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CONFRONTING THREATS FROM CHINA: ASSESSING CONTROLS ON TECHNOLOGY AND INVESTMENT, AND MEASURES TO COMBAT OPIOID TRAFFICKING

HEARING

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

ONE HUNDRED SIXTEENTH CONGRESS

FIRST SESSION

ON

EXAMINING THE AGGRESSIVE ROLE CHINA PLAYS IN THE AREAS OF INVESTMENT AND TECHNOLOGY TRANSFER. THE COMMITTEE WILL ALSO EXAMINE THE PRODUCTION AND EXPORT OF POWERFUL SYNTHETIC OPIOIDS AND WHETHER CURRENT U.S. LAWS IN EACH OF THESE AREAS ARE ADEQUATE, AND BEING APPROPRIATELY IMPLEMENTED AND ENFORCED TO CONFRONT THESE THREATS

JUNE 4, 2019

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CONFRONTING THREATS FROM CHINA: ASSESSING CONTROLS ON TECHNOLOGY AND INVESTMENT, AND MEASURES TO COMBAT OPIOID TRAFFICKING

TUESDAY, JUNE 4, 2019

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Committee met at 10:02 a.m., in room SD–538, Dirksen Senate Office Building, Hon. Mike Crapo, Chairman of the Committee, presiding.

OPENING STATEMENT OF CHAIRMAN MIKE CRAPO

Chairman CRAPO. This hearing will come to order.

Today, June 4th, is the 30th anniversary of China's brutal Communist Government authoritarian crackdown on unarmed civilian protesters in Tiananmen Square, dashing a pro-democracy movement's highest hope for reforms.

That image of a young man standing in front of a row of rolling tanks is an indelible reminder of the true character and intentions of the Government in China that today is pursuing Made in China 2025, the most ambitious, unorthodox industrial policy program in the history of the world.

The Made in 2025 program aims to shift China's economy into higher-value sectors such as those associated with robotics, aerospace, and artificial intelligence, more generally.

In a very short span, Beijing has managed to transform itself from the perennial hope of being a cooperative trade partner to an all-out strategic competitor, in part to confront China's industrial policy program, which, among other things, includes subsidies for its domestic companies, developing advanced semiconductors, the bedrock of all things today.

Worse still, China is one of the United States' largest trading partners, and it is in part pursuing that policy through a concept known as "civil-military fusion," which is intended to provide the missing link between China's technological and military rise.

While the United States pursued policies aimed to integrate China into the global economic order, China persisted in predatory practices at home: to force American companies to disgorge their technologies, to subsidize its own firms domestically and their trade around the world, and otherwise throw various roadblocks in front of foreign firms.

Today's escalating trade and technology tensions can be seen as consequences of a Government that not only brutally rejected its own people's hope for reform 30 years ago, but has since exploited the openness of a global economy and embarked on its own brand of economic nationalism and technological supremacy. This path, if unchecked, advantages not only Chinese firms but can boost Chinese military strength at the same time.

More and more, U.S. national security grounds are called upon to confront threats to America's dominance in high-technology manufacturing and other threats from China.

The work of the Banking Committee, with its jurisdiction over banks, markets, export promotion, export controls, and reviews of foreign direct investment security and economic sanctions, sits at the intersection of U.S. national security, U.S. economic prosperity, and the global economy.

Today the Committee will focus on three threats from China.

The first two threats arise from emerging national security issues associated with foreign investment in the United States and the export of critical technologies, particularly in the semiconductor industry, which is a primary target for illicit acquisition.

Last year, the Committee successfully negotiated and the President signed into law the Foreign Investment Risk Review Modernization Act—FIRRMA—and the Export Control Reform Act. Together, these bipartisan, bicameral pieces of legislation work to enhance the Federal Government's authorities to protect America against illicit foreign investments in, acquisitions of, and transfers of America's most sensitive technologies.

Today the Committee will hear from a variety of perspectives on whether these new laws are sufficient to counter China's threats or if other measures must be considered.

Of particular interest is the question of how we separate and protect U.S. cutting-edge technology from the non-national security-related trade that finances America's greatest innovative achievements.

The third threat involves the illicit supply of fentanyl to the United States, which is causing close to 38,000 American deaths a year now. This question is if a set of sanctions tools can be effectively leveraged to restrict the supply of illicit fentanyl into the United States.

Senator Brown.

OPENING STATEMENT OF SENATOR SHERROD BROWN

Senator BROWN. Thank you, Mr. Chairman, for calling this important hearing. Thank you for noting the 30th anniversary of Tiananmen Square, as we remember those who fought for democracy and human rights as part of that movement.

Today we focus on whether to provide the Administration with new sanctions tools to complement existing Foreign Narcotics Kingpin sanctions, targeting traffickers in China, Mexico, and elsewhere who contribute to the rising tide of illicit opioids coming into the U.S., including powerful new forms of fentanyl.

Last month, China took the long overdue step of controlling the full range of fentanyl analogs. This should mean that all forms of synthetic drugs which look and act like fentanyl will be subject to

China's drug control laws. I am glad China's Government took that step. Now we have to make sure they implement and enforce it. As we know from watching Ohio's steel industry, without strict enforcement, promises from China do not mean very much.

We cannot wait to see whether China enforces its laws. Fentanyl has become the leading cause of overdose deaths. On average, in my State, more than any State in the country, 14 Ohioans die every single day due to an overdose. Those families cannot afford to wait and see whether China will enforce its rules.

A recent *Washington Post* study found that the Ohio Valley in eastern Ohio, generally coinciding with the Appalachian part of Ohio, is suffering the most from the surge in overdose deaths due to synthetic opioids. I ask consent, Mr. Chairman, to include the *Washington Post* article, entitled "Fighting Fentanyl".

Chairman CRAPO. Without objection.

Senator BROWN. Thank you.

We can bolster Chinese efforts by taking steps of our own to target traffickers. Our bipartisan Fentanyl Sanctions Act led by Senator Schumer would give the Administration new sanctions tools to help stem the tide. It would help provide intelligence and funding to keep these dangerous drugs out of Ohio communities.

We will also address today the range of challenges posed by China in export control, intellectual property theft, technology transfer, and certain foreign investments—including through China's massive Belt and Road Initiative, its Made in China 2025 initiative, and targeted collaborative investments in U.S. firms with critical technologies that China seeks to acquire.

We must respond forcefully when China's ambitious and sometimes illegal acquisition strategies are deployed against U.S. firms, raising critical national security or economic security questions here at home. This is what we did last year when we passed the Foreign Investment Risk Review Modernization Act—expanding and updating both CFIUS, the Committee on Foreign Investment in the United States, and export control laws.

Almost a year after enactment of these reforms, we will hear testimony that some foreign investors continue trying to capture the intellectual property of leading-edge U.S. technology companies for their home country's military uses or, worse, to disrupt U.S. supply chains.

Our current control systems attempt to prevent this type of technology transfer through multilateral and unilateral export controls. This system identifies dual-use products, technology, and software that may not be exported or is strictly limited. Is this approach still sufficient, when coupled with new constraints on emerging and foundational technologies and other reforms contained in export control reforms enacted last year? Is the law being implemented as written?

China continues to use nontariff barriers to block foreign producers from entering its market. Chinese State-owned enterprises, such as those in steel and other sectors, receive extensive Government subsidies that allow them to compete with no consideration of market forces. That makes it harder for U.S. companies and workers to compete—again, as our Ohio steel industry knows too well.

I do not think CFIUS and its investment review process can or should bear the burden of trying to bring about a fair trading relationship with China. That is beyond its scope. It has its hands full trying to police the national security threats that some Chinese investments pose.

But as we know, much foreign investment in the United States falls outside of the scope of CFIUS. We do not have a good way to review it to make sure it is in our economic interests as a Nation. It is not always easy to make a distinction between national security and economic security.

I have introduced legislation with Senator Grassley—the Foreign Investment Review Act—that would require the Secretary of Commerce to review certain foreign investments, particularly those made by State-owned enterprises, to make sure they are in the long-term, strategic interests of American workers and American companies.

Other issues in our Committee's jurisdiction also need attention. Chairman Crapo and I have joined with Senators Baldwin, Cornyn, and 40 other sponsors on a bill to prohibit Federal funds from being used by transit agencies to purchase rail cars and buses manufactured by Chinese State-subsidized companies. Federal dollars should not support anticompetitive, heavily subsidized Chinese products that undermine our workers and threaten the future of U.S. automotive and rail manufacturing. The bill also addresses cybersecurity risks facing our Nation's transit systems.

Finally, Mr. Chairman, our Committee must move quickly to provide a long-term reauthorization to the Export–Import Bank. Each year, China's export credit agencies—get this—provide more medium- and long-term investment support than the rest of the world's export credit agencies combined. American manufacturers need a reliable Export–Import Bank that is authorized for the long term to stay competitive as they pursue business abroad.

It is clear that on China we have lots of work to do.

Thanks to the witnesses.

Chairman CRAPO. Thank you, Senator Brown.

Our witnesses today will be:

The Honorable Kevin J. Wolf, the former Assistant Secretary of Commerce for the Export Administration in the Bureau of Industry and Security, or BIS;

Mr. Scott Kennedy, Director of the Project on Chinese Business and Political Economy at the Center for Strategic and International Studies;

And Mr. Richard Nephew, the former Principal Deputy Coordinator for Sanctions Policy at the U.S. Department of State. We welcome all of you with us today.

Each of these witnesses is knowledgeable about U.S. controls and the aggressive role of China, drawing from their experiences in industry, Government, and academia.

I want to thank you again for your written testimony. It is very helpful to us and will be made a part of the record. I also want to remind you that we have a 5-minute rule on your oral testimony. Please pay attention to that so there will be time for our Senators, who have their own 5-minute rule, and I ask them to pay attention to that.

With that, Mr. Wolf, please begin.

STATEMENT OF KEVIN WOLF, FORMER ASSISTANT SECRETARY OF COMMERCE FOR EXPORT ADMINISTRATION, BUREAU OF INDUSTRY AND SECURITY, DEPARTMENT OF COMMERCE

Mr. WOLF. Chairman Crapo, Ranking Member Brown, and other Members of the Committee, thank you for inviting me today. The views I express are my own. I am not advocating for or on behalf of any particular law or regulation on behalf of another. Rather, as requested, I am here to answer your questions with respect to existing laws and regulations.

This is a very serious topic. The United States never wants to be in a fair fight with an adversary, and the appropriate, aggressively enforced, clearly written, and well-funded export controls are an important part of that tool. They are also a very important tool in our foreign policy, particularly including with respect to achieving include human rights objectives.

I have never subscribed to the view that export controls should "balance" between our national security and foreign policy objectives and economic and trade policy. National security objectives and foreign policy, including human rights objectives, stand on their own merit and should never be traded off for a particular transaction.

That said, it is vital that export controls be tailored to specific, identifiable, clear national security and foreign policy objectives; otherwise, if you have overbroad or uncertain controls, it ends up doing more harm than good to the very thing that we are trying to protect, which is the U.S. industrial base. And for the U.S. to be a global leader, we absolutely need to have access to markets worldwide.

With respect to China, the issues pertaining to dual-use controls, items that have commercial and military applications, are among the hardest intellectually and from a policy perspective to decide and implement and have been for decades. While as you mentioned it is one of our largest trading partners, there are obviously significant issues with respect to internal diversion of commercial items for military applications.

With respect to military or commercial satellite and space-related items, oddly enough, the analysis is really quite easy because particularly since Tiananmen, there are some very clear, absolute statutory and regulatory embargoes and very clear national security and foreign policy reasons for them.

When it comes down to, thus, deciding what the right level of control is on a dual-use item, it ultimately boils down to how you define "national security." The traditional definition is to have the national security experts go to those items that provide us with military or intelligence advantage for commercial items and then to work backward from those very clear, specific identified threats to determine which commercial items feed into that, identify them, and then work with our international allies so that they impose similar controls as well to enhance the effectiveness of the control, regulate them in a very clear, interagency process, and then enforce violations in order to motivate or compel compliance.

Another definition of "national security" is to see China as such as a per se economic threat. Its very economic existence in competition with U.S. companies creates the national security threat, and as such, aggressive controls should be imposed on the transfers of technology that lead into, for example, everything identified in 2025.

So without arguing about either particular perspective or a definition of "national security," what I hope to be able to do today is to give you my perspective of having worked in this area for about 25 years and what, regardless of your worldview is or approach or issue with respect to China, is the key to effective controls, which is clarity, certainty, and multilateralism. Because if you do not have clear controls or if they are uncertain or if you go it alone, all you eventually do is end up hurting the very sector of the economy or the objectives that you are trying to enhance. And the best way now to do that is with the Export Control Reform Act that you referred to earlier. It is a very good piece of bipartisan legislation. The career staff and others at the Bureau of Industry and Security are still writing implementing regulations, and as described in my written testimony, I put in a big plug for more support, more resources, and more oversight of the very clear standards in that statute that this Bureau is going to be implementing.

And as noted, I have a 3-minute, a 30-minute, a 3-hour, and a 3-day version of each topic. So I am going to stop there and leave the rest to your questions.

Thank you very much.

Chairman CRAPO. Thank you very much, Mr. Wolf.

Mr. Kennedy.

STATEMENT OF SCOTT KENNEDY, SENIOR ADVISER, FREEMAN CHAIR IN CHINA STUDIES, AND DIRECTOR, PROJECT ON CHINESE BUSINESS AND POLITICAL ECONOMY, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES

Mr. KENNEDY. Thank you very much, Chairman Crapo, Ranking Member Brown, and the Committee, to talk about the commercial relationship with China and both the national security and economic challenges that we face and how we should respond. Certainly this being the 30th anniversary of the Beijing massacre reminds us of the challenges and the long road that we have to follow, and also as someone working on China for all of that time and longer, taking an approach of principled pragmatism, being principled about what we want to achieve but also pragmatic and effective.

China's efforts in high-tech I think you already summed up pretty well, and I do not need to go into much detail. But they are driven by commercial motivations, domestic security, what they can do to keep the Communist Party in power, and national security. And their goal is simply leadership in every industry.

The list, not just Made in China 2025 but their 13th Five-Year Plan, has hundreds of industries they want to achieve dominance in, and this is a threat to the U.S. and others, not because of China's goals necessarily, but the way they want to achieve them with massive Government and party intervention. And the business model is simple: Throw as much money as you can, scale up as fast

as you can, do not worry about the losses, and then once you get market share and you lose, you know, competitors, you will be successful. That is maybe a good approach for China if you do not care about the price tag, but it is horrible for these industries and for their competitors and supply chain, so it has huge commercial and national security relevance for us, not just because of China's strategy but because of its scale.

But I think one thing I want to emphasize is that China has got a very mixed performance record on this strategy. Overall, China is much more innovative than it was in the past. It ranks 17th amongst countries in the world in terms of its innovation capacity, which separates it from other developing countries and makes it closer to advanced industrialized economies. The U.S. is ranked 6th now, Germany 9th, South Korea 12th, Japan 13th.

At the same time, there is lots of variation. In some industries the Chinese are amazingly successful. In some places they are flops. China has obviously made huge strides in telecom and pharma through having a mostly privatized, globalized industry. Some of that is through real hard work, and some of it is through theft. In other areas, they have had successes which are generating huge, huge problems—electric cars, solar, wind, robotics, massive overcapacity that threatens those industries globally.

And then there are failures—commercial aircraft, semiconductors—where they are spending hundreds of billions, wasting money and distracting the rest of the global industry, and these are serious problems. But they do not have—the results vary significantly.

I want to say a couple things about American policy, and then I look forward to the conversation.

Some of the things that we are doing I think make total sense. China has been dragging its feet on meeting its WTO commitments. We have been overly patient for far too long. And so I have been a grudging supporter of tariffs. I was a supporter of the reforms for foreign investment and export controls, I think also long overdue. But I also think we need to recognize that we are losing focus on what the overall goal is and where the Trump administration at least is becoming so focused on the tool of unilateral pressure that it has lost focus on what the outcome should be. The outcome should not preferably be just simply disengagement and moving along with a new cold war. Instead, it should be finding a way to level the playing field, find a way to peacefully coexist.

Now, of course, that cannot be guaranteed. The Chinese have to respond. But we should use the best tactics we can to achieve that. The strategy of only relying on unilateral pressure is causing a lot of collateral damage in the United States and elsewhere. And so I would just reinforce what my colleague Mr. Wolf said about what our strategy should be, which we should stop bashing our allies, threatening tariffs with them; collaborate with them both on defense and offense, so multilateralizing investment controls, export controls; working with them on multilateral solutions; reforming the WTO; and then something we have not talked much about, which is strengthening the U.S.' own innovation ecosystem. Regardless of what the Chinese are doing, we need to do that, and I have got specific suggestions in each of these areas that I am happy to share with you during the discussion.

Chairman CRAPO. Thank you, Mr. Kennedy.
Mr. Nephew.

STATEMENT OF RICHARD NEPHEW, FORMER PRINCIPAL DEPUTY COORDINATOR FOR SANCTIONS POLICY, DEPARTMENT OF STATE

Mr. NEPHEW. Thank you, Chairman Crapo, Ranking Member Brown, and other distinguished Members of this Committee, for inviting me to speak here today.

