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ECONOMIC AND GEOPOLITICAL IMPLICATIONS OF LOW OIL AND GAS PRICES

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CONTENTS

ECONOMIC AND GEOPOLITICAL IMPLICATIONS OF LOW OIL AND GAS PRICES

WEDNESDAY, MARCH 2, 2016

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 10:04 a.m., in Room SD–419, Dirksen Senate Office Building, Hon. Bob Corker, chairman of the committee, presiding.

Present: Senators Corker [presiding], Flake, Gardner, Cardin, Menendez, Shaheen, Murphy, and Kaine.

OPENING STATEMENT OF HON. BOB CORKER, U.S. SENATOR FROM TENNESSEE

The CHAIRMAN. The Foreign Relations Committee will come to order. It is a great day in America.

We apologize for negotiating the next 3 weeks while you all are waiting, but we thought a couple other folks might come in.

Today's hearing is focusing on the effect of oil prices. With oil at over $100 a barrel not long ago, and now Brent being at $36 or $37 a barrel, obviously, it has an effect on things. Let us face it, most Americans believe that the price of petroleum and having access to energy has been a part of our foreign policy.

So today we have two outstanding witnesses to help us think a little bit about the impact that the prices of oil are having on our foreign policy and certainly on America.

We have significant conflicts that are taking place already around the world, whether it is in the Middle East, where we have a perceived and real I think proxy war between Saudi Arabia and Iran that is occurring; in Eurasia, where Russia is changing the fabric of Europe right now and has stepped in in Syria and totally changed the dynamics there, yet at the same time is highly dependent upon oil resources to fuel what they are doing; in Africa, where Nigeria has an ongoing battle with Boko Haram, the effect on them is tremendous relative to their ability to function as a government; then in Venezuela, it is amazing that the people have spoken. Thankfully, they want change, and yet they have this country that should have in many ways the highest standard of living in the world because of all the resources that they have, they have totally mismanaged those resources for a long, long time and now all of a sudden, those resources are worth less in money and certainly creating chaos there.

So we are glad you are here. We thank you for being here to share with us your expertise. With that, I will turn it over to our distinguished ranking member, Ben Cardin.

STATEMENT OF HON. BENJAMIN L. CARDIN,
U.S. SENATOR FROM MARYLAND

Senator CARDIN. Well, Mr. Chairman, first of all, thank you very much for convening this hearing. I think it is an extremely important subject that we take up, because there is no question that the economic and geopolitical effects of low oil and gas prices are not well-understood here on Capitol Hill. So I think this hearing is particularly important.

Yesterday, I filled up my car with gasoline. I was pleasantly surprised that I could not get more than about $24 of gasoline in my tank. I remember when it was closer to $50 that it cost me to fill up my tank. I know that my wife, who goes over our monthly bills on or MasterCard, points out that we are getting the benefits of lower gasoline prices. It is certainly welcoming to American consumers to pay less for their gasoline prices.

But we also know that the world economy is performing at a very low level today, and oil prices are part of the reason why.

We also know that China's appetite has been diminished dramatically on the world marketplace. All of that has added to the economic problems. There are many more sources of energy today than we have had in the past, including the Iranian oil that is hitting the market and alternative renewable energy resources. Plus, conservation has reduced the demand for fossil fuels.

All that means that demand is not keeping up with supply, and the prices are dropping. So from $115 a barrel to $35 a barrel, a dramatic impact.

So the question is, what impact does this have on the world economy? In the United States, our economy is doing fairly well. We have had a record number of months of job growth under the Obama administration. We have seen the unemployment rate reduced by more than 50 percent. And our national deficit, debt, annual growth in debt is down to what it was in 2009.

These are all the envy of the world, so we are doing well in our local economy, but the global economy, obviously, we are very much dependent upon. So if you are Iraq or Russia or Nigeria or Venezuela, where you are very dependent on fossil fuel in your economy, this is having a major impact.

It is also having an impact on the stability of these countries. These are not the best of governed nations in the world. When you put on top of that the problems of energy prices, it really does compound the concern about world stability.

Those countries that have embraced diversified energy sources are doing well. There are many countries that have said, look, we are going to go all in on alternative energy and renewable energy sources, recognizing the resource curse of the past, saying, look, we can figure out a better way to handle our economic growth moving forward. These countries have benefited from these types of policies.

So I look forward to hearing from our two witnesses. I think this is an incredibly important subject, but one on which we need more

information. And we have two experts today, and we thank them both for being here.

The CHAIRMAN. Thank you so much. We will now turn to our witnesses.

Our first witness is Mr. Timothy Adams, president and chief executive officer of the Institute of International Finance. We thank you for being here.

Our second witness is Dr. Robert Kahn, senior fellow for international economics at the Council on Foreign Relations. We thank you for lending us an outstanding person to run our committee, by the way, from the Council on Foreign Relations.

But we thank you again both for being here. I know you understand you can summarize your comments in about 5 minutes. Without objection, your written testimony will become part of the record. With that, if you would begin, we would appreciate it.

Mr. Adams, thank you.

STATEMENT OF TIMOTHY D. ADAMS, PRESIDENT AND CHIEF EXECUTIVE OFFICER, INSTITUTE OF INTERNATIONAL FINANCE, WASHINGTON, D.C.

Mr. ADAMS. Thank you, Mr. Chairman, Ranking Member Cardin, and members of the committee.

It is an interesting topic, and let me just step back for a minute and paint a broader picture. I just got off a flight from spending a week in China. We had an event alongside the G–20 meeting, so I had an opportunity to spend my weekend with most of the G–20 finance ministers and central bankers.

I will tell you, there is real concern about global growth. Global growth is anemic. We have had the fourth straight year of sub-3 percent growth. Global trade volumes are a fraction of pre-crisis levels. We have lost $10 trillion worth of wealth in global markets since June of last year. Rising debt levels globally since 2009. Emerging market debt has gone from 154 percent of GDP to 213 percent.

Emerging market corporate debt has gone from 67 percent of GDP to 101 percent, almost doubling. Thirteen percent of that is foreign currency denominated, mostly dollars, but some euros.

Last year, our own analysis showed that net capital flows out of the emerging markets was a record $735 billion, and an estimated $48 billion this year. Record outflows.

Slowing productivity, falling return on equity, falling earnings, falling pricing power, rising NPLs, historic credit downgrades. S&P just set a record for the number of downgrades and credit watches they put in place for emerging market corporates. And even sovereigns overnight, Moody's put a warning on Chinese sovereign debt, which I found interesting.

Central bankers are engaged in quantitative easing and potentially at the end of this historical policy experiment, so there is a question about the viability of additional quantitative easing. Are we at the diminishing returns of this policy measure?

Fears of deflationary pressures. Close to thirty percent of developed market sovereign debt is now trading at negative yields. About $7 trillion worth of sovereign debt, negative yields.

Fiscal policy is paralyzed in many parts of the world, and banks are struggling. European banks have around €1.1 trillion worth of NPLs. They face a flat yield curve, which means their net interest margins are narrow. They are facing new entrants. They have high compliance costs. And it is not clear how they will manage their balance sheets. And then there are political uncertainties that overhang global markets. Brexit, the fear that the U.K. will vote in June to leave the EU, and then our own presidential election cycle, which was the talk of the G–20. Certainly, lots of questions about my own party's direction.

With that, we have the issue of oil prices. You mentioned a 70 percent drop in oil prices since mid-2014. In our own analysis, which you noted is a part of the record, we have ranked countries based on what we see as most vulnerable, code red, the next level of vulnerability, code orange, and so on and so forth.

For the most vulnerable, we see Venezuela—I know my good friend Dr. Kahn will talk about Venezuela—Iraq, Libya, Angola, Bahrain. The next level of concern, Nigeria, Russia, Azerbaijan, Oman, and Algeria. They are all different.

If you look at them as a group in the last year, there actually has been a fairly substantial amount of adjustment going on, fiscal tightening, higher taxes, higher fees, spending cuts in a lot of places.

Notably, with respect to subsidies, there are lower subsidies for gasoline or domestic fuel subsidies or higher fees on utilities. We see that in Saudi Arabia, for example.

Then cuts in discretionary, unfortunately, many times investment in capital expenditures and infrastructure.

Military expenditures seem to be walled off, especially in places like Russia.

We have seen exchange rate flexibility, either depreciation or devaluations. Many oil producers drawing on their reserves.

Here is where sovereign wealth funds have actually been an important shock absorber, as many countries have relied on their foreign net assets as a way to cushion their various imbalances. Borrowing more from abroad. And then there is some diversification with respect to economic activity.

But still, there is huge exposure externally with respect to their physical exposures—Angola, Saudi Arabia, UAE, and exposure to China as well. Angola stands out.

Domestic political instability in Libya, Iraq. Sanctions, geopolitical risk in Russia. And then poor and brittle institutional quality and lack of public trust, again, Nigeria and Angola.

There are some benefits to this massive terms of trade shock. The ranking member noted it has been a substantial boost to consumption globally. It is like a massive tax cut, so we have seen a positive impact in the U.S., Europe, and Japan, and many other emerging markets like India, Indonesia, and Turkey, for example.

We do see countries responding by reducing distortion-producing subsidies, so there is a positive aspect.

And one benefit is the observation that many of these countries have had in place for some time really strong sovereign balance sheets. I think that is a powerful feedback mechanism to tell these countries that, in good times, they really need to build reserves and

ensure they have appropriate and solid macroeconomic regimes in place.

And I will conclude. One positive aspect is that we are seeing more transparency in many places, Nigeria, for example, which is forcing better government. In fact, real reform in some of the oil-producing infrastructure and decision-making processes in many of those countries. Greater transparency on how these revenues are collected and where they are spent I think is positive not only for those countries, but also globally.

With that, Mr. Chairman, thank you.

[Mr. Adams's prepared statement is located on page 33 of this transcript:]

The CHAIRMAN. Thank you very much.

Dr. Kahn?

STATEMENT OF ROBERT KAHN, PH.D., STEVEN A. TANANBAUM SENIOR FELLOW FOR INTERNATIONAL ECONOMICS, COUNCIL ON FOREIGN RELATIONS, WASHINGTON, D.C.

Dr. KAHN. Chairman Corker, Ranking Member Cardin, members of the committee, thank you very much for the invitation to testify today on this important topic. In my opening remarks, drawing from my longer testimony, I would like to touch on the outlook for prices, why I think 2016 will be a year of intensified pressures on emerging-market energy exporters, and explore some of the policy options that we all have for addressing these challenges.

First regarding the outlook, I very much agree with what Senator Cardin said in terms of a broad range of supply factors—shale and gas revolution, new technologies brought supply line. As the Senator mentioned, geopolitical pressures on countries like Saudi Arabia to keep pumping are also playing a role. Weakness in demand is also very important part of it.

My assessment of this is, while acknowledging the uncertainties surrounding the global outlook, energy markets are very high right now. It could take several years in the current environment to work off the kind of imbalances we now see in the markets. So certainly, I am comfortable with the view that says low oil prices are going to be persistent, if not permanent.

Now these lower oil prices, in my view, were a small drag on U.S. growth last year, which is not the way it has been in history. But we saw a 40 percent drop in capital expenditure in the oil and gas sector, and that canceled the boost from higher consumer spending.

One reason we had what I would consider a muted consumer response may have been the desire by many consumers to fix their balance sheets after the damage caused by the Great Recession. That is a healthy development.

It also leaves one with some hope that as time goes on, consumers can become more willing to spend. Indeed, we could get that kind of more traditional relationship that lower oil is a net plus for U.S. growth. But right now, it is pretty much an offset.

The main point here for today is the U.S. economy is not immune from oil-related turbulence abroad. Many of the emerging markets in turmoil share very close trade and financial linkages with us.

Stock market turmoil, as you know, in recent months has contributed to a tightening of financial conditions. I do think that one of the factors in the January selloff may have been sovereign wealth funds. These energy exporting countries selling off the assets, as Tim alluded to. And appreciation of the dollar along with lower oil is imparting an inflationary impulse to the economy.

All this suggests U.S. policymakers are going to continue to need to be alert to the risks emanating from abroad.

Now turning to the emerging markets, I do agree with Tim that there have been some important adjustments made in some countries, the beginning of reform efforts. But still, I would say, in broad terms, looking across the major exporters, 2015 was a year when adjustment was delayed, sovereign wealth funds were drawn down, infrastructure investment deferred, all in the hope that oil prices would return to previous highs. While that was understandable, I think it is only recently that many of the countries began to come to grips with the fact that oil is $30 a barrel and not $100.

At that price, there is a historic gap between the market price on one hand and what we call the fiscal breakeven, the level of oil that really balances the books and allows the politics to be stable within these countries.

