions of the world where it has been too cold and uncomfortable for human activity to flourish in the past. However it is still a taboo to express this idea in public. For example, countries like Canada and Russia can look forward to better harvests and a blossoming tourism industry, and the only distress the Scandinavians will face is the guilty conscience that could come with benefiting from global warming.

### **Hurts the Economy**

#### **FDI hurts the economy- kills domestic growth and jobs**

Žilinskė 10 (Asta, Kaunas University of Technology, Lithuania, “NEGATIVE AND POSITIVE EFFECTS OF FOREIGN DIRECT INVESTMENT,” June 28, 2010, http://www.ktu.lt/lt/mokslas/zurnalai/ekovad/15/

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