The scope of this Committee's inquiry today is much broader than the Fentanyl Sanctions Act or, for that matter, the use of sanctions in general in addressing policy differences with China. But it is a privilege to offer my thoughts with respect to this specific set of issues. I am also honored to join my fellow panelists here today who have such long experience in issues germane to this Committee's consideration, and like them, I should note that my comments here reflect my own views and not any of the institutions with which I am affiliated.

I think the decision to explore sanctions as a possible means of securing additional leverage to manage the supply of fentanyl to the United States—and sanctions' active use in other foreign policy contexts with China—is fitting due to the established utility of sanctions in managing other policy problems. As I have written about extensively since I left Government in 2015, sanctions can be an effective tool. But they should neither be the only nor the dominant tool in managing every foreign policy problem. There are real dangers in the overuse of sanctions and in the reduction of U.S. policy interests with key countries—China foremost among them—to sanctions management exercises.

I am particularly grateful the Committee has decided to study and debate this issue rather than leap immediately into the business of applying sanctions against entities in China or, for that matter, any other country in which there are entities involved in fentanyl trafficking.

That concern notwithstanding, and acknowledging that my opinion is only in the context of sanctions design rather than as an expert in fentanyl, I do think the Fentanyl Sanctions Act is an appropriate step forward in the redress of our concerns with China in this regard.

In my written testimony, I offer specific thoughts with respect to the provisions of the FSA and the diplomatic strategy it would support. Let me say here that in my view it has sound, clearly articulated objectives. It offers a flexible approach that provides substantial discretion to the executive branch. It provides for proportional and limited sanctions and in a manner that is distinct from but complementary to the existing sanctions structure, including the Kingpin Act. It can facilitate a diplomatic approach, especially in that it is not limited solely to China as a target. And it is complemented by other steps—including the creation of a commission, establishment of an intelligence program dedicated to the problem, and the provision of funding—that can help to create a "whole of Government" approach.

There are three challenges or concerns that do need to be considered in the context of the FSA. They are:

First, the reality that the U.S.–China relationship is already very complicated. Adding FSA measures to the mix may make it harder to address our broader array of interests with China. In my opinion, though, the limited scope and scale of the FSA and the fact that this issue is already on the agenda mitigates some of this risk. But it is an important one to acknowledge.

Second, the United States has a lot of sanctions in place already that affect Chinese interests. From Iran to human rights to Russia, our sanctions plate with China is full. One can reasonably argue that this will only reinforce Chinese reluctance to cooperate with any part of our sanctions since their demands are, in their view, never-ending. Some Chinese scholars are also already starting to advocate retaliatory sanctions measures.

That said, in my view, this only argues in favor of being more careful in our sanctions approach, picking and choosing which sanctions to create and how to enforce them. If the U.S. Government prioritizes fentanyl trafficking, then in my view it can and should make space for this issue and its approach to other sanctions matters.

Third, there is the risk of contributing to the sanctions overuse problem. In my view, this is a very real concern and one that might in time affect U.S. economic performance and access. It is not, however, likely to be triggered by this one measure. I do believe that the overuse problem needs examination, and I commend those on Capitol Hill who are beginning to mull options to do just that, through reporting requirements and even commissions to study the issue.

In sum, though I believe there are legitimate questions about the FSA, I believe that it is a reasonable next step to take in our efforts to redress our concerns regarding the supply of fentanyl to this country. The sanctions proposed are proportional, reasonable, subject to executive discretion, consistent with the diplomatic approach, and manageable in the overall policy context. In an ideal world, no sanctions measures included in the FSA would ever need to be used, as their mere existence would contribute momentum to ongoing diplomatic efforts to confront the challenge of illicit fentanyl trade. And even if sanctions had to be imposed, I believe there are mechanisms in the FSA to manage their deleterious impacts as well as to provide relief in the context of future diplomatic progress.

I appreciate the opportunity to speak with you today and offer my testimony. I look forward to your questions.

Thank you.

Chairman CRAPO. Thank you very much, Mr. Nephew, and I appreciate the comments that each of you have already made.

One thing that was, I think, a common theme among each of you was that sanctions are an effective tool and that we need to be careful to use them with precision. And they are not a blunt instrument. To me, this is a lesson that we learned here in the Committee as we tried to work through FIRRMA and the Export Control Act reforms that we did last Congress on a bipartisan basis.

The question that I want to focus on here is: How do we do that? And I am primarily—you know, Mr. Kennedy, you said there were hundreds of industries where China is seeking to basically leapfrog

itself into global dominance. I want to focus on the semiconductor industry, which I believe is one of the most significant ones that is currently under direct threat. And the first question I have is: For the U.S. companies in the semiconductor industry to maintain what I believe they currently have as a dominant lead, but for them to maintain their position in developing and leading in cutting-edge technologies, do we not have to make sure that they have access to global markets? I assume that is an easy answer, but go ahead.

Mr. KENNEDY. Yes, I appreciate the first one being a softball. American companies are leaders in all aspects of semiconductors, and we should be exporting them. It is a huge part of the industry, not just because China and other places are the end consumers but also because of global supply chains, and if you—obviously, you need—in the context of the Chinese, they are throwing hundreds of billions of subsidies at these industries, and they are trying to steal this technology. You have to guard against that as much as you can. But you also have to keep your industry healthy, so investing in R&D, keeping these markets open.

If those markets are closed off for whatever reason, then it is going to be the Chinese investing and building their supply chain now. They are very far behind, and they have a long way to go. But if we just pull up the drawbridge too quickly, then what they are going to do is eventually they will figure out how to make a semiconductor, and that will be dangerous for our industry and our national security.

Chairman CRAPO. Well, as a matter of fact, wouldn't it be the case that if we use this tool wrongly or ineffectively, we would actually advantage China's movement into the semiconductor position that it is seeking to achieve?

Mr. WOLF. Absolutely. I agree with everything you said and what was just said a moment ago. If we, as a matter of both law and psychology, encourage buyers to want to go and dual source from outside of the United States, then that reduces the amount of ability of U.S. companies to invest in R&D to stay ahead with respect to the next generation and be the world leader from the United States. And so U.S. companies absolutely need access to all markets, both as a matter of law and psychology, and that these tools that we all—we did not coordinate, but we all were basically saying the same thing, is do not overuse them in order to avoid spooking potential buyers and overcontrolling that which does not need to be controlled. So I agree with everything you said in your question.

Chairman CRAPO. So let me just conclude with a more specific point here and ask your comment on this. I very strongly support both ZTE and Huawei being put on the entity list and having the sanctions that we have begun implementing against them.

At the same time, I am concerned that if we utilize the sanctions in this context without the precision that we need, we could actually benefit China by losing our market share for our semiconductor industry or weakening it badly and then allowing other suppliers, not necessarily Chinese suppliers but other suppliers, to take over U.S. markets and ultimately facilitate China's objective in this very field.

I would just like any of you to jump in on that if you would like. Mr. Kennedy.

Mr. KENNEDY. Yeah, I would agree. Although I have been supportive of some of the unilateral measures the Administration has taken and also the efforts to increase our defenses across these industries, I think the entities list action was taken prematurely and is too broad. So I probably would have waited some time before I went forward with that step because of the huge consequences it can have, and then I would—if you end up having to implement it, I would have tailored it much more closely. So there are elements of Huawei's business in consumer electronic cell phones which are not the type of threat that they could be, for example, in base stations for 5G. So I think I would have been much more specific in how I would have targeted it if I had gotten there, but I probably would not be there at this point because it is really having a huge effect on the overall trajectory of the relationship and the negotiation, so I think we would have—I would have preferred greater coordination about that decision.

Chairman CRAPO. Well, thank you. And, Mr. Nephew and Mr. Wolf, my time is up. I do want your answers to this, so if you would give them to me in writing following this.

Mr. WOLF. Pretty much what you said I agree with, so that is the short answer.

Chairman CRAPO. All right. Thank you.

Senator Brown.

Senator BROWN. Thank you, Mr. Chairman. And thank you all for shedding light on the importance of sanctions and the limitations and the importance of precision on how we apply them. I do not want to overstate their power, but I want to explore with you, Mr. Nephew, to understand better sort of how this plays out.

What do you see the major targets of sanctions, particularly on targeting fentanyl, what do you see the major targets, Chinese chemical companies who look the other way, pharmaceutical companies whose employees may be engaged in these lucrative crimes, individual traffickers? Talk to me about how that should go.

Mr. NEPHEW. Yes, Senator, I think you have listed actually all the ones that I would imagine would be on the list. It would be those companies and those entities that are either deliberately or with malice of ignorance allowing for their goods to be transferred to the United States. And I think there is a range of companies, both pharmaceutical companies and chemical companies, that could be potentially targeted. But there are also, you know, those involved in the shipping and the transfer and the transiting of goods as well, especially not just to the United States directly but also to third-party or third-destination countries that could potentially be used to transfer to the United States as well.

But, importantly, I should say, I do not see that as being the first step of implementation of the FSA. My sense of this is that we would take the existence of the FSA, if it were to become law, and to use it in a diplomatic approach with the Chinese where we would identify to them specific areas where we have concerns, including specific companies, as we have done with nuclear proliferation, missile proliferation, and other such things, and to expect them and ask them to take action on their own. And to me, it is

those incorrigibles that the Chinese are unable or unwilling to address that we would then eventually have to impose sanctions against.

Senator BROWN. OK. Thank you for that thoughtful answer.

Mr. Wolf and Mr. Kennedy, let me shift to another issue. Chinese State-owned rail car manufacturers use low-ball bids to win four major contracts to supply subway and commuter rail vehicles to transit systems, to large transit systems in large cities. That company wants to sell up to 800 subway cars to the D.C. Metro system, a public contract that would be worth upwards of $1 billion. A major Chinese electric vehicle manufacturer that has received generous support from its Government has sold electric buses to U.S. transit agencies in 13 States. Chairman Crapo and I are working with three dozen colleagues on legislation to prohibit Federal grants from DOT from supporting contracts with these Chinese subsidized companies. Is that the right approach, Mr. Kennedy, Mr. Wolf?

Mr. KENNEDY. I guess what I would encourage is being as specific as you can to stop the problem that you see. So in the case of companies that are State-supported or State-owned, we have rules already. We can use countervailing duties. If they have captured so much market share that they are abusing their dominant position, you can use antitrust rules.

So there are ways, if you are sure what they are doing is giving them an unfair advantage, to be very targeted. State-owned enterprises obviously are very difficult. It would be nice if we had global rules related to State-owned enterprises in particular, either at the WTO, or, you know, the TPP has those. But if those did not work, then the methods that you propose might be a good next step.

Mr. WOLF. I agree it would be an effective tool, and one of my main themes is that export controls and CFIUS are not the solution to all problems, and when other areas of law do not address the issue that you just described, then new ones need to be created. So, yes, I agree.

Senator BROWN. OK. I did not know I would have a minute left. Let me shift back to the fentanyl issue with Mr. Kennedy, and from Mr. Nephew's response on fentanyl, that you go to the Government first and you give them that opportunity, if you will, to, for want of a better term, behave better, are you hopeful, Mr. Kennedy, the decision in early May to treat as controlled substances under their law to treat fentanyl will be effective in the way perhaps that Mr. Nephew suggested we follow through?

Mr. KENNEDY. Had we continued on a path to reach a broad trade agreement and stabilize the relationship, yes, cautiously. With that increasingly unlikely, I am very pessimistic that we will make much progress because of the broader change in the atmosphere of the relationship.

Senator BROWN. OK.

Chairman CRAPO. Senator Toomey.

Senator TOOMEY. Thank you, Mr. Chairman. And I also want to thank our witnesses.

I just want to make a quick observation following up on a point that Mr. Kennedy made in his opening comments, and Mr. Kennedy rightly, in my mind, reminded us of the massive scale of mal-

investment and misallocation of capital that happens in the Chinese economy precisely because it is a managed economy. It is not a truly free economy. And so the smartest people in the world are never going to figure out exactly where capital should go, exactly where resources should go. Markets discover that far better than any committee, and if that were not true, then the socialist economies of the world would have long ago surpassed ours.

So while China is a very serious threat in many important ways, I just hope we will remember that this power that they exercise is actually a weakness for their overall economic performance. And our greatest strength is not the head start that we have in modernization but, rather, the relative freedom that we have and the ability to discover how to allocate capital through a market mechanism.

I would like to switch back to the discussion about fentanyl as well. It is stunning to me just how powerful this drug is, and I will give you one illustration that was mind-blowing for me. In June of 2017, so 2 years ago, the U.S. Customs and Border Patrol seized 110 pounds of fentanyl at the port of Philadelphia. One hundred and ten pounds. Now, that is about the weight of a relatively large German shepherd. It is enough fentanyl to kill every man, woman, and child in Pennsylvania twice. That is how powerful this is. And like Ohio, Pennsylvania has experienced a huge surge in the number of opioid deaths that are directly attributable to fentanyl. So I am pleased to be an original cosponsor of the Fentanyl Sanctions Act.

I have also introduced legislation with Senator Jones that is a little bit different, but it goes after the same problem. It is called the "Blocking Deadly Fentanyl Imports Act". Currently, the Foreign Assistance Act forbids most forms of U.S. foreign aid to countries if they are not assisting our efforts sufficiently in block illicit substances. There is a specific list of these substances. It is heroin, marijuana, cocaine, methamphetamine and its precursor chemicals, but fentanyl is not on the list. And I think that is because the list has not been updated as it should be. So our bill would simply update that list to include fentanyl, so I have just got a couple of questions about this.

One, to start with, for Mr. Kennedy, some experts on Chinese behavior are concerned that China may lack the capacity to enforce its fentanyl controls, and others think that maybe it is convenient for China to use fentanyl as an issue that gives them some leverage over the U.S. in other areas. Can you give us your thoughts on the extent of the Chinese Government's capacity to enforce its own broadening? As you know, recently they banned the entire class of fentanyl and not just a discrete list of analogs. That is a step in the right direction, but could you address their ability to properly enforce this?

Mr. KENNEDY. I think it is difficult for anyone to enforce it when it is that small and that powerful. Right? So it is like diamonds in your pocket. It is that level of problem. And given the size of China, yes, it is difficult. But the Chinese have shown in so many other areas that when they have political will to do something, they are able to make progress, if not fix a problem.

So I think the question is: What is their incentive in the broader relationship so that they can put more resources toward this problem? This is the same issue in intellectual property rights, in many other areas. Given the proper incentives, they will change their behavior. If this is just a capacity problem, we certainly have the ways to collaborate with them, also with Mexico and others, because this is not just a U.S.–China problem, even though a lot of this stuff originates in China.

Senator TOOMEY. And then for anyone on the panel, does everybody agree or does someone disagree with the premise of the Blocking Deadly Fentanyl Imports, with the idea that fentanyl is as dangerous or more dangerous than the existing list of drugs and, therefore, fentanyl should be added to the regime under the Foreign Assistance Act? Any opinions on that?

Mr. NEPHEW. So I will just say, you know, as someone speaking to the fentanyl issue, I do think that tends to make sense. I would see no reason why it would not. Again, I think that this is a broader conversation for experts in drug trafficking and fentanyl specifically, but I see no reason why that would not make sense, sir.

Senator TOOMEY. Any disagreement?

[No response.]

Senator TOOMEY. All right. Thank you very much, Mr. Chairman.

Chairman CRAPO. Thank you.

Senator Menendez.

Senator MENENDEZ. Thank you, Mr. Chairman.

Let me continue along the line of this question on fentanyl, and I would like to ask Mr. Nephew, with your experience coordinating U.S. sanctions, can you speak to how the United States can best use its sanction authorities to combat international opioid trafficking? And what is your assessment? Does the U.S. have sufficient authorities under our kingpin sanctions to tackle illicit opioid trafficking? Or are new authorities needed to hold accountable Chinese companies involved in fentanyl trafficking?

Mr. NEPHEW. Thank you, Senator. So I would say two things.

First, I think that were the Fentanyl Sanctions Act to become law, I could see it being part of an integrated strategy of both intelligence collection, analysis, and identification of targets, that that would then facilitate diplomatic engagement with the Chinese to see if they can be convinced or compelled to implement their own laws when it comes to the regulation of fentanyl, and then failing that, along the lines of the schedule of reports that is outlined in the FSA to impose sanctions against those that either are unwilling or unable to be corrected by the Chinese Government.

And I think this speaks to the second issue, which is the Kingpin Act. To me the Kingpin Act is very valuable. It allows you to impose very significant and substantial sanctions on narcotics traffickers, and I think the fact it has been used at least once with respect to fentanyl is useful. But I do think that having more authorities, especially at the lower scale of punishment, may be valuable. And I think that is where the FSA is so useful because it adds new tools. It adds sanctions against import–export financing. It adds, you know, sanctions on visas for senior officials. It would give the U.S. Government more tools to apply against some of these companies and entities, which I think may be more effective as

part of a diplomatic approach, and especially the fact that there are means for tailoring implementation of sanctions in the long term for countries that are cooperating. I think that also adds.

Senator MENENDEZ. I appreciate that insight. I hope we can get the Fentanyl Sanctions Act passed. I have sponsored it with Senator Schumer. I think there is not a part of our country that is not touched by this issue, and every tool that we can use to prevent fentanyl from coming into the United States in the first place I think is incredibly important.