What it suggests to me is that, in 2016, while there are still some parts of the oil-exporting world, particularly in the gulf where there are significant buffers and wealth fund balances that can be drawn on, in more and more countries, those buffers have been worked through, and muddling through is no longer a viable option.

This worries me that there is the potential for disruptive adjustment, political and economic, in these countries in 2016.

Now the economic playbook for reform is pretty straightforward. It involves moving energy prices to world market levels. Historically, these energy prices have been a distorting and overly generous part of the safety net. You need to target the safety net to those most in need and get the prices right. You need to get your exchange rate back to market levels, if you can.

I believe the IMF can play a vital role in support of these efforts, reinforcing U.S. strategic interests in this area. There has been some very good work from the Fund the last couple years. I think they are getting it right in terms of the analysis. And they been making a big effort in recent months to reach out to countries like Nigeria to establish a dialogue ahead of the actual crisis. I think that is a good thing that we should support.

In my report, I touch on a couple countries at risk. I am particularly worried about Iraq, as are others, where terrorist attacks and infrastructure weaknesses disrupted production and contributed to a 15 percent of GDP fiscal deficit, which is clearly not sustainable for very long.

I have written in the past a fair amount about how in Russia poor policies, a long history of poor policies, low investment in energy, and sanctions, which I think are a powerful multiplier on those problems, have enacted a growing drag on the economy. Asset funds there are being diminished. It is not viable. And I do think there will be very tough political and economic choices made there over the next year.

Nigeria we have touched on. I do not think they have the buffers to deal with very large deficits that have emerged. They have turned to the World Bank for money, but I think they will need more.

But I want to spend just a moment more on Venezuela, because I think of all the countries that are at risk, this is the one we need to be most focused on right now because Venezuela is an economy on the edge. They are descending into a deep and profound crisis reflected in severe shortages, hyperinflation, and collapse in economic activity. They have a widening financing gap, shrinking reserves, which probably are much less than they report they are.

And the measures they took recently were woefully inadequate to deal with the imbalances that they now face. If the government responds by further compressing imports, popular support for the government can collapse very quickly. So in my view, a default and the chaos that would come after that is a question not of if but when.

Now the current Government of Venezuela obviously is unlikely to seek help from international financial institutions or the U.S., and it will generally refuse cooperation with Western governments. But it is not too early to begin planning for a time when a future Venezuelan Government is willing to take the hard measures that warrant broad international support.

That program is going to require very significant financing. It probably will require private debt restructuring and support for all official creditors. You have dealt with these issues in countries like Ukraine recently, and similarly, it will be in play there.

China's role is going to be critical here because they need to be a constructive partner with the IMF and of the United States as part of building an architecture for that ultimate rescue package, rather than be oppositional or outside of it, as we saw with Russia in the case of Ukraine.

Now broadening back out and in conclusion, failure to address these imbalances will translate into crises much larger in scale and spill over in the United States and elsewhere in unexpected fashions.

I think where there is a willingness to take tough measures, there are very important benefits to financing packages led by the IMF and supported by very strong market adjustments. Low energy prices are going to continue to generate global risks, and we need to be thinking ahead and ready to act when the opportunity presents itself.

Thank you very much.

[Dr. Kahn's prepared statement is located on page 37 of this transcript.]

The CHAIRMAN. Thank you both.

Look, I certainly agree we need to pay a lot of attention in our own hemisphere, relative to instability. I know that will be focused on during this hearing, but the title of the hearing is, "Economic and Geopolitical Implications of Low Oil and Gas Prices." Obviously, that is generated by the very comment you referred to of Senator Cardin's, and that is excess supply.

I know both of you focused more on economic issues, but is there anything that you see about what is occurring with oil that you think should in any way affect U.S. policy toward the Middle East in general?

Mr. ADAMS. The massive increase in U.S. oil production over the past 10 years has been phenomenal. There was a period in the 1980s and 1990s where we were seen as having diminishing capacity to produce oil. Also remember that was a time we were also building LNG import facilities, and now we are one of the larger producers of gas, and are in the process of converting those into export facilities. So it gives us enormous independence. And it has been I think the real game changer with respect to supply characteristics, which you describe. Not only supply characteristics, but there was an article on Bloomberg this morning that noted that just working off the inventories that have accumulated over the past year, it may take years, maybe a decade.

So I think the supply-demand imbalances, even if you fix them, the inventory levels are enormous.

But I think it changes the public perspective about how we engage and the role that we play in the Middle East. I think we see that filtering into the political debate with respect to the current election cycle.

Can we wean ourselves from our dependence on Middle Eastern oil? Although prices are set globally, so you are always subject to price swings. But can we wean ourselves and does that change our posture in the Middle East? And does it impact the way in which this committee and our government thinks about the U.S. role in that part of the world?

The CHAIRMAN. Should it?

Dr. KAHN. I think I would just add that the best thing we could probably do to provide stability in global energy markets is to support political stability in these regions, and strong economic policy.

If you think about the Middle East, I think we have to be humble that we are in the midst of a 30-year political transition, which is stressing borders and governments, and it is creating strong domestic dynamics that are affecting the interests and willingness to provide oil or not provide oil. In some ways, we have to be cognizant of the fact there is probably relatively limited we can do in the short run, other than trying provide the conditions for political stability.

I think Senator Cardin mentioned the Saudi-Iran dimension of this is typical but not alone in that regard, in the sense that from the Saudi perspective, low oil prices provide geopolitical advantages in terms of constraining Iranian ambitions in the area. If that is the view, that would be a compelling reason, besides the simple economics, that would influence decisions on providing oil.

So I think at the end of day, political stability will drive economic stability, rather than the other way around.

The CHAIRMAN. I am going to reserve the rest of my time for interjections and turn to Senator Cardin.

Thank you.

Senator CARDIN. Again, I thank both of you for your testimony.

There is a lot in common in the countries that you mention that are fragile or more fragile today as a result of the reduction of oil

prices. These are countries that have serious corruption issues. They are not good governance countries. They are countries whose values are much different than our values. And they are countries that do not put a very high priority on innovation and creativity, and developing an alternative economy.

Therefore, the historic term "resource curse" applies very clearly to these countries. And with lower oil prices, they are feeling the real effects of their dependency on an energy economy.

It was interesting, the observations about the Saudis, that they may be doing this to reduce the influence of Iran in the region. One could argue that the reduced energy prices also reduce Russia's influence in the region, although Russia certainly has not shown any propensity to slow its involvements in Ukraine or in Syria.

But it also could have an impact against the priority for innovation for alternative and renewable energy sources. There have been at least some articles written that the Saudis may be doing this intentionally to deal with our shale oil issues, to keep the prices noncompetitive for development of additional fossil resources here in the United States. Some of us were at COP 21 in Paris, and we saw 196 nations come together to reduce our dependency on greenhouse gas emission energy sources.

One of the more hopeful events that we attended was Secretary Moniz and the innovation exhibit he showed us. We got to see a car, Mr. Chairman, that was manufactured in your State with a 3D printer at the Oak Ridge National Lab. Fascinating, a 3D car. Shelby Cobra, just to give the name.

In my own State of Maryland, we are working on oxide fuel cells with the University of Maryland, with private companies, and the Department of Energy.

I mention that because one of the impacts of lower oil prices could be to slow down innovation for alternative renewable energy sources because of the pricing of gasoline being so cheap, why bother? With oil so cheap, you might as well use it more. So I think it is an issue that we need to look at.

On the other side of that, as I pointed out, countries that are diversifying—India, for example—is showing a remarkable improvement in their economy because they are diversifying. China is reaching out to diversify their economy on renewables and sources.

So if you could comment a little bit more as to whether the silver lining through all of this, alternative and renewable energy sources, less dependent upon oil or fossil fuels from countries that disagree with our way of life, whether the trend line as a result of lower prices will continue to be favorable towards the West or are we going to be held hostage now to low prices, making us more dependent upon fossil fuels?

Dr. KAHN. A couple thoughts. I very much agree with you that to the extent we and others diversify to broader sources of energy, it provides a geopolitical as well as economic security. It was very much, for example, in the discussion with Europeans about sanctions on Russia, this was very much central in terms of our desire for the Europeans as well to move in the direction of alternative fuels and the like.

I suppose the one other point I would add, and it speaks to this issue and also to Senator Corker's earlier question, in terms of the

argument that some have made that the Saudis, by keeping prices low for a period of time, can drive out some shale producers, can discourage the kind of very expensive high fixed-cost deepwater drilling that a lot of the other countries are doing, want to do. Then they can raise prices again.

I understand the first part of the argument, but not so much the second. I think it is important to recognize that traditional model of a cartel that can have strong control over the market, I do not think it really speaks to the current environment. I think as we saw with the recent discussions of a number of countries, including the Russians and the Venezuelans over possibly just simply holding output to the very high levels we had in January, they were not really able to sustain that.

So I think the sort of idea that Saudi can be the kind of swing producer that they had been historically I think very much is not so much the case. Now part of that, of course, is shale and the quick, rapid supply response we would see if prices went up again.

So I do think that while it is certainly right to say you are going to get the substitution effects that you are describing, I think if the goal somehow is to have these kinds of monopoly effects, I think that is very much misguided in the current market.

Mr. ADAMS. I would just add, if you look at a supply cost curve price, these levels certainly make renewables and shale and obviously deepwater uneconomical. The markets have figured it out. That is why many of these shale companies have funded themselves with high-yield debt that is blowing up the markets. There is enormous bank exposure, U.S. institutions, European institutions.

There is article in one of the papers this morning that Canadian banks have $80 billion exposure to the energy sector, some of it because of the tar sands out in Alberta.

But it is not as if that technology and those assets are going away. And fracking technology is getting better. It is getting cheaper. So that cost curve will shift over time.

And I do not know the intentions of the Saudis, but I suspect it is a way to drive out everything above that cost curve out of business or mothball it. Some of it can come back quickly. I understand shale can be put back into production pretty quickly. Others, like deepwater, may take a decade.

So I do believe it is having a profound effect on renewables and other sources of production.

Senator CARDIN. Let me ask one additional question. You both I think mentioned the fact that the countries that are so dependent upon fossil fuels are going to go through a need for international intervention, at least seeking some help from the development banks and international support. Is it likely that these countries, such as Venezuela that has a poor record of governance, will be able to leverage the type of reforms on their energy sector and governmental sector where the international involvement will have a positive impact on the stability of that country moving forward? Is that realistic to expect that could happen?

Dr. KAHN. The track record is not particularly good in this regard, to be honest about that. I think we have to try.

As I mentioned earlier, I do believe that distorted policies in the energy sectors in these countries is a source of corruption. It is one of the major sources of distortions of prices and misallocation of investment.

So if they do turn to the West for help, if a rescue package is involved, really dramatically going after the sectors, getting prices to world levels, trying to get the incentives right, rooting out the corruption, I think you can build a lot of confidence and trust in that government. You can get the investment incentives right.

I think you can make a huge difference. I think you have to try to do that.

But it is hard to maintain popular support for what is very distorted. You have to get a safety net in place that really replaces these energy subsidies that have been there with a targeted safety net so that you really are helping the most in need.

So I think we have learned a lot over the last years in countries that have struggled with this. I mentioned Ukraine is one that is struggling with this right now. So I think it is worth trying but you are absolutely right, it is a tough job, and it requires very strong political support for the government to be sustained during it.

Senator CARDIN. I would just mention I think it is one area this committee may want to take a look at, Mr. Chairman, as we see the international organizations that we have jurisdiction over here, their involvement in this, absolutely we should be demanding that there be accountability for our participation.

The CHAIRMAN. Thank you. Thank you very much.

Senator Flake?

Senator FLAKE. Thank you. Thank you for your testimony.

Turning to Iran for a minute, Iran was expected to get a pretty big windfall with assets being released and being able to sell oil on the world market without restriction. How much has that been negated by low oil prices with regard to Iran? What is it going to mean to economic growth there in the next year or 2?

Mr. ADAMS. Sure. It is only delayed. It has not really thwarted. There has been a tremendous amount of interest certainly from European officials and European institutions as well as Asian institutions to provide capital expenditures, capital equipment and infrastructure to Iranians, which now have access to hundreds of billions of capital to spend. I am sure governments are willing to, in Europe and Asia, to provide appropriate financing for infrastructure spending.

So I think what we will see and will probably drive growth—our own estimates for Iran is that we will see growth jump to about 5 percent this year, simply because of the massive amount of investments that are going to go into what is a fairly diversified economy, but a massive amount of investment that will go into the hydrocarbon infrastructure that will be sold and financed from a variety of places around the world.

So debt production is coming back on. It is coming on pretty quickly. I would say in a matter of years, we are back to pre-sanctions production levels. Some of that is now being priced into the markets.