I would like to ask Mr. Kennedy, as I look at China now 30 years after Tiananmen Square, I see an Orwellian State. Xi Jinping has obviously developed one of the most sophisticated technological surveillance systems of its people in Xinjiang, obviously, with the Uighurs. How should we be balancing our values such as concerns about human rights in Xinjiang and American companies that are engaged in selling surveillance and security goods and services to China, especially when we see China promoting that very essence of that technology to other countries in the world to repress people as well?

Mr. KENNEDY. I agree it is a huge problem. Chinese people do not have middle names, but if they did, Xi Jinping's would be "Control". Every problem he sees he wants to solve with increasing control, whether it is technological, economic, every element of State power. And I think it is really important that American companies not blindly serve, to the extent possible, any of those kinds of goals and that use of party power.

It may be that we need legal restrictions on participating, and I think that is certainly—we have some of those already. In addition, public—shining lights on these companies that are involved could also be involved—but I think it also needs to be multilateral, and we need to be relatively consistent to the extent that we can on a range of Chinese behaviors, not just in Xinjiang but otherwise, and through our own actions show that we are not just picking on the Chinese because they are the Chinese, but because we care about human rights everywhere in the world across people of all faiths.

Senator MENENDEZ. And, last, given that the President has announced that he is going to impose across-the-board tariffs on Mexico, the second largest market in the world for U.S. goods and services, as we are starting the process for ratification of USMCA and Mexico just started their ratification process, as we are trying to deal with China and its unfair trade practices, what message does that send to China that even if they strike a deal with us, then the President goes ahead and says, "Well, I am going to strike tariffs on you for some other reason"?

Mr. KENNEDY. The biggest reason China wanted a deal was that they thought it would stabilize the relationship. But they do not want a deal if they feel on day two we will break our word. And they also feel that if we are isolated because we are hitting everyone else with tariffs and penalties, that it will be us that are isolated at the end of this, and they will just wait out the President until the next Administration.

Senator MENENDEZ. Thank you.

Chairman CRAPO. Senator Kennedy.

Senator KENNEDY. Thank you, Mr. Chairman. Thank you, gentlemen, for your testimony.

Mr. Kennedy, if I referred to "controlled technology," would you understand that term?

Mr. KENNEDY. If you could explain just a little bit?

Senator KENNEDY. Well, it is important technology, important to the Nation's commerce and the Nation's defense. Do we have university students, citizens of foreign countries, China, for example, in our universities that have access to controlled technology?

Mr. KENNEDY. Well, there are laws governing Federal grants to universities, and as far as I understand, in many circumstances there are supposed to be restrictions to access to those technologies in the lab and——

Senator KENNEDY. I think it is called a "deemed export license."

Mr. KENNEDY. Yes, yes.

Senator KENNEDY. But if you have a university student who is just in the lab, just present, a deemed export license is not required. Is that not the case?

Mr. KENNEDY. That is correct.

Senator KENNEDY. Are there foreign university students, university students in our universities from foreign countries like China that are stealing our technology, controlled technology?

Mr. KENNEDY. Well, there are 369,000 students from China in American universities.

Senator KENNEDY. It is the most in the world, isn't it?

Mr. KENNEDY. Yes, by far. You know, at least half——

Senator KENNEDY. And many of them are in the sciences, are they not?

Mr. KENNEDY. That is right, in science technology——

Senator KENNEDY. And many of them are in labs that are developing controlled technology, are they not? But as long as they are just there observing, we do not require a deemed export license, do we? Do you know, Mr. Wolf?

Mr. WOLF. Well, it is actually the area of law I used to be responsible for, and the laws apply equally whether you are a student or in a university with nonpublic technical information that is controlled or in a company. And a release of technology to that student that is not in the public domain requires a license the same way as exporting to——

Senator KENNEDY. Yeah, but if they are just there—they are just in the lab.

Mr. WOLF. Yes.

Senator KENNEDY. It is not considered a release, is it?

Mr. WOLF. No, actually, it is. The revealing of information in any context, orally or visually, is a controlled event, assuming it is not public and on the Internet to be available to anybody.

Senator KENNEDY. So you are telling me that if a student is merely in the lab, our universities are not getting deemed export licenses?

Mr. WOLF. The act of revealing to a foreign person in a university setting or any other settings is a controlled event with controlled technology.

Senator KENNEDY. I do not agree with you.

Mr. WOLF. OK.

Senator KENNEDY. I think the deemed export license is being applied very narrowly, and there are a lot of universities that are not obtaining them. And I have got a bill to do something about that to tighten that up.

Mr. WOLF. OK.

Senator KENNEDY. Do you see any problems with that legislation?

Mr. WOLF. I was unaware of it until just now, but I would be happy to look at it and discuss it with you and provide however much help I could.

Senator KENNEDY. All right. Let me ask you this, gentlemen: The law obviously in China is underdeveloped and many law firms are underdeveloped. But we have seen a growing occurrence of foreign law firms, law firms foreign to China, who are affiliating with Chinese law firms. Are they covered by CFIUS if they are an American law firm affiliating with a Chinese law firm?

Mr. WOLF. If it does not involve an investment in a U.S. business, then no.

Senator KENNEDY. Well, the reason we have CFIUS is to keep China and other countries—I do not mean to pick on China—from taking our technology. Correct?

Mr. WOLF. And other things, yes.

Senator KENNEDY. Right. Well, if an American law firm is affiliating with, let us say, a Chinese law firm and that Chinese law firm has access through the American law firm to American technology, why doesn't CFIUS cover it?

Mr. WOLF. Well, the export control rules would prohibit the release of controlled technology by a lawyer——

Senator KENNEDY. It does not apply to law firms.

Mr. WOLF. Actually, it does. It applies to anybody moving information across the border. There is not an exclusion for a lawyer to provide controlled technology.

Senator KENNEDY. Well, when Dentons—Dentons is now the largest law firm in the world. They just gobbled up an Atlanta firm. Dentons merged—I do not think you can merge in China, but affiliated with a large Chinese law firm. They did not get a deemed export license.

Mr. WOLF. I do not know anything about that, but it would depend upon whether controlled technology was being provided to a foreign person.

Senator KENNEDY. It is not being provided. I am saying that the foreign law firm, foreign to the United States, the Chinese law firm that has access to the data of the law firm can access the American technology.

Mr. WOLF. OK.

Senator KENNEDY. Is CFIUS being applied to that?

Mr. WOLF. Well, CFIUS is focused on the investment and the export control——

Senator KENNEDY. I get that. I get that. But before the merger between the American law firm and the Chinese law firm, is the American law firm coming to CFIUS and saying, "Is this OK?"

Mr. WOLF. Probably not, but I would love to discuss this more with you. It is a new fact pattern to me that I have not thought about until today.

Senator KENNEDY. Thank you, Mr. Chairman.

Chairman CRAPO. Senator Tester.

Senator TESTER. Thank you, Mr. Chairman, Ranking Member Brown, for holding this hearing. I want to thank you all for your testimony.

I want to just touch on what Senator Kennedy said. Is it fairly common knowledge that in the university and the private sector, whether you have a fellow or a student in the lab dealing with controlled information, that that controlled information cannot be transferred? Is that fairly common knowledge?

Mr. WOLF. I would hope so, yes.

Senator TESTER. OK.

Mr. WOLF. Whether it is enforced is a different question, but the rules regarding deemed export apply to a national of that country the same way as the technology going to the home country.

Senator TESTER. I think Senator Kennedy brings up a good point. In fact, if they do not know about it and it is the law, we ought to figure it out pretty darn quick. And if they do know about it, then it is there.

I just want to—there are a lot of different ways to go here today, and I just appreciate you all being here. Huawei is on the Department of Commerce's entity list, so you know the rules that go around that. And this is for Mr. Wolf or Mr. Kennedy or anybody. What impacts does this listing have on Huawei's business operations? Is that listing significant to them?

Mr. WOLF. Oh, it is dramatic because an entity listing prohibits the export of anything from the United States, whether it is a semiconductor or——

Senator TESTER. Got it. And one of you brought up, if not more than one of you brought up, the fact—I think it was Mr. Kennedy brought up we have got to quick bashing our allies and working together and this has got to be a multilateral operation. So I am not sure that the other folks see it the same way I do that are our allies in the world. Let us just be frank. Can it be steered through a third country, third-party country, so they can still get what they need?

Mr. WOLF. Well, the prohibitions apply to U.S.-origin items anywhere around the world.

Senator TESTER. OK.

Mr. WOLF. So if a foreign company were transferring U.S.-origin items, that is still illegal to a listed entity.

Senator TESTER. OK. Mr. Kennedy.

Mr. KENNEDY. There are certain technologies which only American companies have, which they cannot get from anywhere else, and so if faithfully implemented across the board, this could be potentially fatal to Huawei, and not just Huawei as a company but all the networks that are currently running on Huawei equipment. So it is going to degrade those networks in the 170 countries in which they operate. So, yeah, this is a massive action which the U.S. can unilaterally do on its own, even if others are not happy with it.

Senator TESTER. OK. So the trade war that is currently going on with China, is this helping them achieve their 2025 goals?

Mr. KENNEDY. Well, no, the trade war is an annoyance because what they prefer is to go back to business as usual so that they can continue to invest and follow the business model that I described at the beginning and that they are so familiar with.

The trade war is not stopping them. They have got plenty of money, and they have not been fully disengaged from the global economy, and certainly globalization is central to their success. They cannot do this all by themselves, even though some Chinese think they could. But, you know, unless we are looking to fully disengage and try to entirely isolate the Chinese, they are going to keep moving in the direction that they want to go until they feel——

Senator TESTER. But the truth is without our allies being a part of the sanctions that are put onto the trade war, we cannot achieve isolation of China alone.

Mr. KENNEDY. No, we cannot.

Senator TESTER. OK. Our stepping back and getting out of the TPP, is that helping them achieve their 2025?

Mr. KENNEDY. I recognize that there are some elements of TPP which people find objectionable, and TPP is not an ideal agreement, but it would have been helpful to have tried to put some measures of constraints on some of Chinese industrial policy and gain multilateral collaboration in keeping the Chinese out of TPP until they made those reforms. Of course, the Chinese often do not live up to their agreement, and so they could have gamed that system, too. But TPP would have been helpful in combination with the other types of defensive measures that we are using as well.

Senator TESTER. OK. So not being in it was a net negative as far as our abilities, OK.

Mr. WOLF. I agree.

Senator TESTER. You guys talked about China's ability to enforce controls of fentanyl, implement their own rules if they had the proper incentives. Tell me what those proper incentives are.

Mr. NEPHEW. Well, Senator, I would start off with the fact that, you know, there is a general incentive to not have this be a bilateral issue between the United States and China, at least insofar as the Chinese have demonstrated throughout the trade war that they wanted to try and deconflict this issue. Now, that could be because they are trying to buy good will from the United States, or it could be, you know, independently. But I think this also then speaks to the need potentially for sanctions, because sanctions can also provide the disincentive to continue with allowing their companies to do behavior that we find objectionable, and that could be helpful in this regard.

Senator TESTER. OK. I think I understood what you said, and I have got to shut up because I am past time, but I am more looking for what we need to do to give them the incentives to enforce their rules.

Mr. NEPHEW. Well, Senator, I would say one of the incentives that we can give them is the need to avoid U.S. sanctions penalties.

Senator TESTER. I got it.

Mr. NEPHEW. Right? So that is definitely one——

Senator TESTER. But, once again, don't those sanctions have to happen—I mean, in the instance I took up before, you said, right,

it can be done unilaterally. But most of the time, don't those sanctions have to come with our allies' help?

Mr. NEPHEW. Yes, Senator. As a general point, multilateral sanctions will always be more effective than unilateral ones.

Senator TESTER. Thank you. Thank you all very, very much. I appreciate it.

Chairman CRAPO. Senator Cotton.

Senator COTTON. Thank you, gentlemen, for joining us for this hearing on the 30th anniversary of the massacre at Tiananmen Square by the Chinese Communist Party.

I would like to speak first about Huawei, a simple question to get answers from all three of you, starting with Mr. Wolf. Who owns Huawei?

Mr. WOLF. It is complex, but obviously it is closely affiliated with the Chinese Government. But I do not know the exact legal answer, but I agree with the premise of your question.

Senator COTTON. Mr. Kennedy.

Mr. KENNEDY. Officially, on paper, all of their employees own the company. But that has been shown to be quite suspect, and so actually it is not clear. Also, since they are not publicly listed, there is very little required transparency to give you an answer to that question.

Senator COTTON. Mr. Nephew.

Mr. NEPHEW. Senator, I do not have any more independent information than these two.

Senator COTTON. So the leadership of Huawei along with Chinese Communist Party officials often talk about Huawei being employee-owned. It sounds like you would dispute the claim that it is employee-owned as opposed to have perhaps at most some kind of employee incentive profit-sharing plan. Mr. Wolf, you nodded your head in a way that does not reflect in the record.

Mr. WOLF. No, I agree with the basis of what you are asking. That is all I was nodding my head for.

Senator COTTON. Mr. Kennedy, Mr. Nephew, anything to add?

Mr. KENNEDY. I would just say its ownership is ambiguous for sure.

Senator COTTON. So the holding company of Huawei is 1 percent owned by its founder, 99 percent owned by a mysterious trade union committee. Mr. Kennedy, I see you nodding your head. Do you know anything about this trade union committee?

Mr. KENNEDY. Well, all Chinese companies are supposed to have unions that are associated with the All-China Federation of Trade Unions, which are not really bottom-up unions that represent their members. They represent the Chinese State.

Senator COTTON. So is it fair then to say that the Chinese Communist Party, if it does not own Huawei according to Western legal standards, at least controls at a fundamental level the decisions of that company?

Mr. WOLF. Or could give it instructions to do something in the interest of the Chinese Government at some point, yes.

Mr. KENNEDY. I would just say I have followed Huawei and interacted with it for a couple decades, and my sense is that at the operational daily level, they walk, talk, and look like a company that makes their own strategic decisions. But given the industry

that they are in and how strategically important it is, I would expect a great deal of behind-the-scenes interaction with every side of the Chinese State—central and local.

Senator COTTON. Mr. Nephew, anything to add?

Mr. NEPHEW. No, Senator.

Senator COTTON. I think, Mr. Wolf, it was you in the answer who mentioned stock listings. I would like to—oh, I am sorry. Mr. Kennedy mentioned stock listings. I would like to turn to stock listings here in the United States. There are several hundred Chinese firms currently trading on the New York Stock Exchange, the Nasdaq, and other exchanges, yet they are largely immune from oversight, for instance, from the Public Company Accounting Oversight Board and other common practices in our market-based economy. Should Chinese firms be allowed to trade on our stock exchanges given that they are largely immune from the kind of Western scrutiny and auditing that American and other Western companies face?

Mr. KENNEDY. I think ideally I would have required them—when we started giving listings, I would have required—would have preferred that to be a precondition that they were exposed to that. But now that you have several hundred, I do not know if it makes sense to just automatically de-list them all until China complies, or if you should have the SEC or others investigate these companies one by one to see if there is some place that they are not in compliance and have action taken that way, or by their shareholders.

Senator COTTON. Mr. Wolf, Mr. Nephew, anything to add on that question?

[Witnesses shaking heads.]

Senator COTTON. Why was it decided to allow opaque Chinese companies to be publicly listed on our stock exchanges?

Mr. KENNEDY. My sense is that when this decision was done in the late 1990s, there was an effort to get more companies listed on American stock markets and help investors, and there was the expectation that these were—that these looked like private companies, and that the transparency of listing would provide outsiders a chance to monitor the companies in a way that they could have confidence that even had they come from China, you could still learn a lot more about them than if they were not listed.

Senator COTTON. Like so many wishes about China's economy and Government from the late 1990s, it turned out not to be true. Thank you, gentlemen.

Chairman CRAPO. Senator Warner.

Senator WARNER. Thank you, Mr. Chairman.

I want to pick up where Senator Cotton left off, and let me preface it by saying I think China is a great Nation, extraordinary Nation, extraordinary history, extraordinary power, going to be a great power going forward. But I dealing with concur with Senator Cotton in his comment that the vast majority of Chinese companies are in a sense fronts for the Communist Party. And my concern with Huawei and ZTE is not only the direct concerns around Huawei and ZTE but around the notion that what China is attempting to do is to set the standards in 5G. In a certain way, this should be a wake-up call not just for the United States but for the West, writ large, because I would argue across the board post-Sput-

nik, most technology and, more importantly, the standards around the technology, whether it is the Internet, telecom, space, social media, have generally been defined by the United States, and the rest of the world has followed that, and while we have not always gotten it right, I think there has been a general agreement that directionally we have headed appropriately.

I fear that that leadership is fading away, the fact that we have not stepped up and set any guard rules around social media and defaulted that to the Europeans or California or others I think will have long-term ramifications. I think in the case of 5G the Administration was very late to recognizing this more macro threat.

I guess, Mr. Kennedy, I would slightly disagree with you. I think because, as we were trying to make the case to countries around the world of the security—inherent security concerns with Huawei equipment that in a distributed 5G network you cannot stop a company from sending upgrades on a regular basis, and those upgrades are where the potential vulnerabilities will fall—it is not that there is a back door right now—and, consequently, that the Administration had to take a fairly draconian action in terms of putting Huawei on an entity list to send the message to the world that we were serious about this issue, candidly as well to say to some of our own rural telcos and satellite providers they have got to rethink. But I would like you to drill down a little bit because one of the things—and Senator Crapo and I have met with folks in the semiconductor industry, that entity designation being so broadly based really was a fairly blunt instrument and could, I think as Senator Crapo pointed out, have a negative impact on one of our strongest American domestic industry, the semiconductor industry.

So how would you rethink that entity designation? There is in my mind a great deal of difference about buying equipment from an enterprise like Huawei versus the ability for us to sell chips into a Chinese market that is still 35, 40 percent of the overall world. Do any of you have any comments on how you might refine that entity designation with certain exemptions that might again keep the market down? And I would also argue that what is ironic—let me as a quick aside—I do not want to use up my whole time with my question, but a quick aside, though, is that many of the countries a la Korea and others who have been anxious for us to make that designation and to sound the alarm on 5G and Huawei, it would be ironic if in sounding that alarm we created a circumstance where actually Korean chip manufacturers benefited while the American chip manufacturers lost out.

So how would you go about refining that entity designation?

Mr. WOLF. The answer is in your question: carve out that which we care about, aggressively enforce it, enforce the rules, and that which is less sensitive or benign or commercial, that allows the U.S. to maintain dominance in this area to on a very tailored, controlled, monitored basis, allow that to go forward in order to prevent the very foreign dominance that you were just describing.

So I would just take your question and work it back to you as the answer. I agree with it completely.

Senator WARNER. Mr. Kennedy.

Mr. KENNEDY. I guess I would put more emphasis on the Executive order that the Administration issued banning purchase of

Huawei equipment into the United States. It is probably being the best step toward protecting ourselves and then having allies follow along so that the Western world just simply does not introduce that equipment, if it is 5G, if it presents the danger that you said, and I would be extremely tailored and narrow on the entities list, leaving out, you know, chips and things that go into cell phones and things that are on the very edges of networks, which do not present that type of security concern.

Senator WARNER. Mr. Nephew, do you have anything to add?

Mr. NEPHEW. No, Senator.

Senator WARNER. But you would, Mr. Kennedy, just use more the EO rather than the entity list—although I would argue that the entity list carries a greater weight. But I would love to have additional follow-up and refinement from both of you because this is an issue that we are continuing to make the case to American industry about some of the challenges of doing business with China right now.

Mr. KENNEDY. Yes.

Senator WARNER. And I did not get to my question about venture capital investment from Chinese firms into American venture capital firms, which prevents a whole other set of issues. But we need to do it with some level of refinement.

Mr. WOLF. Sure. One last—I was the father of the ZTE entity list action and how that was handled and would love to continue the discussion, both in specific and in abstract, how——

Senator WARNER. My fear would be that the White House, in an effort to try to make a deal with China, may tradeoff—for X billion dollars of agricultural sales, may tradeoff this national security issue around intellectual property theft and technology standards, which is a much, much bigger deal, I would argue.

Mr. WOLF. I agree.

Senator WARNER. Thank you, Mr. Chairman.

Chairman CRAPO. Thank you.

Senator Tillis.

Senator TILLIS. Thank you all for being here. I was just down in a Judiciary Committee hearing where we were talking about fentanyl and China's role in poisoning and killing some 38,000 people in the United States. They are one of the major suppliers, and they are sending it either directly by mail or through precursors and through drugs that are ultimately being manufactured in Mexico.

Over the course of the past couple of months, I have met with a number of people in my travels across the State and the Nation, and I had a very interesting meeting about 2 months ago. This group, this business, which actually manufactures freight rail cars here in the United States, talked about a very successful 10-year investment of the Chinese in one of their State-owned enterprises for convincing Australia that they should "manufacture"—I will put that in quotes—their commuter rail cars because they could do it for a lower price point, they would maintain manufacturing in Australia, and they would have a reliable product.

The Australians bought that, and over the course of a few years, it was very clear that all they were doing was assembling in Australia for a brief period of time, and now they basically send

shrink-wrapped commuter rail cars directly from China to Australia.

So when they diminished that portion of the industrial base, they did the same thing for freight rail cars, and now in Australia they have no indigenous industrial base for something that I would consider on the rail side a very important strategic asset.

Now if you go to Boston and you go to Chicago and you go to L.A., guess who is offering a lot of their commuter rail cars? China, starting with the promise of indigenous manufacturing, but basically trying to play out the same thing since they have proven it in what we could consider a pilot project in Australia, now they are trying to play out the same thing here. In fact, they also tried to make an investment in freight rail capability that was actually in my State that, for a variety of reasons, did not go through. I think they are doing something similar down in Miami.

What I see China doing is arising as a military threat clearly and an economic threat, and it is one of the reasons why I tend to support the President going after all facets of the relationship with China right now. I do believe the designation of Huawei was appropriate not only because of the threat in the 5G space, but because of their repeated theft of intellectual property, not really innovating, reverse engineering and creating competitive products for companies, many of them based in the United States just months after a new product is introduced.

So if you look at just the broader, the bigger picture, is there any Nation out there that we should be more worried about economically and technologically than China?

Mr. KENNEDY. Yeah, I guess my answer would be no, that China's size, scale, its focus on these industries, the very frosty strategic relationship which we have with them which could get much worse means that China should be front and center, and that means that other challenges that we have that are problematic but do not rise to the same scale, we should differentiate, and there are others that we can collaborate with in addressing that challenge, which is, as you said, number one.

Senator TILLIS. What about the future—you know, China has got a lot of smart people, a lot of them good people. It is the leadership that I have a concern with, and I think there are malign objectives. But what about the future in the financial space? Could we see ourselves at some point in the near- to long-term future that we have pension systems and a number of people in the United States invested in a way that future economic actions that may diminish Chinese economic growth and prosperity is becoming a political issue because taking those actions could ultimately have people rise up and say, "You are hurting my pension plan"?

Mr. KENNEDY. Well, certainly we already have a whole variety of economic contact with China. Financially, there is some—you know, through the stock markets and securities markets. What we do not have now is a lot of American money, assets in the Chinese financial system, and they have opened it up, and I would say we ought to be very hesitant about——

Senator TILLIS. What about future Chinese assets invested and a part of broader investment portfolios? So I am talking about the reverse.

Mr. KENNEDY. Yes, so Chinese investing here as well. Right now we do not have—those restrictions are really from the Chinese side limiting the——

Senator TILLIS. No, I am talking about like maybe a diversified international portfolio that has a significant amount of dependence on economic performance in Chinese markets, reaching a point where now all of a sudden—I served in the State House before I came up here. When you start messing with policies that could affect pension plan performance, then you get American people worried about their pocketbooks. I am worried about that end game at some point. I do not think we are there yet, but, I mean, what kind of controls do we have in place to prevent that sort of an end game?

Mr. KENNEDY. We have zero controls on that. But I would also be worried that if we have so much money dependent on China, that the stability—that our investors would think the stability of the Communist Party is as important as the Chinese think it is, and we want to avoid that.

Senator TILLIS. That is my concern. It is not something that we have talked about a lot, but the Chinese are playing the long game, and I have no doubt in my mind at some point they would like to see punitive actions taken toward China representing an existential military or other threat, suddenly it becomes a political issue because it could harm the pocketbooks of pensioners.

Mr. Nephew, I will let you finish your thought.

Mr. NEPHEW. Senator, if I could just say one thing, I very much share your concerns, and I would just note that there are some Chinese scholars who are already starting to think about ways in which they can weaponize U.S. access to the Chinese economy, frankly, playing back to us some of the sanctions tools that we have used in the past, and I think this is part of the reason why we ought to be very careful about how we approach all of those tools.

Senator TILLIS. Thank you.

Chairman CRAPO. Senator Van Hollen.

Senator VAN HOLLEN. Thank you, Mr. Chairman. I thank all of you for your testimony today, and I just want to say at the outset I support the legislation, the Fentanyl Sanctions Act, and that is a crisis everywhere in the country, including in Maryland.

I also want to follow up on some of the questions Senator Cotton had with respect to Huawei. My sense is that it is the consensus of the U.S. intelligence community that if Huawei were to come to dominate the 5G network globally, that would pose a national security risk to the United States, an unacceptable one. Do you all agree with that conclusion?

Mr. KENNEDY. Well, I have never worked in the U.S. Government, so I do not have the security clearance to be able to give you the kind of answer which you have gotten from others with much more information than me.

Senator VAN HOLLEN. Does anyone dispute that conclusion?

[Witnesses shaking heads.]

Senator VAN HOLLEN. So then the question is: Where we do we go from here, right? And, obviously, this Administration has been trying to work with our European partners and others to persuade them that it is a mistake to go down the Huawei road, and they

had mixed success with that. A lot of our European allies are, I think, thinking of going a different way. And then the Administration obviously put Huawei on the entities list, which was a tough move but I think in my view sent an important signal.

But my question is: If the preferred strategy is to work with others around the world in terms of preventing others from becoming reliant on Huawei as the 5G network, how do we do it? You have an Administration that has been essentially threatening sanctions against all of our allies with clubs. I mean, we threatened Canada. Now we have threatened Mexico. You know, now Australia was under consideration. How do you go about getting our partners on board with respect to the strategic threat posed by Huawei at the same time we are clubbing our partners with tariffs? How would you suggest we proceed if you all agree or do not dispute the conclusion that Huawei dominance of a 5G network would be a threat?

Mr. KENNEDY. I guess I would just say, you know, when the U.S. was preparing to invade Iraq in 2003, Secretary of State Powell went to the U.N. and gave a speech and outlined the risks regarding weapons of mass destruction. Now, it ended up not being the best information, but I think the U.S. owes it to the American people and others to talk more publicly about what the risks are. You are not going to build a political consensus within the U.S. or with your allies without greater sharing of information. So I would suggest even though there are risks to sharing some of that information, I think it would be valuable to building the argument.

And then, second, you are going to need to work with Nokia, Ericsson, other suppliers in telecom in 5G so that you have enough capacity so that you can build that equipment and then you can provide the services on top of it. So I think it is going to be collaborative between Governments and across industry—to get this to be successful.

Mr. WOLF. What he said.

Mr. NEPHEW. Senator, if I can, I would just add an additional point, too, which is prioritization, and I think you are speaking to this when you bring up all the various different sanctions that we are threatening on our partners and so forth. If we believe that this is a very serious and substantial threat to U.S. national security, then we ought to be elevating that above other threats and other interests. And I think the fact that we are at this point not prioritizing amongst our various interests is problematic. It makes it hard to dissect what we care about the most, and it certainly makes it more difficult when you go in with 15 different things you are trying to get out of a country as opposed to four or five.

In the Iran sanctions experience which I have done a lot of work in, we went into most of our international meetings with that as our number one, two, and three international agenda items, and people understood where that sat in our prioritization. I think we need a similar, more strategic view.

Senator VAN HOLLEN. I share your view. I mean, I do believe this is a strategic issue for the United States, and I think we do need to prioritize it. And I think when we are fighting with all our allies on other trade issues, it undermines that concerted effort. Would you all agree with that?

[Witnesses nodding heads.]

Senator VAN HOLLEN. Very quickly, Senator Kennedy and I have introduced legislation dealing with the problem where you have some Chinese-owned companies trying to enter the United States market without complying with the oversight requirements of the Public Company Accounting Oversight Board, which all other countries have to comply with. Would you agree that we should hold China to the same standards and rules that everybody else has to comply with?

Mr. KENNEDY. Yes. I think that would be the ideal goal. The question is: What do you do with the existing firms? And do you grandfather them in? Do you create some type of process to allow them to come into compliance? So I think the goal is worthy. The question is do you have to create a transition process to make it effective and do not harm those who came in under different rules, have complied with those different rules, and could, if given the opportunity, comply with the new rules.

Senator VAN HOLLEN. Good. I appreciate that, and I think we will reach out to you to work on that. Thank you.

Chairman CRAPO. Senator Cortez Masto.

Senator CORTEZ MASTO. Thank you.

Mr. Kennedy, back to fentanyl, I do not think any community, whether it is opioid abuse or now fentanyl, is free from seeing it in, unfortunately, the overdose and the number of deaths and the impact on families. That is true in Nevada.

I was encouraged to see that on May 1st the Chinese Government implemented a ban on all fentanyl-related substances by adding them to a controlled substance list. Now, though, the ban has to be enforced.

So here is my—I am curious. Based on your work with the Chinese Government, do you believe that the Chinese Communist Party has the will to implement the fentanyl ban both at the national and the provincial levels?

Mr. KENNEDY. I think Mr. Nephew is probably more of an expert in this area than me, but in looking at the Chinese behavior in the past and with regard to this, I think it depends on where the overall relationship with the U.S. goes. If they see that we could stabilize the relationship and that we want to peacefully coexist, they will generate the political will. But if not, this will be a lower priority, and this will continue to be a problem.

Senator CORTEZ MASTO. Thank you. And, Mr. Nephew, I am going to ask you to answer that, but also this, because I noticed in October 2018 in Foreign Affairs you wrote about the importance of multilateral coordination to ensure the U.S. Government does not overuse the power of sanctions. So can you touch on both of those questions?

Mr. NEPHEW. Absolutely, Senator. So on the first, I would tend to agree that there is a relationship element to how Chinese enforcement goes, but I think there are two other elements that are important, too.

There is a capacity issue, especially when we are dealing with materials that are relatively low signature, and I can give as a comparison some dual-use export controlled goods that even if I think the Chinese Government wanted to enforce some rules on them, they had difficulty given the number of workshops and so

forth that exist in China. That does not mean they could not do better, and I think that was always our demand, especially when we presented them with intelligence about problems. But I think that is a crucial component of making this work.

Second is I think the Chinese do care about international reputation. It has been very important to them in other export control kinds of contexts, in other concerns about problems emanating from China. So I think to the extent—and this goes to your second point—that we are multilateralizing the conversation with the Chinese, that will be very effective because then they will sense there is a multilateral risk if they do not take appropriate action.

I think one of the problems we have at present—and there are others more expert in fentanyl than I am certainly—fentanyl remains a very U.S. problem at this point, and to the extent that it has yet to spread to a number of other countries, that makes multilateralizing it more problematic. But I do not think that does not mean it cannot be part of the conversation, especially, unfortunately, as we do see it spread as a problem in other countries and jurisdictions.

Senator CORTEZ MASTO. Thank you. I appreciate that.

Listen, I spent 8 years as Attorney General and addressing just in general illicit drugs coming into the country. The U.S. consumes, I know, 80 percent of the drugs that just come in from Mexico. You are right. It is a supply and demand issue. But at the same time, other than just the enforcement piece of it, we need other tools and mechanism procedures to really force some of these countries to work with us. And so I appreciate the comments here today.

Let me, Mr. Wolf, talk on another subject. A few weeks ago the *New York Times* reported that as many as 18 countries are using Chinese-made surveillance systems. In some cases, these systems allow Governments to monitor the citizens' faces and hunt down dissidents. What, in your terms—and you talked a little bit about it earlier, but what are the national security implications for the United States if we do not respond to China's expanding exports of this type of technology?

Mr. WOLF. Well, in addition to national security, the export control rules allow for foreign policy objectives to be achieved through regulating particular items, types of equipment, or particular end uses or end users that are engaging in acts contrary to our interests. So the export rules would allow , for example, designations of entities or items and, better yet, if we work with our regime allies in concerted action to address the threat you are dealing with. And all that authority exists in the new law that was implemented or, rather, passed last August. So the authority exists to address the concern that you are describing, and it is a function of the Administration coming together to identify the technologies' end uses and end users to be able to work with the issue and to get our allies to cooperate.

Senator CORTEZ MASTO. Thank you. I appreciate that. I know my time is up. I will submit the rest of my questions for the record.

Mr. WOLF. I will be happy to help.

Senator CORTEZ MASTO. Thank you.

Senator BROWN [presiding]. Senator Smith.

Senator SMITH. Thank you, Ranking Member Brown, and thank you to all of you for being here and testifying today. It is very interesting.

I would like to return to an area of questioning that Senator Brown touched on and also Senator Tillis. We know that Chinese-funded State-backed enterprises are aiming to become a dominant global manufacturer in new energy vehicles like buses. Minnesota is home to two New Flyer manufacturing plants in St. Cloud and Crookston that make these kinds of buses. And several years ago, a Chinese-funded bus manufacturer set up shop in the United States, and they are unfairly competing with buses that are being made in my State, Minnesota, thanks to Chinese subsidies. So this is the underpinning for the bill that Senator Brown and Senator Crapo and others of us have introduced that would prevent Federal transit dollars from being used to procure passenger rail cars and transit buses from Chinese State-owned or subsidized enterprises, and this makes just eminent sense to me.

So I would like to ask you, what should we be doing about these Chinese-funded companies that are operating in the United States that are undermining these longstanding market-driven U.S. companies? Mr. Wolf. Mr. Kennedy.

Mr. WOLF. Well, sure. The legislation you described I agree with. When other areas such as CFIUS or export controls do not address the problem you have described, then you need new legislation, and the legislation that was described earlier today is, I think, right on. So beyond your bill, I do not have an answer.

Senator SMITH. Thank you.

Mr. Kennedy.

Mr. KENNEDY. If the fact pattern is as you describe and they are receiving subsidies or other types of support that are not permitted by the WTO, then it seems to me that is ripe for a countervailing duty case that the Commerce Department would bring, which would then put massive tariffs on their products. And then perhaps the bill, the legislation, would be another alternative approach to hold them to account in case that type of case would not work.