But I would say that it has only slowed. It has not stopped. There is a gold rush into Iran to sell and be a part of the renewal of that economy.

Senator FLAKE. Mr. Kahn, do you agree?

Dr. KAHN. I agree.

Senator FLAKE. All right.

Turning to Angola for a minute, a country like Angola that has had problems and has relied on higher oil prices to fund its activities, its governmental activities and a world of corruption there as well, what does this mean to Angola, these prices?

Mr. ADAMS. My estimates are, first of all, the oil accounts for two-thirds of government revenues and 95 percent of their exports, and they have enormous exposure to China. So it is not only oil exposure but it is exposure to the cyclical changes in China. Heavy government borrowing. GDP has doubled over the last couple years, but we see a massive shift in their current account deficit, about 8 percent of GDP. They are drawing down their reserves. They are borrowing in capital markets.

In fact, we expect external borrowing to hit $31 billion.

Economic growth will slow to about 3 percent, so down about half the pace of growth prior to the drop in oil prices. The annual budget deficit is about 6 percent of GDP, and inflation is running about 14 percent.

They have general elections in 2017, but the current President has been in power for 37 years, so it is not clear what general elections actually mean.

Senator FLAKE. It will mean more probably to a country like Nigeria that just went through elections and turned in the right direction, as far as we are concerned. If oil stays below $50 a barrel for another year or 2, what are we looking at in Nigeria?

Dr. KAHN. As a segue, I think in Angola, when you see this type of spending, unsustainable buildup of debt, an election well into the future, it is a recipe for too little, too late, in terms of policy adjustment, and a crisis at a future date. I get very worried when I see that type of debt accumulation, that it is going to the wrong places.

I think in some ways that is a bit of the legacy of Nigeria. Nigeria, to its credit, I think had made in past years some significant reforms and efforts to really diversify away from energy. Other know this, but my sense is that they deserved credit for that. There were elements of good economic management within that.

But it was a fragile stability, and I think what we have seen with the recent run-up in the deficits and the like, that despite cutting government investment, you are seeing a real squeeze on the private sector in Nigeria. I think that is a real concern that the kind of gains that we saw would be lost over time.

Obviously, if we get into a situation where this government has to start cutting social spending in the context of these deficits, it could be really destabilizing, quite destabilizing politically. That would be a concern of mine.

And traditionally, I have been worried about the Nigerians being too late to come to the international community and ask for help. In that regard, I welcome the fact that they went to the World Bank for support and advice. There was a technical mission with the IMF. There is still a big stigma there for this government with asking the IMF explicitly for help. But my expectation is that is going to have to change.

Mr. ADAMS. I probably am a little more optimistic. Nigeria has enormous infrastructure problems. If you have ever driven from downtown hotels to the Lagos airport, in the 4 hours that trek takes, you know the needs for infrastructure.

The Buhari government has certainly said all the right things. They have a cabinet in place. I am hopeful that they will be able to follow through on reform of the petroleum industry, greater transparency. As we all know, there has been an enormous amount of leakage, no pun intended, with respect to the way in which oil revenues have been allocated.

They do have plans for an enormous amount of infrastructure, which the country desperately needs. They are a diversified economy—agriculture, services, construction. It is quite vibrant.

There are still distortions. They are limiting access to dollars in an effort to try to create sort of an import substitution policy, forcing locals to buy locally. If you are a businessman and you are a manufacturer trying to import spare parts, you cannot get access to dollars to do that. It takes some time before domestic industry pops out. If you wanted Colgate toothpaste in Lagos, it is really hard. You have to buy the local brand, which is fine.

But I am actually optimistic. I think for the first time in decades, that country at least has the right political leadership in place, and the capacity to be a player. And let us hope they are. They have 180 million people in that country. By 2050, they will have 400 million. Their population will exceed that of the United States.

So we should invest some time and energy into that country and make sure they get it right.

Senator FLAKE. Thanks. I do not have time but I was going to ask, when we were in Mozambique, myself and Senator Cardin, and they are counting on large offshore natural gas production coming online in about 3 or 4 years. If we get a second round of questions, I would love to talk about that.

The CHAIRMAN. Before turning to Senator Menendez, I think both my words and my actions have demonstrated I am no fan of Iran. But if you look at their debt-to-GDP numbers, it has been fascinating that during this period of incredible sanctions, they have managed to keep debt-to-GDP low while we have been feckless on both sides of the aisle and allowed our Nation to become incredibly weak. It has been fascinating to watch.

But with that, Senator Menendez.

Senator MENENDEZ. Thank you, Mr. Chairman.

Before I turn to the subject at hand, I just want to recognize that the U.N. just passed the toughest sanctions against North Korea in 20 years. And I appreciate the leadership of this committee, both you and the ranking member, and the work that we did with Senator Gardner, to lead on this issue.

I think there are moments that, when we lead, we gather the world's attention and we focus it. Today, is a good example of that, so I wanted to just note that.

Thank you both for your testimony.

Mr. Adams, thank you for sending it in advance. I read it, and it did not provide for a lot of optimism at the end of the day. But I appreciate the insights.

Certainly, while the precipitous decline in oil prices has benefited oil-importing economies by raising household disposable income, by lowering inflation, by increasing market competitiveness for products producing these economies, that same decline in prices has put oil-exporting countries under significant pressure, particularly those exporting countries that either lack the foresight or capacity to diversify their economies.

So for these countries, loss of oil-related revenues and oil-related economic activity can be catastrophic. I want to talk about that a little bit with you.

But in one sense, that should not be a surprise. Countries that have depended on revenue from oil as it is almost singular source is vulnerable to its price. And the more they are dependent, the more they are impacted.

Mr. Kahn, thank you for your testimony. Now, from a foreign policy perspective, it strikes me that low oil prices might be a forcing function for economic diversification, but this is not the first downturn that many of these vulnerable countries have endured.

So do you see opportunities here? As we were talking, and I totally agree with Senator Cardin vis-a-vis Venezuela, which this committee has had actions on, I would think international financial institutions would be advocating in these more vulnerable countries because of their dependency on oil for policies in support of economic diversification.

Is that something that you see as an opportunity to happen?

Dr. KAHN. I do think it is an opportunity. I think as one of these countries respond to a decline in prices promptly with an economic adjustment program, the sort I talk about my testimony, the sovereign wealth funds can provide a buffer to allow for that adjustment to take place because these things do take time. And I think it could be hugely positive in terms of long-term growth potential. It can be a forcing event to get rid of these very distortive subsidies.

But I think the honest reality is that in many cases there are strong political incentives for these countries to kind of delay, to convince themselves that prices will come back up, that the deals that have to be cut to live with lower oil prices within the country are too difficult, and to not be willing to talk to the international community until it is really quite late in the game.

Senator MENENDEZ. Is that then the leverage moment for these international financial institutions, because they may not want to do that and may be recalcitrant because of their expectations that prices will rise, and they will not have to change their operating. But it seems to me that is the moment that the international financial institutions should leverage to try to get them to do so.

Dr. KAHN. It is what they should be doing. And to give them credit, I think the IMF is making a real effort right now to get out to the oil exporters and to have exactly this kind of conversation with them.

There have been these press reports of noticeable successes with Nigeria, whose Uzbekistan, Kazakhstan, and a few other the countries.

But I think there is still a stigma to coming to the IMF. Sometimes there are legitimate concerns in these countries that to do so almost is a signal to their private sectors that things are worse than they seem.

So certainly, to the extent the international community, the G–20, including G–20, which Tim can talk to, can try and find ways in which to facilitate these discussions, it is all for the good.

Senator MENENDEZ. Now in the context of a flipside of this, in terms of our use of peaceful diplomacy tools, sometimes when we cannot get countries to observe the international order and are impervious sometimes to international opinion sufficiently and criticism to get them to move in a different way, and our use of our aid and our trade has not induced them to move in a better direction, sometimes we turn to sanctions as a peaceful tool of international efforts.

So I think about Russia, Ukraine, Crimea. I think about Iran and its nuclear program. But beyond its nuclear program, what they are doing with the Houthis in Yemen, what they are doing in Syria, what they are doing in the expansion of intercontinental ballistic missile technology. I say to myself, obviously, the precipitous drop of oil has a multiplying factor in those economies. I think that is a fair statement. While sanctions are existing, there is a multiplying factor.

I offer this question to either one of you or both. Do you see a point—I think maybe it was you, Dr. Kahn, that called it a fiscal breakeven price at which Russia finds itself unable to sustain its foreign policy. Is there a point at which the Iranian regime might be unable to sustain policies for support for Assad, Shia militias in Iraq, the Houthi insurgency in Yemen, the financing of billions of dollars to Hezbollah and Hamas?

And in Venezuela, which has another challenge to one internally, but it has been giving free oil or largely subsidized oil to countries throughout the hemisphere. That has an even bigger ripple effect at the end of the day.

So could either or both of you talk to us in that regard? How you see when it is that they can no longer continue, that they are going to have to alter, because of fiscal realities, some of those policies?

Mr. ADAMS. We have with us and we can submit for the record current breakeven fiscal points (See Table 1 below). As the spectrum goes, Iran is pretty close to the bottom. Our latest estimates are about $72 a barrel for Brent, and in many countries it is coming down simply because the fiscal adjustments they are putting in place.

TABLE 1.

Fiscal Breakeven Oil Price Estimates:

	Fiscal breakeven oil price ($/barrel)
Venezuela	166
Colombia	123
Ecuador	115
Algeria	101
Bahrain	101
Oman	90
Mexico	89
Saudi Arabia	86
Iran	72
Iraq	67
Russia	65
UAE	65
Qatar	58
Kuwait	55

Source: IIF.

So some of them have been quite large, over $110, $120 a barrel, and have been going up over at the last few years, from about 2000 up until about 2012 because of the spending sprees that went on in many of these countries. But they are starting to see adjustment.

I think we are a long way from creating that kind of pain, especially in Russia, although they are going through their reserves pretty quickly. By the end of 2016, there will be maybe $15 billion left in their reserve fund. As you get into 2017 and a new election cycle, they will be forced to take even further measures. They have been walling off military expenditures and focused most of their cuts on social programs and investment. At a certain point, they will have to rethink that mix.

But I want to go back to your point about diversification. The best job in the consulting business now is to have an account in Riyad. The airplanes out of Dubai into Riyad are full of contractors trying to sell diversification. The Deputy Crown Prince Mohammed bin Salman, who is actually doing a tour of the U.S. soon, is leading that effort to try to diversify the Saudi economy.

I think they are very serious about it, and I think they have the resources to put behind it. They see what is happening with the UAE, which has diversified, and Oman as well.

But all of these countries to varying degrees are being forced to put in place appropriate adjustments. Some is by design. Some of

it is well thought out. Some is haphazard. Some of it will be done recklessly.

But Iran I think is not one I worry about in the short term. And I think Russia has enormous durability to withstand these prices for some period of time.

Dr. KAHN. Let me pick up on the Russia point, because I think it illustrates some of these trade-offs.

The fiscal breakeven is a static concept. It sort of saying, right now, with the policies we have in place, what is the price we need to make things balance. So for Russia, they are hemorrhaging money at this point. Now they have large asset balances they can draw down, and, of course, in the gulf as well, they can do this for some time.

So certainly, you can try to calculate how long they last. A lot of these sovereign wealth funds, including Russia, is not fully transparent, how much is there, how much is liquid and usable. Of course, the politics of whether it can be used can be an issue as well.

But then as you get lower, then you have to ask, well, what are the next policy steps you can do? Is it cutting investment?

One of the things we see in Russia, which I think is indicative of other oil expect exporters but it is particularly an issue in Russia, is that if you have a country where the majority of their export revenue and budgetary revenue comes from oil, so the budget is in domestic currency, in rubles, in this case, oil is sold dollars, a devaluation helps the budget. So if you say put together a budget in the fall, assuming $55 a barrel, that is as much a political statement as much as an economic judgment. It is saying we are going to try to balance interests and put together a budget that maintains our politics at this price, and allocating resources for the military, for social spending, and for the like.

Then prices are $30. What do you do about it? You can renegotiate. We saw that in Saudi Arabia in some sense, announcements about changes to the safety net, which in a sense was recalibrating the budget to a lower price. That is one way to close the gap.

In Russia, easing monetary policy by depreciating the exchange rate and raising the domestic value of that oil revenue shifts money to the budget. It is a way of easing those pressure points.

Now where does that money come from? It is a tax on consumers, particularly those with fixed income.

So that is a common kind of element in many of these countries, particularly those that do not have pegged rates. In the gulf, there are a lot of peg rates and changing it would be very disruptive. But where countries have flexible rates, that is one element of the dimension that feeds into the politics very readily, because it is a shift of resources.