But I also think that we need to also look at multilateral rules related to how State-owned enterprises operate. So it is not just us. It is others. Because these companies are selling their vehicles all over Europe and everywhere else.

Senator SMITH. Right.

Mr. KENNEDY. And so we have to look at this as a global problem, not just an American problem.

Senator SMITH. Could you explain to me how a countervailing duties case would work when these are U.S.-manufactured products?

Mr. KENNEDY. So if you could not apply it because they are domiciled here and registered here, then you could use antitrust legislation and you could basically have the Federal Trade Commission or others bring a case against them for abuse of that dominant position that allows them to sell at such attractive prices that others cannot compete. So there are potentially other existing rules that we might be able to use, but, again, if they would not work, then your solution might be the best way to go.

Senator SMITH. I appreciate that. You know, what I am concerned about with relying on antitrust is that we end up having to be able to demonstrate significant market—you know, significant damage to companies, including potentially being completely forced out of the market in order to kind of win an antitrust case. And so I would just suggest that that is why there is a good reason to try to be more proactive about this rather than just waiting for the damage to be done and then trying to mop up the mess.

Any other comments on this?

[No response.]

Senator SMITH. I just have a minute left. I want to just touch on something, Mr. Kennedy. I was really struck in your testimony about the point that you make about the importance of maintaining U.S. economic competitiveness. This has been something that I have been so concerned about as I think about how the United States needs to be leading the charge and not following the charge when it comes to a clean energy future. And in your testimony, you talk specifically about DOE funding for breakthrough battery technologies and how important this is for us to be able to be leaders and not followers in this area. I completely agree with you on this and have been working with both Democrats and Republicans, especially on the battery storage area, with bills that would fuel that kind of research and development at DOE.

But just in the few seconds I have left, could you elaborate any more on other ideas that you have for what the United States should be doing to stay economically competitive in this clean energy sector?

Mr. KENNEDY. Well, part of it is Federal Government funding for research that is tied to not just discovery but also to manufacturing in the United States, because the technologies are not just about making sure it works in the lab, but also scaling up and creating additional incentives for the products to be scaled up and used in the United States. So that is on the producer side. But you are also going to need to have policies that affect demand, that promote these technologies to be used and commercialized in a way that is profitable for industry and addresses those same type of concerns with regard to the climate and pollution. So I think you are going to—supply and demand.

Senator SMITH. I agree with that. Thank you. I am out of time, but I appreciate that, and I think especially in this sector, in the clean energy sector, China is eating our lunch, and we are going to be in a subservient position on this if we do not get on the ball.

Thank you.

Senator BROWN. Senator Jones.

Senator JONES. Thank you, Ranking Member Brown, and thanks to the Chairman and you for having this really important hearing.

I want to go back and focus on fentanyl because it is such an important issue for my State in particular. You know, I started my career, after working here in the Senate, as an Assistant U.S. Attorney, and that was in the days when cocaine was just really beginning to hit. And we have seen waves and challenges with cocaine, with crack cocaine, with methamphetamines, and now the CDC says we are in kind of the third wave of the prescription opioid crisis with wave number one being heroin, wave number two

is synthetic opioids, and now we are in fentanyl. And we have seen in Alabama double-digit increases in opioid overdose deaths, and that starts with fentanyl.

To show you just to demonstrate what I am talking about here, two milligrams is essentially a lethal dose. This little white speck next to this penny represents a lethal dose of fentanyl. Recently, we had in Limestone County, Alabama, some 2.2 grams that were seized, 100 times this amount, and but it is still a very small amount. I mean, we are still talking 100 times will still fit on a penny. And the challenges for local law enforcement, that is the biggest concern I have, because it is an incredible—our U.S. Attorney in the Northern District of Alabama where I served during the Clinton administration, Jay Town, made the comment that there is not a one-off solution. There is not one area of law. Getting more drug dealers off the street is not going to impact it. We have to go to China. We have to use the State Department resources, Treasury Department resources, the full weight of the White House, and anything that the Justice Department can do. Clearly, this is a transnational crisis, and I hope you can address this, and maybe you do not have the experiences, but the unique challenges facing local law enforcement with such a deadly drug.

Can each of you, just for the record, briefly address what you believe to be the unique challenges that our local—you know, the cop on the street faces with this kind of challenge with fentanyl?

Mr. NEPHEW. Well, Senator, I would say my experience has been in the Federal Government level, so I do not have experience at a local law enforcement level. But what I will say is I do think that this is part of the reason why there needs to be a whole-of-Government approach to address this problem, why you do need to be able to identify illicit traffickers abroad, why you then need to link that intelligence to an active diplomatic campaign, with the threat of sanctions potentially there as well, to give penalties and a disincentive to continue with this trafficking, because as you noted, the size differential and the value of what they are able to transfer versus the costs and profit margins are substantial, and that is a major challenge when it comes to interfering with and denying access to the United States of these goods.

So to me, you absolutely have to deal with source issues. You have to deal with the diplomatic strategy, and you have to give some disincentives for China to look the other way with respect to this.

But, also, you need to be forward-looking because China is our problem today. There may one day be other suppliers, and some scholars on this have pointed to India, Nigeria, South Africa. So this is part of the reason why you need a very agile and adaptive strategy that is looking at all the various different threat factors.

Senator JONES. All right. And have you seen the bill that Senator Toomey and I have that puts fentanyl on the same par with cocaine and methamphetamine to try to stop this problem?

Mr. NEPHEW. Yes, Senator. Senator Toomey mentioned it earlier, and I think that makes a lot of sense.

Senator JONES. Great. One of the issues that we are also seeing now with this is the use of the post office. Again, you know, history tends to repeat itself. You track shipments, you do these things,

but this is another one. You know, now we are seeing purchases off the Dark Web. In Madison County, Alabama, 40 grams in a shipment. Forty grams of fentanyl was seized from one guy. What can we do to help the post office? What can we better do to try to stop the use of our United States postal system for this deadly problem?

Mr. NEPHEW. Yes, Senator, in researching for this testimony, I understand that there has already been legislation passed that would give additional resources to the Postal Service. I think at this point we need to see the regulations and the implementation of that to see how effective it will be. But, again, this is part of the reason why you have to address the supply concerns as well because there is always going to be a problem of how large the body of shipments are and how much the inspector is able to actually go through with it. You need to try and address the supply issues as well so you can head it off before it comes here.

Senator JONES. Great. Well, thank you all. Thank you for your testimony. I may have some additional questions for the record.

Thank you.

Senator BROWN. Senator Sinema.

Senator SINEMA. Well, thank you, Mr. Chairman, and thank you to our witnesses for being here today.

Too often Americans grapple with addiction in silence. In 2017, according to the Kaiser Foundation, 267 Arizonans died from overdosing on synthetic opiates like fentanyl. That is more than double the number of overdoses that were reported in Arizona in 2016, and it is nearly four times that which was reported in 2015. So it should not surprise us that fentanyl is now the leading cause of overdose deaths in the United States.

But the Americans who grapple with addiction are our brothers and sisters, and many of them also struggle with mental health issues. Others sought relief from chronic pain that sometimes accompanied a lifetime of hard and honest work, and many of these individuals wore the uniform and defended our freedom with dignity and honor. But when they returned home, the challenges of acclimating to civilian life and the wounds of war can open the door to self-medication and addiction.

So ending the epidemic requires more than just stopping illicit fentanyl. This crisis shows that the addiction is bigger than any one drug, and I want to ensure that all Arizonans have quality, affordable health care so they are equipped to fight addiction in all its forms.

Mr. Chairman, the health care system in Arizona known as AHCCCS is our State's Medicaid program, and it plays a pivotal role in ensuring that Arizonans get the treatment and support they need to overcome addiction. That is why when some proposed cutting Medicaid, our AHCCCS, and jeopardizing the drug addiction treatment it provides to thousands of Arizonans, I fought hard and voted no against that because Arizonans should not be forced to fight this battle alone. So we also have to combat drug trafficking and particularly the trafficking of fentanyl.

At our Committee's last hearing, I spoke about our southern border crisis and the millions of dollars of methamphetamine and fentanyl that have poured over the border from Mexico into Ari-

zona, almost all through our ports of entry. But Arizonans are seeing this, that just 2 weeks ago Border Patrol agents in Nogales and in Tucson seized 143 pounds of meth and 220 grams of fentanyl worth half a million dollars. So we need comprehensive solutions to the border crisis and to our Nation's opiate epidemic, which includes finding new ways to improve our sanction regimes and export control policies.

So, Mr. Nephew, my first question for you is this: In April, China announced it would ban all variants of fentanyl, but it is my understanding that China's ban does not include all the precursor chemicals used to make fentanyl and its analogs. So China still has the ability to send these raw chemicals to Mexico and elsewhere for production, and they can ship them into the U.S. So your testimony emphasized the importance of ensuring any new sanctions are considered in the context of our current sanctions regime and are targeted in scope and purpose.

As we consider additional sanctions in this space, what advice would you offer to Congress to ensure sanctions remain flexible enough to capture these precursor chemicals used to make fentanyl but targeted enough to accomplish what we are aiming to do?

Mr. NEPHEW. Thank you, Senator. I would say two things.

I think, first, this to me speaks to why just having the Kingpin Act and the sanctions that come along with it is not sufficient. We need to have more sanctions tools, and I think the FSA gives us a much more flexible sanctions approach that would allow us to target a broader range of companies and entities that are potentially involved in the trafficking of these goods, and especially to create disincentives for them to continue doing so if they have other legitimate business that potentially is at risk. And this to me speaks to the issue of precursors in particular. If they have got other chemical business interests, then to my mind putting those at risk as a result of U.S. sanctions threats potentially could be very effective way of addressing this.

But related to this, you need to also keep the Kingpin Act in place to deal with countries—or, rather, entities in countries that refuse to cooperate or entities that are fully committed to engaging in this because they are just illicit traffickers. That is their only business model, if you will.

And so I think having a variety of tools that are all embedded in a diplomatic approach that is comprehensive and whole of Government, to me that is the way in which you can address all the various different components.

Senator SINEMA. Thank you.

Mr. Kennedy, we have heard concerns that China's regulatory agencies may not have the capacity to enforce the new fentanyl ban, so what is your assessment of the Chinese Government's capacity to effectively enforce the ban? And what steps can Congress take to ensure that China keeps its promise?

Mr. KENNEDY. They may not have the capacity now, but if they decided it was a high priority, they could mobilize the capacity. They have done that on so many different issues when it has been shown to be in their self-interest or their diplomatic interest that they have moved the needle on things. So I think if this is a very high priority for the United States and our relationship with

China, we ought to explain what it is and how we can help them build capacity, but also give them foreign policy incentives to do so. They certainly could address it if they want to.

I would engage with Chinese authorities, public health figures in China, to increase communication. Right now the communication between the U.S. Executive branch and China is not smooth whatsoever because of the growing tensions in the relationship. But it may be that this Committee or Congress could be more of an honest broker than they—you know, usually it is the executive that has done that, but maybe the Senate could provide that kind of help.

Senator SINEMA. Thank you.

Thank you, Mr. Chairman.

Senator BROWN. Thank you.

I appreciate Senator Sinema's comments about Medicaid. This hearing has been about law enforcement—I mean, not so much law enforcement, but about exports from China and Mexico, especially China, and we have all talked about law enforcement and the important role of law enforcement. But her comments about Medicaid—I was in a treatment center in Cincinnati several months ago at a place called "Talbot House", and a gentleman, a middle-aged man, put his hand on his daughter's arm, and he said, "Without Medicaid, my daughter would be dead," and how important it is that as we do these issues and as we help law enforcement and partner with law enforcement, that we scale up treatment programs, and there is probably not a community in America that has had the funds and the resources to do that. So thank you, Senator Sinema, for bringing that up.

That concludes our questioning. For any Senators wishing to submit questions for the record, those questions are due 1 week from today, June 11th. As for the witnesses, we ask, if there are submitted questions, that you please respond as promptly as you can to those questions.

Thank you for being here today. The hearing is adjourned.

[Whereupon, at 11:47 a.m., the hearing was adjourned.]

[Prepared statements, responses to written questions, and additional material supplied for the record follow:]

PREPARED STATEMENT OF CHAIRMAN MIKE CRAPO

Today, June 4, marks the 30th anniversary of China's brutal Communist Government crackdown on unarmed, civilian protestors, in Tiananmen Square, dashing a pro-democracy movement's highest hope for reforms.

That image of a young man standing in front of a row of rolling tanks is an indelible reminder of the true character and intentions of a Government in China that today is pursuing Made in China 2025, the most ambitious, unorthodox industrial policy program in the history of the world.

The Made in 2025 program aims to shift China's economy into higher value sectors such as those associated with robotics, aerospace, and artificial intelligence, more generally.

In a very short span, Beijing has managed to transform itself from the perennial hope of being a cooperative trade partner to an all-out strategic competitor, in part, to confront China's industrial policy program, which, among other things, includes subsidies for its domestic companies developing advanced semiconductors, the bedrock of all things, today.

Worse still, China is one of the United States' largest trading partners and it is in part pursuing that policy through a concept known as "civil-military fusion," which is intended to provide the missing link between China's technological and military rise.

While the United States pursued policies aimed to integrate China into the global economic order, China persisted in predatory practices at home: to force American companies to disgorge their technologies; to subsidize its own firms domestically and their trade around the world; and otherwise throw various roadblocks in front of foreign firms.

Today's escalating trade and technology tensions can be seen as consequences of a Government that not only brutally rejected its own people's hopes for reform 30 years ago, but has since exploited the openness of a global economy, and embarked on its own brand of economic nationalism and technological supremacy.

This path, if unchecked, advantages not only Chinese firms, but can boost Chinese military strength at the same time.

More and more, U.S. national security grounds are called upon to confront threats to America's dominance in high technology manufacturing and other threats from China.

The work of the Banking Committee with its jurisdiction over banks, markets, export promotion, export controls, and reviews of foreign direct investment security and economic sanctions, sits at the intersection of U.S. national security, U.S. economic prosperity and the global economy.

Today, the Committee will focus on three threats from China.

The first two threats arise from emerging national security issues associated with foreign investment in the United States and the export of critical technologies, particularly in the semiconductor industry, which is a primary target for illicit acquisition.

Last year, the Committee successfully negotiated and the President signed into law The Foreign Investment Risk Review Modernization Act (FIRRMA) and the Export Control Reform Act (ECRA). Together, this bipartisan, bicameral legislation works to enhance the Federal Government's authorities to protect America against illicit foreign investments in, acquisitions of, and transfers of America's most sensitive technologies.

Today, the Committee will hear from a variety of perspectives on whether these new laws are sufficient to counter China's threats, or if other measures must be considered.

Of particular interest is the question of how we separate and protect U.S. cutting edge technology from the non-national security related trade that finances America's greatest innovative achievements.

The third threat we will focus on involves the supply of fentanyl to the United States, which is causing close to 38,000 American deaths a year, now.

The question is if a set of sanctions tools can be effectively leveraged to restrict the supply of illicit fentanyl into the United States.

PREPARED STATEMENT OF SENATOR SHERROD BROWN

Thank you, Mr. Chairman, for calling this important hearing to assess key questions before the Committee about our changing relationship with China, on this 30th anniversary of Tiananmen Square, as we remember those who fought for democracy and human rights as part of that movement.

Today we will focus on whether to provide the Administration with new sanctions tools to complement existing Foreign Narcotics Kingpin sanctions, targeting traffickers in China, Mexico, and elsewhere who are contributing to the rising tide of illicit opioids coming into the U.S., including powerful new forms of fentanyl.

Last month, China took the long overdue step of controlling the full range of fentanyl analogues. This should mean that all forms of synthetic drugs which look and act like fentanyl will be subject to China's drug control laws. I'm glad China's Government took that step. Now we have to make sure they implement and enforce it. As Ohio's steel industry knows, without strict enforcement, promises from China don't mean very much.

But we can't wait to see whether China enforces its laws. Fentanyl has become the leading cause of overdose deaths. On average, 14 Ohioans die every day due to an opioid overdose, and those Ohio families can't afford to wait and see whether China will enforce its rules this time.

A recent *Washington Post* study found that the Ohio Valley is suffering the most from the surge in overdose deaths due to synthetic opioids. I ask consent to include the *Post* article, entitled "Fighting Fentanyl", into today's record.

We can bolster Chinese efforts by taking steps of our own to target traffickers. Our bipartisan Fentanyl Sanctions Act led by Senator Schumer would give the Administration new sanctions tools to help stem the tide. And it would help provide intelligence and funding to keep these dangerous drugs out of Ohio communities.

We will also address today the range of challenges posed by China in export control, intellectual property theft, technology transfer, and certain foreign investments—including through China's massive Belt and Road Initiative, its Made in China 2025 initiative, and targeted collaborative investments in U.S. firms with critical technologies that China seeks to acquire.

We must respond forcefully when China's ambitious and sometimes illegal acquisition strategies are deployed against U.S. firms, raising critical national security or economic security questions here at home. This is what we did last year when we passed the Foreign Investment Risk Review Modernization Act—updating and expanding both the Committee on Foreign Investment in the United States, and export control laws.

Almost a year after enactment of these reforms, we'll hear testimony that some foreign investors continue trying to capture the intellectual property of leading edge U.S. technology companies for their home country's military uses, or worse, to disrupt U.S. supply chains.