The CHAIRMAN. This has been a great explanation, but we are probably going to end it. Thank you.

Senator Gardner?

Senator GARDNER. Thank you, Mr. Chairman. Thank you for holding this hearing.

And thank you to the witnesses for being here today. I too want to echo Senator Menendez's comments on North Korea. The resolu-

tion out of the United Nations reflected much of the language and the work that we had done here in our sanctions on North Korea.

Obviously, one of the areas where they did not go as far as we did was on the issue of cyber sanctions. I hope that we can continue to work with our partners at the United Nations to continue to look at cyber activities and sanction activities that follow from the cyberattack out of North Korea and beyond, particularly as it relates to perhaps North Korean activities through China and others.

So congratulations again on a very good resolution out of the United Nations. So thank you.

To the witnesses today, one of the things that I think you have touched on a little bit here, and we are seeing more and more in the news, just yesterday, Moody's Investors Service I guess on Wednesday, 14 hours ago, so just today, Moody's Investors Service lowered the outlook on China's credit rating from stable to negative, citing a weakening of fiscal metrics and continuing falling foreign-exchange reserves.

We see headlines where China is to lay off 5 million to 6 million workers and earmarks $23 billion to help pay for those layoffs in steel sectors and other sector sectors.

What does this mean for the price of oil? If they are shedding 5 million to 6 million people here, what does this mean as more layoffs are coming as anticipated in industrial sectors in China? And how does that affect the outlook for our oil price?

Mr. ADAMS. Sure. There are two elements at work here with China. I was just in China. I just got back 24 hours ago.

There is a structural shift that is going on in the nature of the composition of growth, from smokestack, heavy industry to services and more high-tech. So that is impacting the nature and volumes of imports, and we are seeing that whether it is iron ore exports from Australia or copper from Chile.

So there are structural shifts going on, which we have been applauding, because we said that they need to change the nature of growth. The structural growth they had in place was not sustainable. That is part of the explanation of why we have seen a slowing in growth.

And there is a cyclical component on top of that, which is magnifying the structural. In fact, we are seeing a substantial slowdown. The official statistics are somewhere between 6.5 percent and 7.5 percent. I think it is something below that. So certainly, on a nominal basis, it is substantially below.

Senator GARDNER. Below as in 5 percent or 6 percent? Or 8 percent or 9 percent?

Mr. ADAMS. Personally, I think it is probably in the 5 percent range. Who knows? It is a large economy and the statistics are of questionable nature.

But we do see substantial reforms. For example, there is enormous overcapacity in many smokestack industries, whether it is aluminum smelting or steel production. And they have been supporting those industries for a long time, either through state-owned enterprises or cheap capital from the financial system. They ought to be shutting those things down, in fact, because it has been flooding the world with excess capacity and depressing prices. The Chi-

nese have been exporting deflationary pressures for years, and they see it even in their own domestic prices.

So in some ways, the shutting down of those factories I think is good because they are not economical in globally competitive terms.

But China is slowing structurally. It is slowing cyclically, and will continue to have a profound impact on commodity prices generally. They are the price-setter at the margin. So how goes China goes Chile, Angola, Australia. The rippling effects go throughout the global economy.

Senator GARDNER. So as we see these layoffs continue and the shuddering of factories and this growth decline that you talk about, what does that mean for projected price, oil supply and demand, in the future?

Mr. ADAMS. Well, if you look at real volumes of Chinese import of oil, it is actually up. It has plateaued a bit.

I think the biggest driver of oil prices has been the change in the supply. It has been in the U.S. because our production has gone up substantially because of unconventional production. So it is both the supply and demand, but China was a driver both perceptually and in real terms for many, many years. And I think demand will soften there.

But the perception is that somehow volumes have plummeted. They have not. In fact, 2016 will actually see positive increase in oil consumption and imports in China from 2015. It is just not at the same pace. And the supply characteristics of global markets have changed dramatically, and we have enormous inventory sitting around, too.

Senator GARDNER. So if you look at the prices where we are at today, just looking at the United States, the prices we are at today, see where they came down to. The last time when it dropped down to about $27 a barrel I think was about 12 years or so ago, the lowest price in 12 years.

What was our economic growth as a result of that decline in gas prices say 12 to 15 years ago? I guess the question is, when you see a significant percentage decrease in the price of oil, what did that do for our economy, if there is any sort of comparable time frame for a percentage drop in the price of oil?

Dr. KAHN. So if you look at the historical models, look at, say, the performance of the U.S. economy in the 1970s, it would have predicted for you that the decline in oil on this order of magnitude would have had a material positive effect on U.S. growth because of the consumption benefits that would have come from lower oil prices, from filling up our tanks, and we would go and spend that.

What is striking is that we did not see that this time. In some sense, it is an easy answer that the countervailing effect was a very material drop in investment in oil and gas sector, because we have just a much bigger presence because of the development of shale.

So the models now updated basically show either very small positives or very small negatives from this shock that we have had so far. Last year, I think most of the things I read say a small negative, actually, for growth. That is unusual.

My hope is this year, that will swing to positive, because consumers that to some extent were still fixing their balance sheets

after the Great Recession, the damage, are going to feel better about spending this year than last. You are not going to have the same decline in investment. You will not have 40 percent every year.

So, on balance, I do think over time, if the low oil price persists, it will become more positive. But that is a projection, and we are in a new world because of the greater role of energy production.

Mr. ADAMS. It has been enormously lagging. The auto sector certainly has benefited. If you are selling SUVs, you have certainly benefited. But households save more than our models told us because I think they were still repairing their balance sheets.

Senator GARDNER. You do some expansion, obviously sales in SUVs and other autos. I think you see airline reports of record profits. But the sort of dividend of this low price to the consumer has not necessarily resulted in same kind of reaction from a consumer investment as it did in the 1970s. Would you agree with that? Or could have in the 1970s?

Mr. ADAMS. It has not achieved what the standard models will tell you. I think if you were to get some of the Federal Reserve Governors here in front of you, they would also say it has underperformed their own expectations for what it would have done to demand, where we are in the cycle. It may just be a lagged effect, and we will see more of it filter through in 2016 than we did in 2015.

Senator GARDNER. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Before turning to Senator Kaine, I want to thank you and Senator Menendez again, and the entire committee for its efforts on North Korea. I really do think it had an impact on pushing China and Russia at the Security Council to take action. Again, if it is implemented properly and held to, it could make a significant difference. So again, I want to thank everybody on the committee for their contributions and the results that occurred.

Senator Kaine?

Senator KAINE. Thank you, Mr. Chairman. Thanks for doing this hearing. This really opens up a lot of discussion I know we will be having.

And I appreciate the witnesses for the testimony.

I was in Israel once when I was Governor in 2009, and met with Shimon Peres. I asked him just kind of the open-ended question, sort of at the end of our discussion, what would be something we could do in American policy that would really benefit Israel, the U.S.-Israel relationship? He kind of cryptically said, wean away from your dependence on oil from the Middle East. He did not really describe kind of why he viewed that as his top ask. I thought he was going to ask about a defense MOU or something like that.

But in his way, as a very philosophical thinker, that is what he put out there. As I thought about it, he was sort of saying, look, the more you develop your own energy sources and reduce demand on energy from here, or the more you move into noncarbon energy and reduce demand, the more you increase supply, if you engage in activities in the United States that will depress prices, there is less money going into bellicose economies that want to use extra

dollars to engage in adventurism in the region. I think that is kind of what he was saying.

It has been a remarkable stretch from 2009 to today in terms of that happening. In some, I think there were policies that drove it. And in others, just good old American ingenuity, sometimes in spite of Congress and in spite of policies.

But nothing is completely good. So I love paying 20 bucks or less to fill up my car. I have not been in that position for a long time. But you have pointed out a number of the ways where there is both a good side and a downside.

We deal with a lot of these petro-dictatorships that have been able to prop up their economies because of high oil prices. Paul Collier and other writers talk about the kind of resource curse. There are corruption issues that often come from it. But also oil revenues have had a way of buying off opposition as well.

I think a lot of what we deal with in this committee is, when we are dealing with challenged relationships, what is the best way to influence behavior.

It is interesting with the sanctions discussions that we have had here, we have had sanctions discussions about Iran, about Russia, about Venezuela, about North Korea. Three of those nations are nations that lean very heavily on petrochemicals and on oil. And all of them are pretty significantly affected in a low-energy price economy.

It has been interesting, Mr. Chairman, sitting here in the discussions we have had about sanctions. I think the balance that we are always trying to strike is, sanctioning bad behavior is important, but we do not want to let a dictator use our sanction as a way to crush internal political opposition.

Ultimately internal political change, political stability, is what we are after. If a dictator mismanages an economy, as was the case with Chavez and Maduro in Venezuela, or Putin in Russia, there will be angst that will develop politically that will demand change. But if the dictator can blame it on, "Congress is sanctioning us. You are suffering because of the United States Congress." If they can blame somebody else, they are going to do that.

So we often have to really use the sanctions tool in a very fine way and not allow our sanctions to mask the mismanagement of economies by dictators who do not know what they are doing and are not diversifying the economy, because if we allow it to be masked, then we can sometimes suppress the growth of a political opposition.

We are seeing some strong elections in Venezuela, some positive elections, at least somewhat positive, in Iran. We have not yet seen the internal political opposition develop in Russia that we would want. There certainly is development of political opposition that we can see in North Korea.

But the low oil price thing really factors into our own calculation of when and how to use the sanctions tool. So I just find this to be very fascinating.

I just want to ask one question about your thoughts about Russia. Low oil prices, if I go back to kind of the Shimon Peres thinking, low oil prices would hurt Russia in the sense of less dollars to engage in adventurism. But there is also a little bit of sense with

Russia that they engage in adventurism to take their people's eye off the ball. If the economy is hurting and if people are suffering, then let us have a winter Olympics or a World Cup or let us invade a country to try to take everybody's eye off the ball.

As I talked to some of our European counterparts, even more than an aggressive Russia with money, they kind of almost worry even more about a basket case Russia in terms of what that would then produce in Eastern Europe, in countries that border.

So talk a little bit about, if we see low oil prices staying for a while, and I know that is a big if, but if we see them relatively low and maybe less volatile, how would you see that playing into kind Russian politics and the prospect for adventurism by a Putin who has sometimes used extraterritorial activity to turn people's attention away from their own political dissatisfaction?

Dr. KAHN. That is, of course, an extraordinarily hard one to predict. Anybody who tells me they know Putin's mind, immediately I am careful.

You are absolutely right to say that the history of sanctions is, indeed, that particularly when sanctions are against traditional enemies, there can be a rallying around the leader and that can strengthen them at least initially. But it does not usually last. It wears over time, so you have to recalibrate your sanctions and be aware of how long it is going to take.

But also, there is this risk that you cite. Several of my colleagues at CFR have been very concerned about that idea that a Russia that is running out of money and that can no longer broker the deals that underpin the current government could look abroad for ways to continue to distract. Certainly, that is a concern in the Baltics and a concern elsewhere in the region.

I guess I would only argue that ultimately the people that support this government are paying a huge price. It is a huge tax to inflation on people with pensions and fixed income. And I am not a political scientist, I am an economist looking at it, but what I can tell you is that those costs are mounting, that sanctions are a multiplier on these low oil—and a history of really bad policies and really difficult demographics and a lot of other factors that are coming together, and that the economic outlook for Russia is really extraordinarily poor. And that is avoidable, in some sense.

So I really would hope that there would be a political argument that would get some traction within Russia that the answer is not adventurism but rather accommodation with the West.

Senator KAINE. Mr. Chair, can I have Mr. Adams try a quick answer. That is the only question I have.

The CHAIRMAN. Sure.

Mr. ADAMS. Parliamentary elections this year, presidential election cycle back in 2018, as I said, they have cordoned off military expenditures. That really put domestic discretionary spending through the ringer. They have cut education spending, health care.

But the President remains incredibly popular in spite of these changes. In my last trip to Moscow, it was sobering in the sense that he was blaming the outsiders and sanctions for all the problems.

There is a wariness on behalf of foreign investors to invest. I just received a phone call last night from a large U.S. investor who said

the Russian authorities were sounding out pricing euro bond issuance and U.S. investors are saying we do not want any part of this. U.S. institutions have pulled out. Financial institutions are very wary of going in. Even European institutions are questionable.

So they are going to have a tough time tapping global capital markets. And they are blowing through the reserves pretty quickly. At some point, 2017, 2018, if dynamics do not change, then they have to change.