Our current control systems attempt to prevent this type of technology transfer through multilateral and unilateral export controls. This system identifies dual-use products, technology, and software that may not be exported, or is strictly limited. Is this approach still sufficient, when coupled with new constraints on emerging and foundational technologies and other reforms contained in export control reforms enacted last year? Is the law being implemented as written?

China continues to use nontariff barriers to block foreign producers from entering its market. And Chinese State-owned enterprises, such as those in steel and other sectors, receive extensive subsidies that allow them to compete with no consideration of market forces. That makes it harder for U.S. companies and workers to compete—again, as our Ohio steel industry knows all too well.

I don't think CFIUS and its investment review process can or should bear the burden of trying to bring about a fair trading relationship with China. It has its hands full trying to police the national security threats we face

But as we know, much foreign investment in the U.S. falls outside of the scope of CFIUS, and we don't have a good way to review it to make sure it's in our economic interests. And it's not always easy to make the distinction between national security and economic security.

I have introduced legislation with Senator Grassley—the Foreign Investment Review Act—that would require the Secretary of Commerce to review certain foreign investments, particularly those made by State-owned-enterprises, to make sure they are in the long-term, strategic interests of American workers and American businesses.

Other issues in our Committee's jurisdiction also need attention. Chairman Crapo and I have joined with Senators Cornyn, Baldwin, and 40 other cosponsors on a bill to prohibit Federal funds from being used by transit agencies to purchase rail cars and buses manufactured by Chinese State-subsidized companies. Federal dollars should not support anticompetitive, heavily subsidized Chinese products that undermine American workers and threaten the future of U.S. automotive and rail manufacturing. The bill also addresses cybersecurity risks facing our Nation's transit systems.

Finally, our Committee must move quickly to provide a long-term reauthorization to the Export–Import Bank. Each year, China's export credit agencies provide more medium- and long-term investment support than the rest of the world's export credit agencies combined. American manufacturers need a reliable Export–Import Bank that is authorized for the long term to stay competitive as they pursue business abroad.

It is clear that on China there is still much work to do.

Thank you to our witnesses here today. I look forward to hearing your views.

PREPARED STATEMENT OF KEVIN WOLF

FORMER ASSISTANT SECRETARY OF COMMERCE FOR EXPORT ADMINISTRATION,
BUREAU OF INDUSTRY AND SECURITY, DEPARTMENT OF COMMERCE

JUNE 4, 2019

Chairman Crapo, Ranking Member Brown, and other Members of the Committee. Thank you for asking me to testify about and otherwise describe U.S. export controls pertaining to China. Although I am now a partner in the international trade group at Akin Gump Strauss Hauer and Feld LLP, the views I express today are my own. I am not advocating for or against any potential changes to legislation or regulations on behalf of another. Rather, as requested, I am providing you with my thoughts on and understanding of such issues regarding the applicable existing regulations and statutes. My views are influenced by my more than 25 years of work in the area, which includes my service as the Assistant Secretary of Commerce for Export Administration during the Obama administration.

The topic is a serious one. The United States never wants to be in a fair fight with an adversary. The appropriate, aggressively enforced, clearly written, and well-funded export and related controls are a critical part of maintaining that advantage. They are also a useful tool in helping to achieve U.S. foreign policy, which include human rights, objectives. I have never subscribed to the view that export controls should "balance" national security or foreign policy concerns with economic or trade concerns. National security and foreign policy concerns exist in their own right and are not to be traded off for something else in a particular transaction. The controls should, however, be tailored to specific, identifiable national security threats or foreign policy objectives to avoid collateral economic costs, unnecessary regulatory burdens, and misallocation of Federal resources. For the U.S. to be a global leader, our companies need to be successful in the global marketplace. Thus, excessive and over-broad controls—as a matter of law or perception—harm the U.S. industrial and technology base, which results in harm to our national security. Lax, out of date, or poorly enforced controls have the same effect. Thus, as a practitioner and a former policymaker in this area, I am pleased that you are holding this hearing and otherwise raising the priority of this complex topic.

With respect to China, the issues pertaining to what the dual-use export control rules and policies should be are the most complex and significant of all export control issues. This has been the case for decades. It is one of our largest trading partners while at the same time being a long-standing country of concern with respect to internal diversion of dual-use items for use in modernizing its military. On the other hand, as I recently described to the U.S.–China Economic Security Review Commission, decisions involving military items and commercial space-related items destined to China are relatively easy to analyze because of the strict statutory and regulatory embargoes pertaining to such exports and the clear, widely accepted national security and foreign policy reasons for them.

Deciding what the right national security controls should be over commercial items that are not specific to military applications with respect to China (or any other country) ultimately boils down to how one defines "national security." The traditional definition begins with national security experts regularly identifying the commodities, software, and technologies that could give an adversary a military or intelligence advantage or cause us to lose ours. The process also includes identifying the commercial items that are required for the development, production, or use of weapons of mass destruction, particularly missiles, chemical/biological weapons, and nuclear explosive devices. Then, experts in each technology area work backwards from the identified threat to describe the technical characteristics of commercial items necessary for the development, production, or use of such items. Regulators, in a well-established interagency process, then work to add the items to the regulatory control lists of the United States and its multilateral regime allies. This work is done in coordination with industry—through both advisory committees and notice and comment processes—to avoid unintended impacts and to ensure clarity. Affected

entities in the U.S. and abroad (because U.S. controls are extraterritorial) then adjust their internal compliance programs so that they know when authorization is needed to export such items. When a company wants to ship a listed item (or release a controlled technology to a foreign person), then regulators review its request to do so in the form of a license application. The regulators, as part of a well-tested interagency process, determine whether the export or release would be consistent with our national security and foreign policy objectives. That is, they assess, with the use of intelligence community resources as necessary, whether the item is destined for an acceptable end use or end user, or whether there is a risk that it would be diverted to an unacceptable end use, end user, or destination. They respond accordingly in the form of a license, a denial, or a license with conditions. Enforcement officials investigate and punish violations of the rules and to ensure or motivate compliance. The process must constantly evolve because technologies and threats are constantly evolving.

Another definition of "national security" includes trade policy considerations and sees China's economic ambitions in a wide variety of economic sectors, particularly those described in its Made in China 2025 plan, as a per se and long-term threat to the economic health of the United States. Technologies that would support the development of such efforts should therefore be controlled, even if they cannot be tied to a specific military or intelligence application. Export controls should be used to have an impact on the economic viability of foreign companies that compete with U.S. companies. Demand in China for the technologies grows more quickly than regulations and multilateral controls can be updated, meaning that unilateral controls should be used more often. These views, combined with the general and State-supported effort within China to find military applications for dual-use technologies, warrant broader than the traditional considerations over the types of items that should be controlled for export to China and what the licensing policies should be.

I am not here today to challenge or pick a fight over anyone's particular world view or perspective on how global economics work. Others are much more qualified than me to explain the benefits and costs of industrial policy, comparative advantage, and barriers to trade. I am not denying the extremely serious issues pertaining to Chinese State-supported economic espionage, intellectual property theft, diversion of civil items for military applications, and forced technology transfer. I am also not denying that China's civil-military fusion policies, among other things, make many end-use commitments questionable and force more aggressive review of applications to export controlled items to China. I agree that it is massively hard for regulations to keep pace with the evolution of technology and to get consensus with our allies with respect to matters involving China. What I can do, however, is to describe what, based on decades of experience, export controls can and cannot accomplish regardless of one's world view on these issues or other China-specific concerns. In sum, my main general point today is that the application of export controls in ways that are unclear, unpredictable, or unilateral generally ends up harming the very interests they were designed to protect.

I believe that a mature and sophisticated understanding of what export controls can and should accomplish is codified in the recently passed Export Control Reform Act of 2018 (ECRA), which I will also describe. It is an excellent piece of bipartisan legislation that probably can be the authority to address just about any problem that export controls can address, including those involving China. It is a modern, coherent, and permanent authorization for not only list-based controls (i.e., over the export of identified items), but also end-user-based, and end-use-based controls as part of a three-legged stool approach to achieving national security and foreign policy objectives. Congratulations to this Committee, its staff, its House counterparts, and the Administration in getting it through along with related improvements to the laws governing foreign direct investment.

ECRA is, however, quite new. Indeed, the regulators have not even finished the process for drafting implementing regulations, such as those with respect to possible new controls on exports to China (section 4818) or on emerging and foundational technologies that are not now controlled but should be given China-related concerns (section 4817). Thus, although it is not my job to tell members of Congress how to do theirs, my suggestion and request for the greater good would be for Congress to provide substantially more financial and other support for and oversight of the agency responsible for shepherding all this activity, the Commerce Department's Bureau of Industry and Security (BIS). It is a terrific little agency with great people that punches way above its weight. Never before though have the issues over which it is responsible been more complex, fast-moving, and consequential—particularly with respect to issues involving China. It, thus, needs significantly more resources than it has now to do properly all the jobs given to it by ECRA, other laws, new Executive Orders, and the Administration. Also, BIS has not been for decades sub-

ject to as many statutory standards for what it should and should not do with respect to export controls as is now the case with ECRA. Thus, a vital requirement for successful export control policy is for this Committee and the House Foreign Affairs Committee to regularly ensure that ECRA is being faithfully implemented.

Export Controls and the Primary Agencies That Administer Them

Before I dive into China-specific issues, it is important to level set for everyone that export controls are the rules that govern

1. the export, reexport, and (in-country) transfer
2. by U.S. and foreign persons
3. of commodities, technology, software, and, in some cases, services
4. to destinations, end users, and end uses
5. to accomplish various national security and foreign policy objectives, including human rights objectives.

This one sentence summary is deceptively simple. As much as this and previous Administrations try to make the rules easy to understand and apply, they are inherently complex from an industry perspective. From the policymakers' perspective, each export control decision require multivariate policy and legal analyses involving statutes, regulations, international commitments, intelligence and law enforcement equities, intelligence community threat assessments, industrial base implications, license administration, budgets, available technical expertise, corporate compliance program considerations, foreign availability, interagency dynamics, how global production and supply chains work, congressional concerns, multilateral and bilateral foreign policy issues, and, in the end, largely subjective assessments of what constitutes a national security or a foreign policy concern with imperfect information that can be addressed through regulating the movement of commodities, technology, software, and some types of activities.

The technologies are often evolving and wide ranging, including everything from information about bird flu to machine tools to items that are being invented today that most do not understand. Specific commodities, such as certain types of microwave monolithic integrated circuits, that are critical to advanced military radar are equally critical to modern telecommunications applications. Technologies that were once sensitive become ubiquitous, such as the GPS technology in our cell phones. Generally nonsensitive commercial technologies can, however, be applied to new uses or by end users of concern in ways that are harmful to our interests. Most extraordinarily advanced technologies, however, represent no threat whatsoever. Many simple, old technologies, such as those unique to standard military equipment, warrant controls for most of the world. Concerns about destinations, end users, and end uses vary widely and change constantly. The mere existence of a control, and the internal obligations that go with it, can sometimes do more harm than good even if the regulators would generally approve transactions under its authority.

The Export Control Reform Act of 2018

I described the U.S. export control system in more detail to the House Foreign Affairs Committee during its consideration of what eventually became ECRA. I incorporate those comments by reference. ECRA is the new authority for the Export Administration Regulations (EAR), which BIS administers. Although BIS leads the dual-use export control system, ECRA, Executive Orders, and regulations require significant interagency cooperation on licensing policies and decisions, primarily with the Defense Department on national security issues and the State Department on foreign policy issues.

Until ECRA, the statutory authority for the EAR—the Export Administration Act of 1979—had lapsed decades ago. The EAR were kept in effect through a series of Executive Orders and emergency declarations issued under the authority of the International Emergency Economic Powers Act. Thus, for decades, Congress had not expressed a coherent vision for what export controls should be designed to accomplish. Although there were certainly basic good Government reasons motivating ECRA's introduction and passage, we basically have bipartisan concerns regarding Chinese investment strategies and efforts to acquire dual-use technologies for use in modernizing its military to thank for bringing Congress together on this issue.

As you know, in late 2017 and the first half of 2018, there was a nonpartisan effort to reform and expand the jurisdictional authority of the Committee on Foreign Investment in the United States (CFIUS), largely in response to national security concerns pertaining to investments in the United States from China. One of provisions in the Foreign Investment Risk Review and Modernization Act (FIRRMA) as introduced would have given CFIUS jurisdiction over some types of outbound invest-

ments by U.S. critical technology companies in foreign countries in order to regulate the transfer of currently uncontrolled emerging and foundational technologies that, with more analysis, warranted controls. I and many others, including many on this Committee, said that such concerns were warranted, but that addressing them through CFIUS both under-controlled and over-controlled. It under-controlled because the Government's review would only be triggered with a covered transaction. If the U.S. Government should regulate the transfer to China or elsewhere a newly identified sensitive technology for national security reasons then it should regulate the transfer of such technology regardless of the nature of the underlying investment. I and many others pointed out that the U.S. Government already had a regulatory system and an interagency process in place to identify and control technologies of concern—the dual-use export control system BIS administers.

That policy debate is what led to ECRA's being the legislative vehicle for addressing the identification and control over transfers to countries of concern such as China of emerging and foundational technologies. This then led to an opportunity for Congress to finally implement permanent statutory authority for the EAR, to articulate a modern vision for export controls, enhance export control enforcement authorities, and to codify in law decades of BIS practice, policies, and regulatory reforms—including the Obama administration's Export Control Reform accomplishments. The rules regarding foreign investment in the United States and export controls are now connected and overlapping to address, among other things, policy concerns over the release to foreign persons in the U.S. and abroad of the technologies to be identified. In sum, CFIUS uses its authority over inbound investment to address concerns, inter alia, regarding transfers of potentially sensitive uncontrolled technologies to foreign persons. The EAR focus on outbound activities (and releases to foreign persons in the United States of controlled technology) to address technology transfer concerns regarding identified technologies. Emerging and foundational technologies added to the EAR's list of controlled items—the Commerce Control List (CCL)—will simultaneously expand CFIUS's jurisdiction over foreign investments in the U.S. involving such technologies.

As I and many others could describe separately, the Treasury Department is leading the effort to draft the regulations to implement FIRRMA, i.e., the new rules expanding CFIUS's authority to regulate foreign investment in the United States that might create unresolved national security issues. From conferences, I understand Treasury plans to publish proposed rules later this year. Because Commerce has not yet published proposed rules implementing ECRA provisions (such as those pertaining to controls over emerging or foundational technologies) and Treasury has not published new rules implementing FIRRMA provisions (such as those pertaining to noncontrolling investments in critical infrastructure), I cannot comment on them. With respect to ECRA, I can, however, provide the context for the issues to help you and others evaluate the proposed rules once they are published.

Emerging and Foundational Technologies—Identification and Control Efforts Motivated Largely by Concerns Pertaining to China

Understanding that the bar for the imposition of unilateral controls should be high, Congress set out in ECRA clear statutory standards governing the effort to identify and control emerging and foundational technologies—again, largely in response to concerns raised by efforts by Chinese companies to acquire such technologies and use them in ways contrary to U.S. national security interests. Specifically, ECRA section 4817(a) requires the Administration to conduct an interagency effort that reaches out to all available sources of information—including academia, industry, and the intelligence community—to identify emerging and foundational technologies that "are essential to the national security of the United States" and that are not now subject to a multilateral control in the EAR's CCL or described on one of the other lists of technologies the U.S. controls for export.[1] Once such technologies are identified, ECRA requires BIS to get industry input on the controls in response to a proposed rule. Such comments must then be considered, consistent with the standards in ECRA, before BIS imposes any final controls on the newly identified technologies.

Although ECRA does not define "national security," a request for comment BIS published in November 2018 described the national security concerns to be addressed by the effort, i.e., to identify now uncontrolled items that "have potential

[1] Even before ECRA, BIS had the authority to impose unilateral controls over technologies that warranted control. We created a process for doing so in 2012—the "0y521" process. ECRA's emerging and foundational technology provisions are largely based on this process. The difference, of course, is that ECRA section 4817 expresses the will of Congress and made the effort mandatory as opposed to discretionary.

conventional weapons, intelligence collection, weapons of mass destruction, or terrorist applications, or [that] could provide the United States with a qualitative military or intelligence advantage."[2] These examples track ECRA's definition of a "dual-use" item, which is an item that has "civilian applications and military, terrorism, weapons of mass destruction, or law-enforcement-related applications." Given the broad controls that already exist in the EAR over items specially designed for military applications that are not controlled by the International Traffic in Arms Regulations, and all technology at any stage required for their development or production, I am not certain what now-uncontrolled items meet this definition. That is, however, what the ECRA section 4817 process is designed to discover in a regular-order, transparent fashion.

In deciding whether to identify such a technology as "emerging" or "foundational" and impose unilateral controls on its export, reexport, and in-country transfer, ECRA section 4817(a)(2)(B) requires the Administration to take into account the:

1. development of the technologies in foreign countries;
2. effect export controls imposed pursuant to this section may have on the development of such technologies in the United States; and
3. effectiveness of export controls imposed pursuant to this section on limiting the proliferation of emerging or foundational technologies to foreign countries.