To Rob's point, they can benefit by cheapening currency with higher domestic inflation and putting the burden on their people. But with 2018 elections coming up for the President, I expect they are going to try to find ways to avoid as much pain as possible, and they will continue to blame outsiders.

The CHAIRMAN. On that same topic, I will use 30 seconds of my reserve time. In the Middle East, sectarian divide and tensions have to be increasing with the lack of budget authority and issues that they are dealing with. We all have folks coming in to see us. And I know the Kurds have been in recently relative to their budgetary issues.

But you also wonder about adventurism there or fabricated conflict to just create the appearance and then the reality of instability to drive prices there, because at some point in time—you look at Iraq right now, it is totally, hugely underwater because of what is happening. I am not saying they would do that, but in the region with huge pressures, I wonder about the same type of thing occurring there.

Senator Murphy?

Senator MURPHY. Thank you very much, Mr. Chairman.

I think it was in 2013, Senator McCain and I had the extraordinary and fairly wild experience of sitting with President Yanukovych in Ukraine the night before he was to announce his new gas deal with the Russians at a pretty severe discount, which ended up being one of the precipitating factors of his government's fall.

But it was, of course, evidence of some of the other kind of adventurism that Russia takes advantage of in the region, not just moving military assets around but using its energy largess to substantially discount arrangements with governments that then have to pledge some degree of fealty to them.

There has been evidence in the last 2 months that Russia's capacity to continue to extend its energy tentacles out into the region is being substantially curtailed. Two pipeline tenders were canceled, one in December to China, I think, and another in January.

I guess I just sort of extend Senator Kaine's question to ask whether those are signs that already decisions are being made because of limited resources to cancel some of these projects that would have potentially extended their energy reach or whether that is simply a question of this lack of access to financing that you referenced? Are we already seeing some substantial inability to extend energy projects that maybe suggest already a conversation about how this adventurism starts to get rolled back?

Mr. ADAMS. Yes, Senator, that is exactly the case. We are seeing a Russian oil production infrastructure that is pretty dated, and it desperately needs investment. That investment has been curtailed.

And the longer it is curtailed, it certainly limits their capacity, not only for domestic production but to tie into other systems. And because of lack of international financing through capital markets and the lack of their own domestic investment resources, and the sanctions themselves, just getting oilfield equipment into the country has become a problem. So sanctions in that respect are biting, without question.

Dr. KAHN. What we have learned is that one of the interesting ways financial sanctions, when they are combined with the sectoral sanctions we have in place in Russia, is it creates a lot of uncertainty that really is a weight on long-term investment, in that there is a de-risking process that goes on. That is part of the power of the sanctions, is that if you get caught on the wrong side of these things, there can be huge brand penalties and financial penalties that some banks have found for violating sanctions and the like.

I think that is persistent. It is something that grows over time. I think we are seeing it.

So for example, on the bond deal that Tim mentioned, it is not explicitly ruled out by the sanctions for U.S. banks to participate. But after consultations, it became very clear for all the U.S. institutions, this was not really worth it because of the risk to the brand but also the risk that if you make a mistake, the costs are extraordinary.

For better or for worse, that is part of the way the new sanctions that we have developed are working.

I think that is not something that you can turn around in a day, in some sense. If I were managing a large bank, I would be very cautious about re-engaging.

Senator MURPHY. You have painted a picture in which in 2016 Russia will have very limited choices with which to continue to keep the operation going. You have hinted at something that we all understand, which is that if you move forward with the valuation and pass the costs of that along to the Russian economy and to citizens, there is a major political risk to that.

So let us say that Putin makes a calculation that that just simply is not worth it. If that is the case, can he continue to wall off military expenditures in the way that both of you have referred to? Or is that a natural next step, if he chooses not to move forward with some substantial devaluation?

Mr. ADAMS. It is a natural next step, but I would hazard a guess about the timing. Our friends across the pond probably have a better perspective of what that looks like than I could give you.

Senator MURPHY. Let me just switch topics. I want to talk a little bit about the future of the shale exploration.

So in Connecticut, we have these two casinos, and they built up over years and years and years under the expectation that there was never going to be another casino their shape or size in the region. They made some big investments that paid off for a long period of time. Then, lo and behold, the politics changed in surrounding States, and casinos started to pop up, and their investments started to become very problematic for them. They will figure it out, but it feels a little bit to me like the shale discussion today, which is that we made a big bet on shale and gas and oil here. It is paying off for us in spades today. We seem to kind of

expect that either politics or technology is going to keep us in an advantaged position for a very, very long time, and there is nothing to stop Europeans are others who may have political problems from starting to get over those, nor eventually is there anything to stop the technology that may not be available to other countries to eventually find their way there. Maybe the sanctions today stop Russia from getting access to that technology. We cannot assume that is permanent.

So what is the likelihood that this revolution expands in meaningful ways to other parts of the world? What are the consequences to the U.S. economy of our bounty being shared in a way that it is today?

You had this very interesting point, which is that maybe the reason for a lack of immediate economic expansion based on low oil prices is in part because of the big play we made.

What happens if all of a sudden that is not a U.S. play any longer. That is a much more global play?

Mr. ADAMS. I am not an oil expert, but it is my understanding that a lot of the shale properties that are no longer financially viable because they issued high-yield debt that is blowing up or the banks are calling their loans, those assets are being redeployed. There are a lot of firms in Texas, other oil companies, who are buying those resources with the view that over the medium- to long-term, prices will come back and those fields will be economical once again. The technology continues to improve and prices on production continue to drop.

The world is awash with places in which that technology can be exploited—China, for example, in the northwest part of the country has enormous shale deposits. There is no water there, so the technology has to continue to evolve, since you need water for fracking. But as the technology has evolved, there is enormous opportunity.

It is the politics in Europe that really keep it from happening now. But in Poland and a whole host of other places in Central and Eastern Europe, there are great shale deposits.

So once the technology is available, it is available globally. Firms that cannot sell it domestically will be selling it globally.

I think it has been a game changer, and it was a game changer that was done by entrepreneurs and visionaries and small firms employing technology. It really was not the majors that did it. So I think it is a great U.S. story, but it is one that is not contained in the U.S.

Senator MURPHY. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Senator Shaheen?

Senator SHAHEEN. Thank you.

Thank you both for being here. I am sorry that I have missed some of the discussion today, so if you have already discussed some of these issues that I am going to raise, please forgive me.

There has been a fair amount of discussion about the Russian influence and Russia's use of energy to influence actions in Eastern Europe and in Europe in general. I want to talk about the opposite side of that, which is what Europe can do while we have this period of declining oil prices and the sanctions on Russia that limit some

of its investments, what Europe is doing to look at future energy sources for Europe.

Dr. Kahn, you were at our subcommittee hearing on Greece last year, and I think we talked about Greece and the pipeline that is being permitted across the middle of Greece, which would provide for some spurs that would help Eastern Europe as they are looking at energy. Can you and Mr. Adams talk a little bit about what you see happening in Europe to get out ahead of what happens at the end of these low oil prices?

Dr. KAHN. I think you summarized it very well. Obviously, the politics of diversification in Europe are fraught, particularly in areas like nuclear but also on shale and the like. So it is a difficult debate, even for a single country to resolve.

Now we have a Europe that is strained by a migration crisis and other governance issues, much less the Greek issue, which we may need to revisit at some point, our conversation. To do the kinds of things that we think they should do is going to be hard in this current environment.

But that said, diversification has got to be strongly stabilizing from a geopolitical perspective. You cannot be dependent on these single pipelines that can be turned on and off as an element of political negotiation.

Then I would just add, on Ukraine, obviously, there are legitimate concerns in Europe about the pace of reform in Ukraine right now, the government debate that has gone on there, which is very messy, and the way in which they are attacking corruption.

They need to do more, but there needs to be real support for Ukraine conditioned on them doing the hard work, because ultimately, if Ukraine's adversaries view it as a failed state, as unable to make it through, it encourages the kind geopolitical issues that we are worried about. If there is a sense that they are well-supported, they are going to do the right things, they are going to create a more modern Western-oriented state, I think that is actually a very positive incentive for Russia to move in the right direction.

Senator SHAHEEN. Mr. Adams?

Mr. ADAMS. Ironically, I was sitting in the offices of the International Energy Association in Paris on the day when the Russians made the decision to shut off some of the gas to Ukraine. As you walk, they have this massive map of Europe, where the pipelines are located.

You just look at the map and you realize how vulnerable Western Europe is to Russian sources of energy. They look at that map every single day.

So there are ways of diversifying and looking at other pipelines, the trans-Adriatic, which is from Caspian gas. The Azerbaijanis are funding two pipelines. Algerian gas. The Germans are certainly leading on renewables. Even though German industry complains about the price of energy input, Chancellor Merkel has been a world leader with respect to solar and alternative forms of energy.

So I think they are desperately scrambling to look at alternative sources. It just takes time to build up that infrastructure. But it certainly is a high priority.

If you look at some of the investment plans that they put in place, the Juncker plan, which is a way to promote economic

growth and infrastructure, much of that infrastructure is really energy-related as a way to reduce their dependency on Russian oil and gas.

Senator SHAHEEN. Thank you. I know that this hearing is supposed to be on oil and gas prices, but I wonder if I could ask you about coal a little bit, because obviously coal has been a huge point of contention here in the United States. There are some who believe that some of the policies of this administration have produced a decline in coal production. But can you speak to that? And what the world market is doing to coal production?

Mr. ADAMS. He looks at me because I was born and raised in Kentucky, and I now live in Virginia, so somehow that makes me a coal expert, I guess. I do not know.

I think the majority leader would not want me commenting too much on coal. It is outside my arena, actually.

Senator SHAHEEN. You do not need to comment on Kentucky coal. Can you talk about what is happening in China, in India, and some of the other economies where at least I think we have been told that coal is their biggest source of energy in the future? Are they continuing to go down that road? Are they looking at the reduced prices of oil as a substitution for those coal resources?

Mr. ADAMS. I think for the Chinese, it is all-of-the-above. Their energy demands are enormous.

I forgot the number of megawatts of nuclear power they are putting in place every week. So it is all of the above. It is something like 1,700 megawatts per week of energy consumption they are putting in place.

They have a lot of coal, too, domestically. I do not think it is the same quality of coal that you have in the United States. We export a lot of our coal to China. It is a big buyer of U.S. coal.

So they, like all other commodities we have been talking about, are a determiner of price at the margin and a determiner of the flow of consumption, so absolutely.

Dr. KAHN. I hope it is right to add that their own environmental problems now could be a potential game changer in terms of changing their incentives to look for that diversification in a way that they did not a few years ago. Then also, tying it back into a point that Tim made earlier, ironically, perhaps in some sense, the rebalancing of the economy away from heavy machinery and industry toward services and a more consumer-based economy ironically is a shift away from demand for those things.

Mr. ADAMS. Absolutely. Stated Chinese policy, green growth, sustainable growth, I think they are serious about it. I do not think they are willing to let a hard landing occur because of it, but I do think they are serious and adamant about putting in place appropriate environmental restrictions. Putting the scrubbers on, I think they are doing what they need to do. Are the scrubbers always on? I do not know. But I think they are serious and focused. It is just that their needs are so enormous.

Senator SHAHEEN. Thank you.

Thank you, Mr. Chairman.

Senator Cardin?

Senator CARDIN. I just really wanted to get your view on one point about Russia.

Russia obviously has been getting more aggressive in its engagement. We have seen that in Ukraine. We have seen it in Syria. You indicated that they have the ability to deal with their foreign exchange rates, which I fully understand, and they can manipulate that, as has China, when it was to their advantage to manipulate their exchange rates.

It seems like it has not affected the popular support or political support in China or Russia. So it seems like that tool is still very much available to manipulate the true impact on their economy by a hidden tax to their people.

So I am just trying to figure out, in these low energy prices, what the United States should be to doing strategically as it relates to Russia, if there are issues we can do. You mentioned alternative pipelines in Europe, which would be wonderful. But with low energy prices, the investments there are more difficult.

So is there a strategy that we should be looking at with low energy prices as it affects the geopolitical influence of Russia?

Dr. KAHN. Ultimately, I have always viewed the sanctions as really the key dial that can be turned.

Senator CARDIN. Ukrainian sanctions?

Dr. KAHN. Sanctions on Russia coming out of the Ukraine in a sense. We made a conscious decision at the start of that not to go for what you might call the nuclear option of comprehensive sanctions, but to start with more modest sanctions and to gradually intensify them over time in response to Russia's treatment of Ukraine. I think ultimately that is still one of the key policy dimensions.

Senator CARDIN. That is going to be a real challenge moving forward.

Dr. KAHN. Absolutely.