BIS has recently implemented multilateral controls on emerging technologies that are essential the national security of the United States. (The new controls pertain to discrete microwave transistors, software operations, post-quantum cryptography, underwater transducers, and air-launch platforms.) Licenses are required to export such items to China and most other countries. BIS officials have said publicly that it and its export control agency colleagues continue work on identifying additional such technologies for consideration as either unilateral or multilateral controls. This makes sense because ECRA requires the effort to be an "on-going" one. That is, contrary to many comments I have heard, ECRA does not contemplate a one-time publication of new unilateral controls on emerging and foundational technologies.

The technology areas BIS announced that it is studying dovetail with those China announced in its Made in China 2025 plan as those of strategic significance for the country. According to BIS, they include:

- "Biotechnology"
- "Artificial intelligence (AI) and machine learning technology"
- "Position, Navigation, and Timing (PNT) technology"
- "Microprocessor technology"
- "Advanced computing technology"
- "Data analytics technology"
- "Quantum information and sensing technology"
- "Logistics technology"
- "Additive manufacturing (e.g., 3D printing)"
- "Robotics"
- "Brain-computer interfaces"
- "Hypersonics"
- "Advanced Materials"
- "Advanced surveillance technologies"

For each technology identified in a proposed rule to be controlled as "emerging" or "foundational," ECRA essentially imposes on BIS a burden of justifying why the proposed control meets several statutory standards. Thus, for example, ECRA essentially requires BIS to demonstrate:

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[2] BIS stated in its notice that it is not attempting to "expand jurisdiction over technologies that are not subject to the EAR." EAR section 734.3(b)(3) states that the following types of information are not "subject to the EAR," regardless of their content: (i) "published" information; (ii) information that arises during, or results from, "fundamental research;" (iii) information released by instruction in academic institutions; (iv) information in patents and published patent applications; (v) information that is a nonproprietary system description; and (vi) certain types of telemetry. Each of these elements of the regulatory exclusion is further defined in this and related EAR provisions. BIS presumably made this point to allay concerns by some, particularly in the academic and research communities, that BIS's effort to identify and control emerging and foundational technologies might somehow affect the long-standing uncontrolled status of published information and fundamental research.

1. Why the technology proposed to be controlled is "essential" to U.S. national security;
2. What the specific weapons-, military-, or intelligence-related application the control is designed to address that is not now being addressed by a control;
3. Why the unilateral control would not harm domestic research in the technology;
4. Why the rule would be effective at stemming the proliferation of the identified technology to countries of concern such as China (taking into account any foreign availability of the same technology); and
5. The results of BIS's full consideration of the impact on the U.S. economy that would result from the unilateral control.

Without such information, industry and this Committee would not be able to provide useful comments or oversight consistent with the standards and goals of ECRA.

If BIS imposes controls on such technologies, or subsets thereof, ECRA requires the Administration to work to get a multilateral regime to agree to the same control so that the United States is not alone in the control. This effectively means that any proposed control should be of a type that is consistent with, and would likely be accepted by, the relevant multilateral regime. Proposing a control over an item inconsistent with what a regime would accept would defeat the point of this ECRA provision and the high bar ECRA places on the use of unilateral controls for emerging or foundational technologies. In any event, as evidenced by industry comments, such multilateral efforts are vital to ensuring that the controls are effective and that U.S. companies are not put at an unfair competitive disadvantage relative to its competitors in allied countries.

Industry comments on the process were due on January 10, 2019. They seem to be largely concerned that unilateral controls on commercial technology available outside the United States would harm U.S. industry. That is, such controls would merely drive demand for such commercial technologies to non-U.S. countries. This would harm the ability for companies in the United States to invest in the R&D necessary to advance such technologies while enhancing the ability of companies outside the United States to do so. Another concern was that unilateral controls over such technologies would be ineffective because, given the international development of the broad categories of technologies identified, they would not deprive China of the ability to develop or acquire the same capability from elsewhere. Many commenters, therefore, asked BIS not to adopt any new controls on such technologies until and unless they were agreed to by one of the relevant multilateral regimes.

Industry also largely did not know how to respond to BIS's requests for comments regarding what industry thought were now uncontrolled technologies essential the national security of the United States. Industry essentially offered information on foreign availability, asked BIS to abide by the ECRA standards, and asked to be included in the drafting efforts to ensure clarity and precision. Many comments, however, said that it was the Government's job to identify the national security threats that were not now being addressed but should be, not industry's. BIS has not responded to the comments, probably because it is still working through the issues with its interagency colleagues. It also has not yet issued a notice asking for similar industry comments on which "foundational" technologies should and should not be controlled.

Going back to my polite request for more resources for BIS, this effort is vastly more difficult and resource-intensive than anything we did during the Export Control Reform effort. It was relatively easy to comprehend technology to develop a military aircraft's landing gear (and hundreds of thousands of other similar components), for example, and change its jurisdictional status to enhance military interoperability with our NATO-plus allies. It is radically harder to comprehend technology related to quantum computing, for example—and even harder to sort out the subsets thereof essential to U.S. national security that are even capable of being controlled given its cross-border development. It was also much easier for us to assess the economic impacts of changing the jurisdictional status of less sensitive military items than it will be for BIS to gather the ECRA-required information from industry to assess the economic impact of a unilateral control, even a short-term unilateral control that might later be submitted to a multilateral regime. Such assessments must take into account not only the loss of actual sales but also the long-term impact on foreign customers and whether they will consider U.S. companies to be unreliable suppliers and thus move their business to non-U.S. manufacturers.

If the Trump and subsequent Administrations strictly follow the ECRA standards, then any new controls will only be over a small list of nonmature specific technologies that are essentially unique to the United States, not currently export-con-

trolled, and truly essential to the national security (and thus should have been controlled under any Administration even without the section 4817 effort). I do not know what will happen with respect the first group of proposed new controls under ECRA, but I do know that industry in potentially affected industries is extremely interested in whether their commercial technologies will become subject to unilateral controls or a tool of trade policy. Companies are or will be making decisions on whether to invest or not invest in the United States based upon a belief or fear, rational or otherwise, that technologies in various commercial sectors will or will not be able to be shared, jointly developed, and sold.

ECRA States That Export Controls Exist To Accomplish National Security and Foreign Policy Objectives

Industry's concern, at least in my experience, that export controls not become a tool of trade policy is echoed by ECRA's statement of policy for why U.S. export controls exist. Specifically, section 4811(1) states that the United States should "use export controls only after full consideration of the impact on the economy of the United States and only to the extent necessary—(A) to restrict the export of items which would make a significant contribution to the military potential of any other country or combination of countries which would prove detrimental to the national security of the United States; and (B) to restrict the export of items if necessary to further significantly the foreign policy of the United States or to fulfill its declared international obligations."

ECRA's second statement of policy for why U.S. export controls exist is additionally limited in scope to addressing specific, tailored, identifiable national security and foreign policy objectives that do not include trade policy concerns.

> The national security and foreign policy of the United States require that the export, reexport, and in-country transfer of items, and specific activities of United States persons, wherever located, be controlled for the following purposes:
>
> A. To control the release of items for use in—
>
> 1. The proliferation of weapons of mass destruction or of conventional weapons;
> 2. The acquisition of destabilizing numbers or types of conventional weapons;
> 3. Acts of terrorism;
> 4. Military programs that could pose a threat to the security of the United States or its allies; or
> 5. Activities undertaken specifically to cause significant interference with or disruption of critical infrastructure.
>
> B. To preserve the qualitative military superiority of the United States.
>
> C. To strengthen the United States defense industrial base.
>
> D. To carry out the foreign policy of the United States, including the protection of human rights and the promotion of democracy.
>
> E. To carry out obligations and commitments under international agreements and arrangements, including multilateral export control regimes.
>
> F. To facilitate military interoperability between the United States and its North Atlantic Treaty Organization (NATO) and other close allies.
>
> G. To ensure national security controls are tailored to focus on those core technologies and other items that are capable of being used to pose a serious national security threat to the United States."

Thus, with respect to any new proposed control, ECRA effectively requires BIS to assess and identify to this Committee and the public what the impact on U.S. industry would be as a result of a new control; how it furthers one of the listed objectives; and how it is "tailored" to "focus" on "core" technologies that pose a specific and "serious" national security threat. Nothing about these standards changes because the destination of an item would be China or another country.

Although ECRA does not require specific national security concerns to be compromised to achieve economic objectives, it does state in paragraph 3 of its policy statement that the "national security of the United States requires that the United States maintain its leadership in the science, technology, engineering, and manufacturing sectors, including foundational technology that is essential to innovation. Such leadership requires that United States persons are competitive in global markets. The impact of the implementation of [ECRA] on such leadership and competitiveness must be evaluated on an ongoing basis and applied in imposing controls

under [ECRA] to avoid negatively affecting such leadership." Of course, Government is the one responsible for making national security determinations, but industry is generally in a better position to assess how or whether a specific export control would negatively affect its global leadership in an area. Thus, their views in response to this statutory requirement of an ongoing evaluation of the impact of export controls should be solicited and given great weight—again, understanding that the Government must make the final call on what is in the national security or foreign policy interests of the United States.

This is one area where issues involving China-specific export controls become massively complex and sometimes counterintuitive. For many U.S. industries, China is one of the largest customers. The companies use the income from such sales to benign end uses and end users to fund their R&D efforts in the United States to advance the next generation of their products. This allows them to remain economically competitive internationally, which thus enhances the U.S. industrial base. Without such sales, the income will go to their competitors outside the United States, which results in companies in the United States becoming less economically competitive relative to foreign competitors and indigenous development in China. This is why I am a firm believer in ECRA's requirement that controls be tailored to specific, identifiable national security threats so that a loss of trade in less sensitive items where risk of diversion is low does not end up harming the U.S. industrial base, which thus harms our national security in more fundamental ways.

ECRA Strongly Favors Multilateral Controls Over Unilateral Controls

As discussed earlier, a major concern of industry in response to BIS's request for information about emerging technologies is that BIS would impose unilateral controls—i.e., those that only the United States imposes. Congress had the same general concern when it wrote in section 4811(5) that "[e]xport controls should be coordinated with the multilateral export control regimes. Export controls that are multilateral are most effective, and should be tailored to focus on those core technologies and other items that are capable of being used to pose a serious national security threat to the United States and its allies." ECRA subsection (6) goes on to state that "[e]xport controls applied unilaterally to items widely available from foreign sources generally are less effective in preventing end-users from acquiring those items. Application of unilateral export controls should be limited for purposes of protecting specific United States national security and foreign policy interests." Thus, I am not saying that ECRA prohibits unilateral controls, only that they should be rare and narrowly tailored to address specific national security or foreign policy issues, and imposed consistent with the ECRA standards described earlier.

I realize that one of the motives for the outbound investment provision of FIRRMA as introduced was that the multilateral control process is slow. It requires consensus among between 30 and 40 or so regime partners with many different types of industries and local concerns. Most of the allies do not have the same concerns with respect to China that the United States does. There are language barriers and other agendas that get in the way. Other countries' enforcement systems for violations are not as robust as ours. I get that. I dealt with it regularly. Process is hard. Short-cut alternatives of easy feel-good unilateral controls, except in extraordinarily narrow and specific circumstances, however, will always end up doing more harm than good for the very industry or technology the control is designed to protect. That is the lesson learned from decades of export control efforts and is true regardless of one's view of global economics or definition of national security. The work and the investments (and thus U.S. jobs) will simply be driven off-shore to allied countries without such controls. Foreign buyers will design-out U.S.-origin content because of the unilateral regulatory burdens that go with it. It's like squeezing a handful of sand too hard; eventually you have none. So, if the multilateral process is too slow, come with other ideas with close allies to speed it up, such as by working with smaller groups of truly interested countries. If they do not have the same concerns regarding China, provide the evidence to convince them. If their enforcement systems are lax, help them build capacity. All such tasks require massive additional funding for BIS and the other export control agencies to implement properly.

China-Specific Licensing Policies in ECRA and the EAR

ECRA did not change any policies regarding exports to China. Section 4818, however, required a review of the licensing requirements pertaining to China and other countries subject to U.S. arms embargoes. Section 4818(b) required the results of the review to be implemented by May 10, 2019. I do not know the results of the effort. I know that industry is curious about what the changes will be though. I am not saying that any particular new control is or is not warranted. Rather, I am just re-

porting that many are wondering what the impact on their businesses will be and how BIS will justify any new controls based on the ECRA standards described above.

ECRA requires that licensing requirements be imposed on exports of emerging and foundational technologies if destined to China or other countries subject to arms embargoes. ECRA leaves to BIS the decision to impose licensing requirements involving other countries. Also, unless BIS changes a core element of the EAR, these licensing requirements will also apply to "deemed exports," i.e., releases of technology in the United States to nationals of countries that have a license requirement, such as China.

In thinking about possible changes in licensing policy with respect to China, it is important to remember that almost all multilaterally controlled items already require a license for export to China and the Executive Branch has wide latitude in deciding whether and when to approve, condition, or deny such licenses. BIS does not make such decisions alone, by the way. They are made in coordination with its colleagues in the departments of Defense, State, and Energy. If there is a disagreement among the agencies, there are formal appeal procedures that have, in the main, worked well for decades. Reports of Defense or State officials being routinely "overruled" by Commerce officials in final determinations during such procedures are untrue.

The following are additional already-existing China-specific export controls and licensing policies in the EAR. BIS has the authority to impose individual licensing requirements on the export of specific types of otherwise uncontrolled items in a transaction merely by informing the exporter that a national security concern exists with respect to the transaction. The EAR contain absolute and complete embargoes on the export of military and commercial space-related items to China, directly or indirectly. The EAR contain "zero de minimis" rules with respect to foreign-made military items, of any significance, and commercial space-related items. This essentially means that a foreign-made item containing any amount of U.S.-origin content specially designed for a military or space-related item requires a license for export from outside the United States, which will be presumptively denied. Wholly foreign-origin items controlled for national security reasons that are the direct product of U.S.-origin technology controlled for national security reasons also require a license from BIS to export to China and other countries of concern. BIS has a process for conducting preshipment checks and postshipment verifications with respect to exports to China and other countries. If the foreign companies do not cooperate, BIS has a process for exerting leverage over the foreign companies to cooperate, which is the Unverified List.

China-Specific Controls Based on End Users

As I mentioned earlier, the EAR can achieve their national security and foreign policy objectives through controls over lists of identified items, specific end-users, or specific end-uses. It is not a one-size-fits all regulation. The EAR essentially have three end-user-based tools, which have often been used against entities in China and other countries. They are (i) the Unverified List (to impose obligations on exports to determine the bona fides of a foreign entity or to allow for an end use check), (ii) the Denied Persons List (to impose punishment for those that have violated the EAR); and (iii) the Entity List. The Entity List is a hot topic these days. It has, however, been a tool for BIS to use for decades. It is just getting much more attention because of the size and scale of the recent listings of Huawei and affiliated entities.

The list has hundreds of entities on it, many of which were added by me in coordination with my interagency colleagues. Obviously, as the one who added ZTE to the Entity List in March of 2016, I believe that it can be an effective tool for accomplishing national security objectives and supporting law enforcement efforts by motivating changes in the behavior of foreign parties engaged in acts contrary to our national security or foreign policy interests—if there is a plan for what is to be achieved with the listing. Indeed, the standard in the EAR for when an entity is to be removed from the list is "if it is no longer engaged in [such activities] and is unlikely to engage in such activities in the future."

Being added to the Entity List is thus not an assessment of a civil or criminal penalty against the listed entity. The burden of proof for listing is lower than even that for a standard civil penalty. The EAR requires only that there be a "reasonable cause to believe, based on specific and articulable facts," that a foreign entity has been involved, is involved in, or poses a significant risk of being or becoming involved in, "activities that are contrary to the national security or foreign policy interests of the United States." Neither ECRA nor the EAR define or limit what constitutes a "national security" or "foreign policy" interest with respect to the Entity

List. The EAR contains an "illustrative list" of "examples" of such activities, such as supporting persons engaged in acts of terror; enhancing the military capability of State sponsor of terrorism; transferring, developing, servicing, repairing, or producing weapons; preventing BIS from conducting an end-use check; and posing a risk of violating the EAR, such by transferring items to proscribed destinations, end uses, and end users. The decision, however, is up to whoever is in charge and the interagency clearance process as described in the EAR.

My view, based on the structure of the EAR and my experience, is that the Entity List tool should be used to change the behavior of foreign entities and not just as a low burden-of-proof tool of punishment. Otherwise, the risk of its being over-used, and thus provoking uncertainty about which entities it might be used against, provokes concerns by foreign buyers that U.S. exporters are not reliable and predictable suppliers. Remember, in international trade, perception is as important as reality and must be managed accordingly. With these comments, I am not challenging any of the recent Entity List actions or saying that a foreign company can be too big to list. Also, I, of course, no longer have access to the same nonpublic information my successors at BIS have, thus making it hard for me to judge many issues. Rather, I am reporting that, given the recent notoriety of the tool, it is having an impact on otherwise authorized trade with China involving unaffiliated and benign end uses and end users. This effect warrants study so that the mere existence of the otherwise effective tool does not end up doing more harm than good for U.S. industry.

Of course, if a foreign entity has violated the EAR, then it should absolutely be charged and punished consistent with the standards, procedures, and due process set out in the EAR and the relevant criminal code provisions. Moreover, I advocate for more enforcement resources for BIS's Office of Export Enforcement (OEE). OEE is unique among law enforcement agencies in that it is dedicated solely to investigating and assisting in the prosecution of export control cases. Investigating exports and other activities involving China has always been among its top priorities given the diversion risk concerns described earlier. I know that advocacy for more enforcement resources may seem to be a counterintuitive suggestion from someone now in industry, but robust enforcement helps keep the playing field level for those companies that do the hard work to establish procedures to ensure compliance with the controls.