Senator CARDIN. Everything we are hearing from Europe is that if Minsk II goes forward, then the sanctions are unlikely to continue. If Minsk II does not go forward because of the slow progress within Ukraine on reform, it is going to be difficult to extend the sanctions in Europe.

Dr. KAHN. I agree. The only caveat I would put on that is in this new world we live in with the use of financial sanctions, there is some capacity for the U.S. to continue on with our own sanctions, even without Europe moving with us hand in hand in a way that was not possible in the old world of trade sanctions. Financial sanctions can be extended beyond our borders and can be effective.

Obviously, this also entered the debate about issues about our own policies toward natural gas and natural gas sales.

But as a macroeconomist, I guess I would come back to, although I know it is a hard one, Tim was just out at the G-20 finance ministers meeting. We just need Europe to do more growth-oriented policies, to be promoting growth, using the fiscal space they have, using on the monetary tools they have, doing the structural reform. I think I share the frustration many have that growth has been quite weak over the last several years there, and that a strong and prosperous Europe is probably the best to hope for.

Senator CARDIN. The challenges there are immense, from what we see with migration to problems continuing in Greece and other

countries, to Great Britain's decision in June. All of those are questioning the strength of Europe.

You have not given me any optimism yet on what we should be doing with low energy prices against Russia.

Mr. ADAMS. Well, I am not optimistic that you can do much of anything, actually. I think low oil prices are certainly containing some of the behavior. It is certainly having a deleterious impact on certain sectors. It is forcing tough decisions.

Over time, it will continue to bite. I am way outside my remit on this, but these are a people that have endured anonymous hardships over the decades and centuries. In my trips to mostly Moscow, I do not sense anyone who is willing to jump ship because times have gotten tough. The President remains incredibly popular. There is not really viable opposition. And they have done a very good job of blaming current pain on external actors, such as the U.S.

So there may be marginal changes, but I think we are where we are. I am skeptical we can do much more.

Senator CARDIN. Well, I thank you for your candor. I didn't particularly like the answers, but I appreciate your candor.

The CHAIRMAN. Senator Shaheen would like to ask another question.

I would just say, the fact that he has not had, I think everyone would agree, much pushback, much physical pushback on the adventurism, there has not been much of a price for him to pay. It has, in fact, created a lot of nationalism within the country.

Senator Shaheen?

Senator SHAHEEN. Just a final question and this is off of energy, but it goes to the comments you were making about Europe and its potential growth policies.

One of the things I understand is challenging for Europe, as it is going to be for the U.S. in the future, is the declining work force. One of the opportunities they have with the migrant crisis is to provide additional workers that they really need for their economies.

So is there anybody in Europe who is talking about this, who is looking at this as a real opportunity, as opposed to just the negative aspects of that?

Mr. ADAMS. It is a great question because demographics I think are determinative of so many different things. It is a graying population in the industrialized world and in China especially. But in many of the emerging markets, we see demographic changes. Our perception is emerging markets are young people. But in fact, in many emerging markets, the populations are growing older.

The irony is that in the gulf oil-producing countries, two-thirds of the population are under the age of 35. And if you expand to the broader region, it is also. So a very young population without great prospects of economic activity or housing or prosperity, actually, so that feeds into some of the concerns here.

Actually, German authorities in my conversation with them are very sensitive to the skills issue. They say that many of the people they are letting in, whether they are Syrians or other nationalities, they are going through the appropriate screening program, they are being placed in certain cities, and they are actually initiating

kind of an internship or skills training exercise and language training.

But their view is they need workers. They need workers for the assembly line. And many of the Syrians are trained professionals. They are well-educated. They have, in fact, a very robust and I would say very complex, probably underappreciated mechanism for assimilating some of these migrants into the local economy, into the local work force.

I have not seen that with respect to other countries. But certainly in Germany, they do have a plan and they seem to be executing on it.

Dr. KAHN. The only point I would add is the free flow of labor within Europe is a founding principle of a successful monetary and financial union. I cannot imagine one without the other. That is why this debate that is taking place right now is actually so critically important I think on the economic side as well.

Senator SHAHEEN. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. I think George Soros may have been in to see you in the last day or 2.

Senator SHAHEEN. He has not, but he should.

The CHAIRMAN. Okay, okay.

Let me ask you this question. The investment in infrastructure to create more sources of petroleum resources for Europe is obviously something we have worked on for some time with other countries. One of the pipelines that Russia had long planned on does not have the support that it once had.

But I guess this period of time of low prices could put increasing pressure on those projects not occurring, and us not taking advantage of a hugely strategic opportunity to cause Europe to be much less dependent on Russia. Are you seeing any sign of that right now? I know here in our own country, obviously, we are. I would imagine you would be seeing that there, but can you give us a perspective on just the building out of pipelines and infrastructure and the effect these prices have are having on that?

Mr. ADAMS. Sure, Senator. In fact, there is a challenge out there on infrastructure. McKensey estimates that we need between $60 trillion and $70 trillion worth of infrastructure between now and 2030. But the financing of that infrastructure is lacking.

I was in Melbourne, Australia, a week ago today, meeting with the Future Fund, which is their savings fund, and asking about how they are allocating their resources. They have a large percentage of resources in cash, which means they cannot meet their pension liability. I said, what about infrastructure? They said the biggest problem with investing in any kind of infrastructure is the political risk of the rules or regulations changing once the infrastructure is put in place.

If you are making project assumptions based on 30 years or 40 years and governments change and the fee structure changes, then all of a sudden your project that maybe was just barely making money, 3 percent or 4 percent return, is then underwater.

So there is a real reluctance on behalf of those who are suppliers of capital to look at infrastructure with concerns about political risk.

The other is that there is so much interest in infrastructure around the world and a lot of people trying to do deals, the returns on those infrastructure projects seem to have been depressed.

The third is that European institutions, namely the insurance companies which have been the normal providers of infrastructure, have gone through regulatory changes, one called Solvency II, which changes the nature of their balance sheet and forces them to hold shorter-term, more liquid instruments. So the capacity of domestic European institutions to fund infrastructure has also diminished.

And also capital charges for the banks, and European banks are suffering from NPLs and a whole host of other problems, which we can talk about, have also lessened their appetite for long-term investing.

So you have less capital. You have wariness by some other sovereign wealth funds and others, which are repatriating capital to oil producers. And this sense that the rules of the game can change. That is why we have the so-called Juncker plan, which is a way of using centralized money as a way to capitalize private money to invest in oil and gas infrastructure in Europe.

But I will tell you, it has been very slow in coming and I am skeptical we are going to see it anytime soon. Certainly, the need is there, but there is a market failure, and there is a funding gap going on, which is not only just on energy, but infrastructure globally.

The CHAIRMAN. Do you want to would add anything, Dr. Kahn?

Let me just mention you both have been outstanding witnesses. It is a privilege for us to have people like you who spend your lives in these arenas that help us make decisions. So at least we get a good perspective on what is happening.

I have to say, while you would think there would be significant benefits to low energy prices—and hopefully, as you all of mentioned, this has not worked out exactly the way it did in the 1970s and 1980s, but maybe at some point it will—there are huge negatives that are taking place and will take place over time. Just the destabilizing forces that are going to be taking place over time are things we certainly need to stay focused on.

So thank you both for your expertise, your willingness to be here, especially after just returning from China.

If we could, I am sure there will be other questions, we would like to keep the record open until the close of business Friday, if you could respond fairly quickly, we would appreciate it.

The CHAIRMAN. But again, thank you very much.

With that, the meeting is adjourned.

[Whereupon, at 11:41 a.m., the hearing was adjourned.]

Additional Material Submitted for the Record

PREPARED STATEMENT OF TIMOTHY D. ADAMS, PRESIDENT AND CEO, INSTITUTE OF INTERNATIONAL FINANCE (IIF)

Honorable Chairman Corker, Ranking Member Cardin and Members of the Senate Foreign Relations Committee, thank you for inviting me today to testify on the impact of low oil prices on oil importing and exporting countries and the potential risks to stability. I am grateful to the Committee for convening this hearing at a critical time for the global economy, given elevated financial market stress, rising risks of a global recession, diminishing effectiveness of macroeconomic policy tools, and the uncertain outlook for the Chinese economy. Emerging markets have been at the epicenter of these developments, amidst below potential economic growth, heavy net capital outflows, reduced boost from China, weak global trade, and growing economic strain among oil exporters. The Institute of International Finance (IIF) conducts research on the global economy and financial markets and assesses key global risks and policy challenges. These themes, including the impact of low oil prices on the global economy, have been at the core of our recent research.

The decline in oil prices by over 70% since mid-2014 has benefitted oil-importing economies by raising household disposable incomes and lowering inflation, such as in Emerging Asia and Emerging Europe where energy accounts for a large share of the consumption basket. Lower oil prices have also helped reduce external vulnerabilities in oil-importing countries with large current account deficits like India, Indonesia, South Africa and Turkey. Policymakers in many oil-importing countries have used this opportunity to maintain easy monetary policy to support growth and cut back spending on subsidies (such as in India and Indonesia) to free up fiscal resources for capital expenditure, including infrastructure.

On the other hand, oil exporters have come under immense pressure amidst a deterioration in fiscal and current account balances, particularly countries with pegged exchange rates and less diversified economic structures. Countries with substantial assets (such as Saudi Arabia and Qatar) have been able to cushion growth in the near-term by running down reserves and limiting fiscal adjustments. Others with more limited cushions have implemented sharp fiscal, monetary and exchange rate tightening measures (such as Russia and Nigeria) to reduce vulnerabilities from low oil prices, even at the cost of slower growth in the short-term. Meanwhile, countries like Venezuela have delayed the necessary policy adjustment, increasing risks of a sharper downturn ahead.

Looking ahead, if oil prices remain subdued, as we expect, economic vulnerabilities among oil exporters are likely to accentuate. This raises the question of which oil-exporting economies would come under the greatest economic strain under such a scenario. To assess this, we have looked at three types of economic vulnerabilities emanating from low oil prices for oil exporters: 1) Fiscal vulnerability from the loss of oil-related revenues, deterioration in fiscal balance, and rise in government debt; 2) External vulnerability from the loss of oil export receipts, deterioration in current account balance, decline in foreign exchange reserves, and increase in external debt; and 3) Macroeconomic vulnerability from the loss of oil-related economic activity. In our analysis, we have evaluated both the extent of an economy's oil dependence in a flow sense and the resources accumulated by a country from a stock perspective that would help cushion the impact of lower oil prices.

Most Vulnerable Countries

Assessing twenty major oil-exporting countries using this approach, we find five countries to be most economically vulnerable: Venezuela, Iraq, Libya, Angola and Bahrain (See Figures 1 and 2 below). These countries have significant weaknesses across all three types of economic vulnerabilities. In particular, these countries have heavy reliance on oil as a source of export receipts (especially Iraq and Angola), and as a source of fiscal revenues (particularly Bahrain, Iraq and Libya). Most of these countries also have elevated government debt, high production costs (especially Angola and Venezuela), and limited cushions in the form of international reserves or

sovereign wealth fund resources (particularly Venezuela). More importantly, these countries operate under currency pegs, reducing their economic capacity to adjust to an external shock and making it more likely that the eventual adjustment will be highly disorderly and negative for economic growth. In Venezuela, we are particularly concerned that continued delays in exchange rate and spending adjustments will prolong and deepen the recession, increase the risk of debt default, and threaten social disorder.

In addition to these five most vulnerable countries, an additional group of six countries—Nigeria, Russia, Azerbaijan, Kazakhstan, Oman and Algeria—stand out as economically vulnerable based on our criteria. These countries have shown greater ability to adjust over the past two years to lower oil prices by devaluing (Nigeria and Algeria) or free floating (Russia, Azerbaijan and Kazakhstan) their currency, imposing restrictions on balance of payments, and tightening monetary policy sharply in many cases. Nonetheless, we do still see these countries as being squeezed further in the years ahead, and being pushed towards further fiscal consolidation (for example, in Russia), exchange rate adjustment (Nigeria) and emergency IMF support (Azerbaijan).

Countries with Rising Vulnerabilities

There are a number of other countries, mainly in the Gulf, where we see vulnerabilities contained for now but to rise as the oil price decline prolongs. These economies rely heavily on oil revenues with exchange rates pegged to the dollar—including Saudi Arabia, Kuwait, Qatar and UAE. These countries are less economically vulnerable to a short-term decline in oil prices because they have strong national balance sheets (low government debt and/or high international reserves/sovereign wealth fund assets), substantial current account surpluses, and low oil production costs (helping to protect market share). Continued growth in the nonhydrocarbon sector is cushioning overall economic growth, especially in the UAE which has a diversified economy. These countries have more time to adjust to lower oil prices as they can cushion the short-term impact on their economies by running down accumulated assets and ramping up borrowing. Eventually, however, if low oil prices are extended over time, these economies will need major and sustained economic and fiscal adjustment, especially Saudi Arabia which has a relatively higher fiscal breakeven price for oil. Such adjustments are now starting to get underway—for example by reducing oil subsidy bills and slashing investment projects, but cuts will need to go much deeper.

Least Vulnerable Countries

The last group of countries lying at the lower end of the economic vulnerability spectrum are Malaysia, Mexico, Colombia, Ecuador and Iran. These countries combine significant oil exports with more diversified economies. Countries like Colombia, Mexico and Malaysia have come under heavy market pressure due to their oil exposure but these economies are less exposed to the negative impact of low oil prices on growth and balance of payments, as flexible exchange rates and track records of good policy management make them better equipped to weather pressures through a combination of fiscal and/or monetary policy adjustment and exchange rate depreciation. In Iran, the lifting of sanctions is likely to boost oil exports and private investment, providing support for growth.

To conclude, the past two years have forced oil-exporting countries to start adjusting their economies. Exchange rates have been allowed to depreciate, monetary policy has been tightened, and most commonly, fiscal policy measures have reduced capital expenditures, cut back subsidies and expanded tax and non-tax revenue tools. However, low oil prices are likely to be sustained, implying that pressures on fiscal balances and public debt will escalate, calling for even more aggressive fiscal consolidation and other policy actions going forward. A number of countries that are most vulnerable will come under heavy pressure over the next few years. Countries already facing political risk (Venezuela) or conflicts (Iraq, Libya) will be particularly vulnerable. Many GCC countries which have been cushioned by depleting assets accumulated over many years will need to make more meaningful adjustments. This is likely to weigh on economic growth for a prolonged period and increase risks of social tensions amidst high inflation and unemployment, and cut backs in social spending, transfers and government wages. Managing growth and social stability under such circumstances would therefore call for accelerating reforms beyond fiscal policy in order to rebalance their economies towards non-oil sectors. This would include improving the business climate, continuing with financial sector development, reforming the SOEs, strengthening institutions, investing in human capital, and attracting private investment and FDI, especially in non-oil sectors.

Mr. Chairman, Mr. Ranking Member and members of the committee, thank you again for giving the opportunity to testify before the Committee. I look forward to answering any questions that you may have.

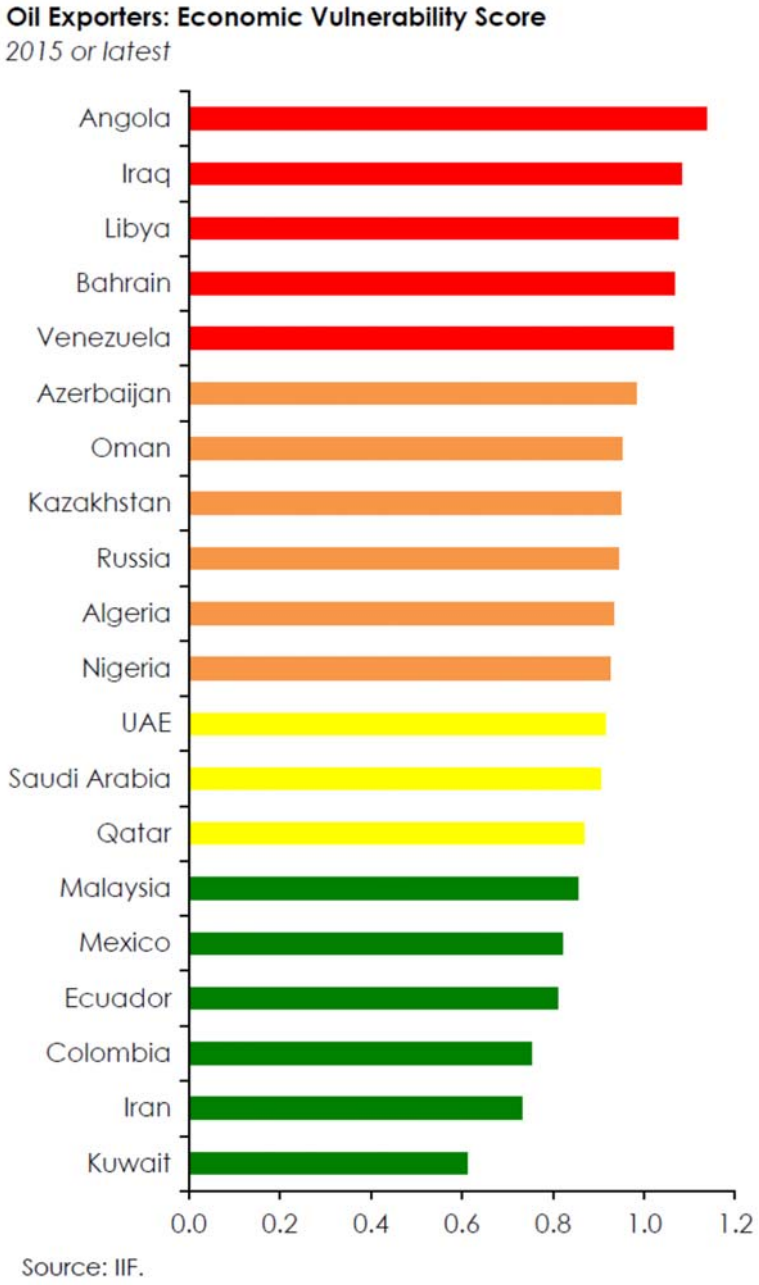


Figure 1

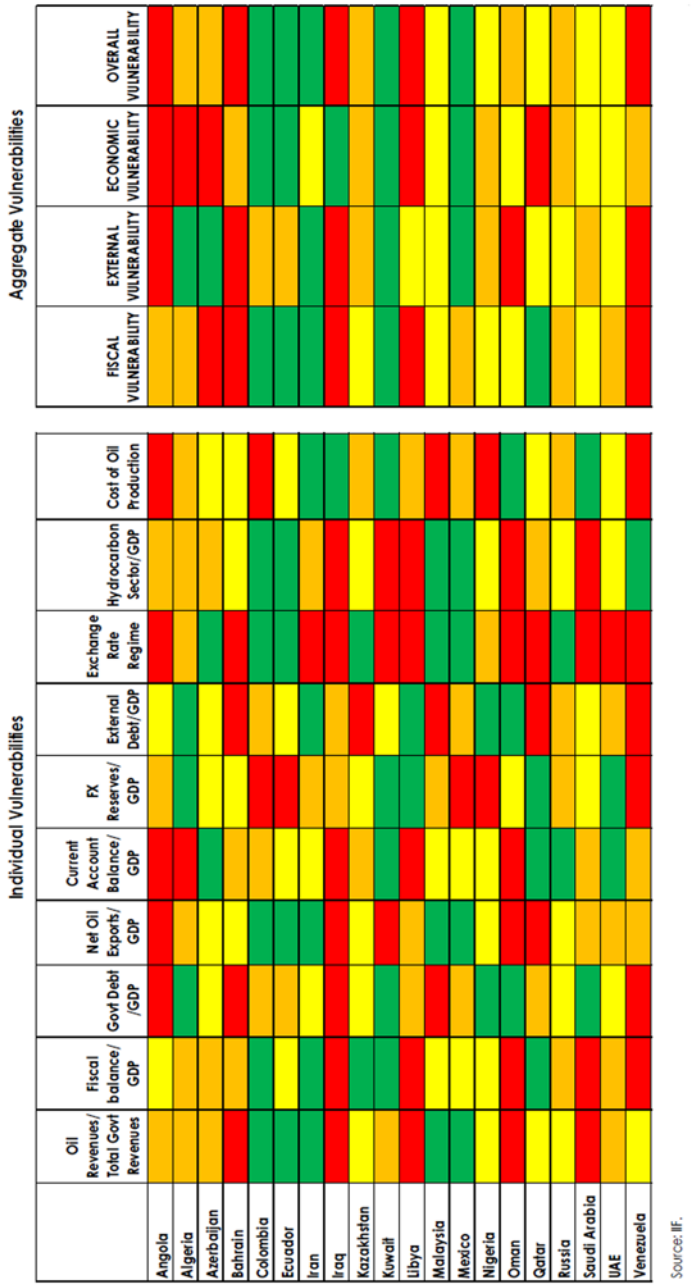

Individual Vulnerabilities
Oil Revenues/ Total Govt Revenues
Fiscal balance/ GDP
Govt Debt /GDP
Net Oil Exports/ GDP
Current Account Balance/ GDP
FX Reserves/ GDP
External Debt/GDP
Exchange Rate Regime
Hydrocarbon Sector/GDP
Cost of Oil Production
Angola
Algeria
Azerbaijan
Bahrain
Colombia
Ecuador
Iran
Iraq
Kazakhstan
Kuwait
Libya
Malaysia
Mexico
Nigeria
Oman
Qatar
Russia
Saudi Arabia
UAE
Venezuela
Aggregate Vulnerabilities
FISCAL VULNERABILITY
EXTERNAL VULNERABILITY
ECONOMIC VULNERABILITY
OVERALL VULNERABILITY
Source: IIF.

Figure 2

PREPARED STATEMENT OF ROBERT KAHN, STEVEN A. TANANBAUM SENIOR FELLOW FOR INTERNATIONAL ECONOMICS, COUNCIL ON FOREIGN RELATIONS

Chairman Corker, Ranking Member Cardin, and members of the committee, thank you for the invitation to testify today. I am honored for the opportunity to discuss the economic and geopolitical implications of low energy prices. I would highlight three takeaways in particular:

- Low oil prices are likely to be persistent. Emerging market oil exporters that drew on fiscal and asset buffers in 2015 to delay adjustment can no longer put off essential reforms.
- The playbook for reform includes moving energy prices to world market levels, strengthening and better targeting the safety net, and putting macroeconomic policy on a sustainable footing. The IMF can play a vital role in support of these efforts, reinforcing U.S. strategic interests.
- Venezuela is an economy on the edge. A default and economic crisis seems to be a question of when, not if. U.S. policymakers need to be planning now for a lead role in resolving the crisis, when Venezuela has a government willing to work with the west.

The sharp decline of oil and natural gas prices has been a rare but significant shock to the global economy. In less than two years, we have seen the price of crude oil dropping from about $100 per barrel to about $30 today. During this period, the prices of natural gas and many other commodities also have decreased sharply. Both demand and supply factors have contributed to this trend. In Medium-Term Oil Market Report 2016, the International Energy Agency (IEA) estimates that oil supply exceeded demand by 2 million barrels per day in 2015. Absent a significant production cut, it is hard to imagine prices rising materially till at least 2018. Futures markets also predict low oil prices are likely to persist for some time.

The oil price downturn creates an important windfall for consumers, and has boosted prospects for oil importing countries such as India, China and Japan. But for oil exporting countries, low prices exert heavy financial and fiscal burdens. This comes at a time when the global economy already faces sluggish growth and significant downside risks from slowing Chinese growth, volatile exchange rates and capital flows, and high corporate debt. While economic vulnerability is rising, policymakers' ability to respond is not; instead it is becoming more constrained. Many oil exporters are seeing fiscal buffers dissipated, and in some cases weak policies and populist pressures are constraining government's ability to act.

Reflecting this weaker environment, the International Monetary Fund (IMF) in recent years has repeatedly downgraded its growth forecasts, most recently in January when its World Economic Outlook projected global growth of 3.4 percent; further downgrades are likely. Last week, the finance ministers and central bank governors of the Group of Twenty (G20), meeting in Shanghai, China, acknowledged these growth concerns and recognized the need for policymakers to do more—but there was little in the way of specific new policy commitments.

The U.S. economy nonetheless has proven resilient. In 2015, the real GDP grew by 2.4 percent. The unemployment rate is currently 4.9 percent, the lowest level since 2008. Lower oil prices appear to have been a small drag on growth last year, as a 40 percent drop in capital expenditures in the oil and gas sector cancelled out the boost from lower oil to consumer spending. One reason for the muted consumer response to date may be the desire to save and repair balance sheets after the damage caused by the Great Recession. While this is a healthy development, it is possible that consumers could become more willing to spend if oil prices remain low.

Most major forecasters expect similar levels of growth in the United States this year, which would place us above other advanced economies including the eurozone and Japan. Nevertheless, the U.S. economy is not immune to oil-related turbulence. Many of the emerging markets in turmoil share close trade and financial linkages with the United States. Stock market turmoil in recent months has contributed to a tightening of financial conditions, while the appreciation of the dollar along with lower oil prices is imparting a deflationary impulse to the economy. All of this suggests that U.S. policymakers will need to continue to be alert to the risks emanating from abroad.

Assessing Fiscal Sustainability and Risks for Emerging Market Exporters

A starting point for assessing the risks from lower oil to emerging market exporters is the fiscal breakeven price, the level of oil price that balances government

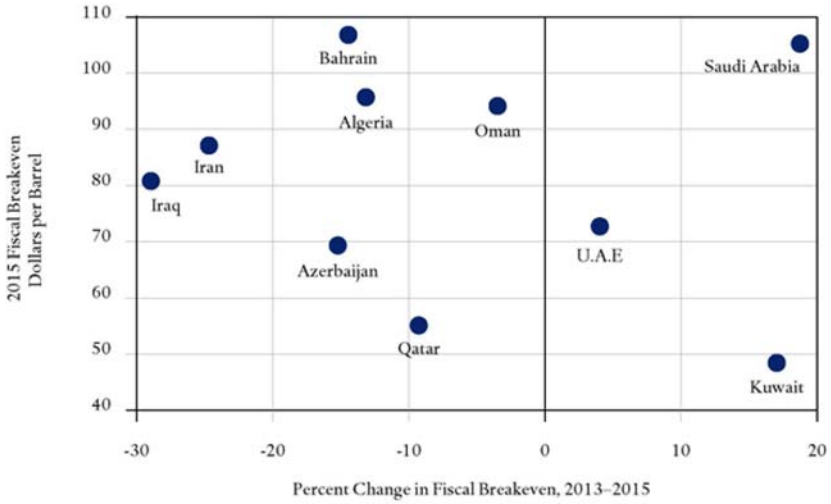
budget based on current prices and policies (figure 1).[1] During much of 2015, oil prices hovered around $50 per barrel, meaning most countries in Figure 1 faced world prices that were below their breakeven prices. With the further fall in oil prices to current levels, it is likely that the gap in 2016 between current prices and the ones that balance the books in most oil exporting countries has grown larger.

Solely relying on this metric could lead to overconfident predictions of geopolitical risks and future oil prices. What matters is the willingness and ability of countries to adjust to these shortfalls. It was reasonable, through much of 2015, for oil exporting country policymakers to assume that oil prices would rebound, and so to delay adjustment. Fiscal deficits were allowed to increase, exchange rates in some cases were depreciated, and assets (including importantly sovereign wealth fund holdings) were drawn on. It was only later in 2015, following a further oil price decline and as budgets were being prepared for 2016, when many of these countries began to take seriously the need for policy adjustments.

This suggests that the potential for disruptive adjustment is higher in 2016. For now, we are continuing to see sizeable asset drawdowns, with recent reports that countries such as Russia, United Arab Emirates, and Qatar are liquidating their investments, which according to some analysts could result in withdrawal of $400 billion of equities this year. Indeed, some reports suggest that withdrawals from these "rainy day funds" were a major factor behind the stock market turbulence in January of this year.

How long these countries can continue to drain savings is a difficult question to answer, given the lack of transparency from many of the sovereign wealth funds (SWFs). In a report on the regional economic outlook, the IMF argues that many governments in the Middle East would run out of fiscal buffers in less than five years due to large fiscal deficits (assuming prices in the $50 per barrel range). Meanwhile, countries such as Venezuela are facing unsustainable public debt and possibility of default as soon as 2016. For these countries, "muddling through" is no longer a viable option.

FIGURE 1. IMF FISCAL BREAKEVEN ESTIMATES[2]



Therefore, sizeable adjustments of fiscal and energy policies are imperative in these oil exporting countries. Some indeed have taken actions. Mexico, for instance, eliminated fuel subsidies in December 2014, which would offset the loss from export-related fiscal revenues. By 2018, the country also plans to fully liberalize domestic energy prices. Saudi Arabia has taken some steps in restoring fiscal sustainability,

[1] For a more comprehensive analysis of the isights and pitfalls of using breakevens, see a report by my CFR colleagues Blake Clayton and Michael A. Levi, from which figure 1 is taken.

[2] Source: Clayton and Levi (2015) "Fiscal Breakeven Oil Prices: Uses, Abuses, and Opportunities for Improvement"

energy prices. Saudi Arabia has taken some steps in restoring fiscal sustainability, exemplified by the drastic spending cuts in its 2016 budget and first steps at electricity and fuel price reform.

In the remainder of this testimony, I will touch on Iraq and the Middle East, Russia, Nigeria, and Venezuela, highlighting some challenges faced by these economies as well as policy adjustment options they have.

Iraq and Middle East

In Iraq, the drop in oil prices coupled with supply disruptions due to Islamic State (ISIS) attacks have had a profound effect on an economy that is heavily reliant on oil for government financing. In 2014, oil accounted for over 94 percent of the central government's revenue. Worse yet, the ISIS attacks are hindering the development of non-oil sectors by disrupting trade and destroying infrastructure. The government deficit increased from 5.6 percent of GDP in 2014 to over 15 percent in 2015. Under a non-financing IMF program, the government is attempting fiscal consolidation, but firm policy implementation will be required to sustain the adjustment effort and preserve domestic stability.

Iraq's plight is not uncommon in the region. In CFR's recently released 2016 Preventive Priorities Survey, eight of the eleven most critical contingencies are related to events unfolding or ongoing in the Middle East. Whether the concern is Syria, rising tensions between Saudi Arabia and Iran, or a weakening of state control elsewhere in the region, it is hard to discount the Middle East as the leading source of geopolitical risks, "new thirty years' war."[3] The instability in the region could continue to impede many governments' efforts to diversify economic structures and promote private sector growth, which are crucial for the region's economic future.

Russia

The recession in Russia is deepening, due to a combination of factors: poor economic policies, low energy prices, and sanctions imposed by the United States and the European Union (EU). The economy contracted by 3.7 percent in 2015 and will likely shrink by more than 1 percent this year. With nearly half of government revenue from oil and gas, prospects for energy markets are critical to economic results. The 2016 budget assumes oil price to be $50 per barrel, which would produce a fiscal deficit of 3 percent of GDP. But this assumption is looking badly outdated. With the current oil price, Russia could see a deficit of 7 percent, putting more pressure on the currency. Similar to many energy-exporting countries, Russia's revenue shortfall exposes its difficulty in generating non-energy incomes and subsequently structural weaknesses.

In response to these pressures, the government has chosen to run down wealth funds and allow a sharp depreciation of the rouble. That depreciation has provided support for the budget (by raising the rouble value of oil revenue) but at a significant cost to the broader economy. Inflation has risen well above target, a tax on all Russians and especially painful for those on fixed incomes. Real incomes have fallen sharply. On its current trajectory, the government's fiscal buffers will be exhausted by end 2016, which could put additional pressure on the government. Demographic change and decades of distorted prices and poor investment are further undermining the long-term health of the economy. The risk of a crisis will rise over time unless the government adopts more fundamental reforms.

Nigeria

Despite efforts of diversification, the Nigerian economy is struggling to come to grips with low oil prices. Non-oil sectors are the main drivers of the country's growth, but in absolute terms oil revenues remain significant, and the shortfall to the budget is causing stress. The country's GDP growth was 2.8 percent in 2015, a significant drop from the 6.3 percent in 2014. Moreover, the general government deficit was 3.3 percent GDP in 2015, almost doubling the figure of 2014 despite a sharp drop in public investment. Foreign exchange restrictions introduced by the central bank have caused credit problems for the private sector and contributed to broader shortages in the economy.

In view of the worsening conditions, the country is seeking emergency loans of $3.5 billion from the World Bank and the African Development Bank (AfDB). If granted, these funds could help cover the government's financing needs but may not be sufficient. Further, financing alone cannot solve Nigeria's fundamental problems. The country's external balance has been deteriorating. The currency naira is fixed but under pressure, and the Nigerian central bank has had to deplete foreign exchange reserves to defend the peg. While reserves remain ample ($28 billion at the

[3] Richard Haass (2014) "The New Thirty Years' War"

end of 2015), there would look to be a compelling argument that Nigeria should liberalize (devaluate) naira and/or loosen capital controls, as part of a broader strategy to promote exports, further diversify from oil, and relieve external pressures.

Venezuela

The economy is descending into a deep and profound crisis—reflected in severe shortages, hyperinflation, and a collapse in economic activity. It faces a widening financing gap, and has imposed highly distortive foreign exchange controls. Debt service far outstrips dwindling international reserves. Recent policy measures by the government, including a rise in gasoline prices, fail to meaningfully address the imbalances. The Venezuelan government made a $2.3 billion debt payment on February 26. But the debt of state oil company Petroleos de Venezuela, S.A. (PDVSA) due this year is more worrisome. A default increasingly appears to be a question not of "if," but "when."

There is no doubt that the dramatic decline in oil prices has hit Venezuela hard. At $30 per barrel, oil exports will be around $26 billion this year, down about three-quarters from 2012. The net export revenue is inadequate to meet debt service this year of nearly $20 billion on $125 billion of debt. Altogether, market commenters have estimated a financing gap of around $30 billion. Meanwhile, reported reserves are only $15 billion, and there are serious questions as to whether all of those reserves (especially the gold) are freely useable. In sum, it will take extraordinary measures to make it through the year without a default. And if the government responds by further compressing imports, popular support for the government could collapse. Change could come quickly, not because of a debt payment due but rather because of domestic conditions.

Meanwhile, the economy likely declined by around 10 percent last year, and according to the IMF is expected to decline by an additional 8 percent this year. Inflation was officially 180 percent in 2015, though the actual number was probably closer to 250 percent, and accelerating rapidly this year. In response, the government has invoked emergency powers through mid-March, devalued the primary official exchange rate by 37 percent, and adjusted some domestic prices—but this has done little to address widening imbalances and shortages.

China has been the primary provider of financing to the government in recent years, and while there is low transparency to these deals, it is thought that net claims are on the order of $30 billion. Many of the contracts require payment in oil, but the decline in the price has dramatically increased the quantity that needs to be provided. Venezuela needs continuing relief from the required amount, but at the same time it is not in China's interest to be seen as providing loans under the guise of commerce that serve solely to extend the life of the current government. Even today, China's message needs to be that it will be a critical player in a rescue package, and to that end cannot be too closely associated with the current government or policies.

The current government of Venezuela is unlikely to seek help from international financial institutions. It will also refuse cooperation with Western governments. Indeed, the IMF is operating largely in the dark. The last IMF review of the economy was in 2004, and Venezuela ceased all cooperation with the Fund in 2007. But it is not too early to begin planning for a time when a future Venezuelan government is willing to take the hard measures that warrant strong and broad international support.

When conditions warrant, international policymakers should move fast rather than let the crisis fester. A bold adjustment program will need to include the following items:

- A rapid move to unify the exchange rate regime
- Move domestic energy prices to the world levels
- A strengthened and better targeted social safety net system that protects those most in need from the dislocations caused by the adjustment effort
- A sustainable budget (including a broadening of the revenue base) and well-anchored monetary policy.
- A comprehensive program to recapitalize the banks.

Short-term bridge financing, perhaps linked to oil, may be needed once agreement is reached on a comprehensive adjustment program. Given the likely financing needs, any future IMF package will need to include at a minimum a debt reprofiling (an extension of maturities with limited net present value loss) to provide breathing space. Whether the IMF goes further, and demands a deep restructuring because the debt is unsustainable, is hard to know given the current uncertainties. However, extraordinarily high debt as a share of exports suggests the need for restructuring,

as would the ratio of debt to GDP (the Fund's preferred metric) if a unified exchange rate settles near the black market rate.

China will need to contribute, through transparency about its claims on the government and a willingness to provide relief through a negotiation that leaves other official and private creditors with a sense that there is fair burden sharing. That will be a change in how China has been operating in emerging markets, but would go a long way toward becoming a responsible part of the global rescue architecture. The IMF is uniquely placed to develop a bold program that contains these elements, and mobilize support to ensure adequate financing for the adjustment. U.S. government support will be essential to putting such a package together.

Conclusion: Policy Adjustments to Prevent Crises

While the experience of oil exporters vary significantly in terms of the scale of the imbalances, the assets that can be drawn on to deal with the shock, and the ability of policy to adjust, there are common elements. Policy adjustments need to be made, ideally ahead of a crisis. Failure to address these imbalances could translate into crises of much larger scale and spillover into the United States in unexpected fashions. Commenting on the 1994 Mexican peso crisis, Rudi Dornbusch stated that "the crisis takes a much longer time coming than you think, and then it happens much faster than you would have thought, and that's sort of exactly the Mexican story. It took forever and then it took a night." Where there is a willingness to take tough measures, there are important benefits to IMF-led international support in terms of policy advice, strong reform packages, and financial support where needed. Low energy prices are generating global risks, and U.S. policymakers need to be vigilant and ready to act. Thank you.

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