The EAR prohibit exports of a list of otherwise uncontrolled items to Russia or Venezuela if for a "military end user." Such a "military end user" control with respect to China was not adopted during the Bush administration because, as a I recall, of the difficulty in identifying such end users when they are engaged in purely civilian activities, such as running hospitals and airports. I, too, was not able to come up with a clear definition of the term that exporters could comply with, but suspect BIS is now working on the issue given the requirements of ECRA to review China licensing policies.

China-Specific Controls on End Uses

The EAR, however, contain a China military end use rule. In essence, it requires an exporter, reexporter, or transferor to apply for a license when it knows that an item on a list of 32 types of items that do not ordinarily require a license for export to China are for a military end use in China. Such items include civilian aircraft engines, navigation systems, certain composite materials, and telecommunications equipment. Applications for such exports will be presumptively denied. BIS also has the authority to inform an exporter that there is an unacceptable risk that an item will be diverted for a military end use in China and that, as a result, the item may not be shipped without a license.

ECRA permits other end use controls. This makes sense because, as previous technology control identification efforts have demonstrated, detailed technical descriptions of specific new technologies for inclusion on control lists can sometimes end up doing more harm than good. If, for example, a technology is the same as that which is used to commit a bad act as is used to defend against the bad act, then a list-based control and all the regulatory complexity that goes with it will harm the defenders far more than the attackers. The solution for when list-based controls would be ineffective, or would do more harm than good, is to focus on the end uses of concern. When someone in Government or civil society identifies concerns with such widely available items, the concern is generally more about how they are being used and who is using them than something inherently threatening in the commodity, software, or technology.

Although not exclusive to China, the EAR contain a series of controls on exports, reexports, and transfers related to nuclear, missile, and chemical/biological end uses. As referenced in ECRA and as implemented in EAR section 744.6, the EAR

also already control a range of services performed by U.S. persons if with respect to missiles, nuclear explosive devices, or chemical/biological weapons—regardless of whether the items involved in the service are subject to the jurisdiction of the EAR. Although there are no China-specific end-use controls in the EAR or ECRA, ECRA section 4812(a)(2)(F) requires the President to "control the activities of United States persons, wherever located, relating to specific . . . foreign military intelligence services." Congress presumably added this requirement to narrow a gap between the ITAR's controls on defense services and services that do not involve defense articles but still warrant control for national security reasons. BIS has not yet implemented this control in the EAR. When it does, the addition may address some of the China-specific policy concerns I am aware of. I would thus encourage the Committee to study and track the provision's implementation. When I considered implementing a similar idea in the EAR, I was unable to develop a definition of foreign intelligence services that accomplished the policy objectives of the control and that also would be understandable to those who would need to comply with it.

Hong Kong

The United States–Hong Kong Policy Act of 1992 effectively requires the U.S. Government to treat Hong Kong and mainland China as two separate destinations for export control purposes. In addition, section 103(8) of the Act states that the "United States should continue to support access by Hong Kong to sensitive technologies controlled under [the then existing multilateral export control regime that is the predecessor to the Wassenaar Arrangement] for so long as the United States is satisfied that such technologies are protected from improper use or export." Because the United States has not made a determination to the contrary, the statutory and regulatory prohibitions pertaining to the export and reexport of controlled items subject to U.S. jurisdiction that are applicable to mainland China do not apply if the destination is Hong Kong. The export control regulations, however, still require licenses to export and reexport controlled items to Hong Kong. Applications for such exports and reexports are reviewed by U.S. Government export control authorities to determine, for example, whether Hong Kong is indeed the ultimate destination and whether the export or reexport otherwise presents any national security or foreign policy concerns.

I was asked to comment on whether items subject to U.S. export controls are being illegally exported out of Hong Kong to mainland China or other countries of concern. I left the Government on January 20, 2017, and thus no longer have access to such information, whether positive or negative. I can, however, say that on January 19, 2017, a rule that I signed expressing concerns about the issue remains in effect. The rule imposes additional support document requirements on exports and reexports to Hong Kong. In essence, the rule leveraged the EAR to effectively compel compliance with Hong Kong export and import permit requirements by requiring proof of compliance with Hong Kong law as a support document necessary for shipping under an EAR license or license exception. As stated in the preamble, BIS took "this action to provide greater assurance that U.S.-origin items that are subject to multilateral control regimes . . . will be properly authorized by the United States to the final destination [such as mainland China], even when those items first pass through Hong Kong." My thought at the time was that if we had regular, robust assurances and intelligence that diversions of U.S.-origin items were not occurring, then the additional requirements would remain in effect as is or be removed. If not, then the stricter licensing policies, including policies of presumptive denials, would need to be imposed. I would encourage you to ask this question of current BIS officials.

ECRA Authorizes the Tools in the EAR To Be Used To Further U.S. Foreign Policy, Including Human Rights, Objectives

Most of my comments pertain to national security issues. ECRA, however, specifically authorizes the EAR to be used as a tool to "carry out the foreign policy of the United States, including the protection of human rights and the promotion of democracy." The EAR also contains an extensive list of foreign policy controls. Items controlled under such policies include crime control and detection equipment, restraints, stun guns, instruments of torture, equipment for executions, and shotguns. Following the 1989 military assault on demonstrators by the Chinese Government in Tiananmen Square—30 years ago today—the U.S. Government imposed controls on many such items.

All license applications BIS receives to export such and other types of items are reviewed by BIS foreign policy experts and also referred to the State Department for its assessment of the foreign policy and human rights implications. (With one exception involving a complex, atypical fact pattern with national security implica-

tions, I am confident that the State Department's assessment that a license should be denied for human rights-related reasons has never been rejected by BIS and the other agencies.) Because, however, the nature of most items involved in acts contrary to this ECRA provision are common or do not lend themselves to technical descriptions on control lists, a combination of the EAR's other end-use- and end-user-based tools could be effective in furthering its objectives. I recognize that the Entity List is not commonly used to further such objectives, but it could be. I make this point only to respond to a likely request to explain the tools in the EAR available to address various human rights concerns.

The Need for Certainty, Clarity, and Multilateralism in Export Control Policy—And How Perception Is Sometimes More Important Than Reality

As someone who now hears concerns of U.S. industry on a billable hour-by-hour basis, I can report that there is considerable concern that the United States will begin imposing broad controls on the large categories of commercial emerging technologies identified in BIS's November request for information for nontraditional national security reasons. I am not saying controls consistent with ECRA's standards and requirements should not be imposed. Rather, I am just reporting that most companies do not appreciate that BIS's notice was a request for public input and information about broad categories of technologies in order for BIS to use in considering how to develop narrowly tailored controls essential to national security. They also generally do not appreciate that there are specific statutory standards governing the effort and what technologies may and may not be added to the control lists. Because perception can, however, become reality with respect to economic decisions involving U.S. companies, my recommendation is that BIS describe its plans for new China-specific controls publicly with clarity, certainty, and with as much ECRA-consistent emphasis on multilateral solutions as possible. This is vital to reducing uncertainty, and thus unnecessarily lost business opportunities for U.S. companies involving benign items, among those who do not follow the nuances of the EAR, ECRA, and the regulatory process.

I acknowledge this will be difficult even when BIS is ready to publish proposed rules. However, ECRA essentially requires BIS to demonstrate, for example, why any new proposed unilateral emerging technology control is "essential" to national security, why it would not harm domestic research, and why it would be effective at stemming the proliferation of such controls to China and other countries of concern. BIS now, per ECRA, also must fully consider the impact on the U.S. economy that would result from any new unilateral control, an effort that it will need industry's help in doing. These are high standards, but Congress created them because, as stated several times in ECRA, unilateral controls should be rare and only respond to specific or emergency situations essential to our national security. All other list-based controls are better addressed through the regular order and the well-tested process of working with our multilateral regime partners to develop and implement multilateral controls to enhance their effectiveness and keep the United States on a level playing field with such countries, particularly with respect to commercial technologies.

Conclusion

The United States has always pursued two complementary objectives—protecting our national security and promoting U.S. technology leadership. While they both make us stronger, they have very different tools and purposes. We have spent 50 years building a global trading system with clear rules and tools for remedying unfair trade practices. Export controls are not one of them. If we use export control-related national security justifications for purely trade policy purposes, we will undermine the system we have built and even further encourage the Chinese Government to do so even more. Export controls should be used to their fullest possible extent, however, when a specific national security or foreign policy issue pertains to the export, reexport, or transfer of commodities, technologies, software, or services to destinations, end users, or end uses. If the issue pertains to an activity, an investment, or a concern separate from such events or concerns, then one must look to other areas of law, such as sanctions, trade remedies, foreign direct investment controls, intellectual property theft remedies, or counterespionage laws. In addition, a trade agreement among Pacific allies surrounding China could be a useful tool in motivating, through collective multilateral action, changes in unfair Chinese trade activities—while, at the same time, benefiting U.S. industry's access to such markets and projecting American labor and environmental protection values.

Returning to the title of the hearing—assessing controls on investments and technology relevant to threats involving China—the key to doing so properly is more funding for more people in BIS and the other export control agencies to regularly

and aggressively conduct and implement such assessments. In light of broad grants of authority in ECRA and FIRRMA, I do not yet believe more law is needed to do so. The issues and technologies involving China are more complex than ever and the need for multilateral cooperation, which is time intensive, continues to remain extremely important to the controls' effectiveness. I believe that each agency is understaffed when compared to its mission. Among other things, this leads to increased burdens and delays for industry, reduced time needed for internal training, insufficient time to study all the issues; and the inability to keep the regulations current. Failure to keep the regulations current to novel threats does not advance our national security interests and harms our economic security.

A renewed attention to supporting these organizations should include efforts to educate the next generation of export control professionals and to motivate them to join the Federal Government. Decades of wisdom and collective memory will walk out the door when current senior career staff retire or otherwise leave the Government. In addition, I would advocate that the export control agencies have easier hiring authority, more staff to conduct reviews of open source and intelligence community data, more intel analysts, more licensing officers with advanced technical skills, and more staff with foreign language skills, particularly Chinese. Congress was helpful in substantially increasing our budget when I was at BIS, for which I am grateful, but more is needed.

As with all export control topics, I have a 3-minute, a 30-minute, a 3-hour, and a 3-day version. So, with this, I'll stop here and be happy to answer whatever questions you have.

PREPARED STATEMENT OF SCOTT KENNEDY

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Introduction

Today's hearing is about issues of technology, economics, public health, and national security, but it is occurring against the backdrop of the 30th anniversary of the Beijing massacre. This is a solemn day not just in Chinese history, but in world history. I was a 4th-year undergraduate student at the University of Virginia when the protests broke out and was preparing for language study in Taiwan when the events of June 3rd and 4th unfolded. China confounded expectations then, and it has since. Few expected a regime to take such actions, and few expected it to survive and become the major power that it is today. In so many ways, big and small, China continues to defy expectations.

As someone who cares deeply about China, the United States, and the globe, one of the largest lessons I take from my years of working on China and U.S.–China relations is our need to adopt a posture of principled pragmatism: we need to be guided by our values, but we also need to be smart in how we pursue them. A clear purpose needs to be married to well-reasoned and effective policy. Our purpose should be to encourage and press for humane governance in China domestically and its responsible behavior internationally. Pursuing these goals requires a combination of engagement with China, deterrence and opposition to some of its policies and actions, and collaboration with friends and allies in the Asia-Pacific and beyond. But most importantly, success requires making America the best it can be. Our direct effect on China will always be limited. We have a much greater ability to make our own economic, social and political systems stronger, serve as a model for others, and have them recognize how their national interests are best served by having a good relationship with the United States.

I elaborate on these principles in my statement as they apply to advanced technology. I first briefly describe China's ambitious policy goals in promoting high technology and the array of policies it is deploying toward these ends. I then summarize the results to date and likely future trajectory. The main point is that although China has made progress and is likely to continue to do so, there is wide variation across industries in the level of success and the effect on the United States and global economy. On this foundation, I turn to discuss America's current policy approach in responding to China's high-tech drive. Presently, the United States is only utilizing a single policy tool—bilateral brinksmanship—and this approach has limited utility. To be more effective, the United States will need an "all-of-the-above" approach that involves greater coordination with friends and allies and much more attention to strengthening the foundations of our own technology ecosystem.

China's High-Tech Drive: Ambitions and Tools

China's technology goals are amazingly ambitious. Its leaders are no longer satisfied being a low-cost assembly point along the global supply chain and only utilizing Western technology.[1] China wants to be a major high-tech leader. Although the Made-in-China 2025 (MC2025) technology plan focuses on a small handful of technologies, MC2025 is part of China's 13th Five-Year Plan, and this plan includes dozens of industrial policies and hundreds of advanced technology sectors, from artificial intelligence and information and communications technologies (ICT) to commercial aircraft, and from materials to new-energy vehicles and pharmaceuticals. Beijing's motivation is multifold; it has a clear economic logic, seeking to move from low-valued added segments of industries to higher-value added parts of industries, spur consumption and improve the lives of its people, all of which together should raise China's long-term growth prospects.

But the leadership also views advanced technologies in political and international terms. China wants to use technology to improve domestic governance, for example, by making traffic move more efficiently, reducing crime, and improving coordination across Government agencies. It also wants to reduce domestic security risks, people and movements that could threaten the Chinese Communist Party's (CCP) hold on power. Developing and acquiring advanced technologies also serves China's national security goals, making China's military better able to defend its borders and near-abroad and have power projection capabilities. This gives China the ability to deter potential foes, including the United States, in times of peace, as well as better prepare for potential conflicts along its perimeter, including the border with India, the Korean peninsula, Taiwan Strait, and South China Sea.

Just as the motivations behind China's high-tech drive are multifold, it is drawing on all the powers of the State and society to achieve them. Most importantly, although Beijing employs markets to carry out research and development (R&D), promote industries, and create consumer services, the Chinese State—the Government and CCP, at the national and local levels—is deeply involved in every aspect of this drive.

There are five important principles guiding the Chinese State's role: (1) The State has the right to intervene at any time for any reason; (2) State officials have discretion to adopt discrete policies to promote or hinder any industry, company or region as necessary; (3) Funding and investment for priority sectors often occurs in the expectation of future demand, not existing demand already reveal by market signals; (4) The State would prefer to direct support to firms that are both politically safe and economically competent, but special support goes to State-owned enterprises (SOEs) even when they do not perform well; and (5) Strategically use globalization to China's advantage, not as an end in itself.[2] The Chinese State does encourage business competition, even internationally, and in some industries it is extremely fierce, but competition occurs within this larger political economy, and so it is controlled with the explicit hope of achieving specific economic and political goals.

On the basis of these motivations and guiding principles, the Chinese State mobilizes every tool at its disposal to achieve these ends. Funding is at the heart of the system, including Government spending, subsidies, and State-directed bank credit. China's securities markets as well as private equity and venture capital are a growing part of the equation, particularly with regard to advanced technologies. High-tech firms receive tax benefits, access to low-cost land and other incentives. China now spends over 2 percent of gross domestic product (GDP) on R&D, equal to the average of advanced industrialized countries. In absolute terms, it has the world's second large R&D budget, only behind the United States. In some industries, its investment outpaces that of everyone else. Although over 75 percent of R&D is by companies, the State is still able to incentivize and direct spending in its priority areas. For example, in the case of semiconductors, national and local governments have created a series of investment funds that total at least $150 billion. They are supporting the creation of dozens of fabrication facilities around the country even though a straightforward market analysis would suggest this scale of investment is wasteful.

Beyond finances, there is a rich panoply of interwoven policy tools available to promote advanced technology: extensive support for universities and vocational schools to develop more talent, active participation in setting technical standards, Government procurement that encourages or mandates buying Chinese products,

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[1] Scott Kennedy "The Beijing Playbook: Chinese Industrial Policy and Its Implications for the United States", in James Andrew Lewis, ed., *Meeting the China Challenge* (Washington, DC: CSIS, January 2018), pp. 1–9.

[2] Barry Naughton, "China's Distinctive System: Can It Be a Model for Others?" *Journal of Contemporary China*, no. 65 (2010), pp. 437–460.

and high environmental performance standards. China has a love–love approach to intellectual property (IP). On the one hand, it would love Chinese to develop their own IP. It has developed world-class IP laws and regulations, encouraged the filing of patents and copyrights at unprecedented levels, developed regulatory systems and markets for licensing IP, and developed courts to adjudicate IPR disputes, most of which occur between domestic litigants. On the other hand, if it runs into obstacles creating IP domestically, it would love to obtain this IP from abroad, legally if possible, illegally if necessary. Most independent analysts believe China is the largest source of commercial IP theft globally, no longer focused on toys and CDs, but instead on everything from advanced materials to commercial aircraft components, drug formulas, and telecom systems.

A key element of China's high-tech drive is its strategic use of globalization. In addition to sending millions of students abroad over the last few decades to obtain advanced degrees in engineering and science, Chinese financial institutions and companies have ramped up outward investment and acquisition of overseas companies. Cumulative Chinese investment in the United States from 1990 to 2018 was $145.14 billion. Of this amount, 92 percent were acquisitions of existing American companies, and 75 percent of investment was by private Chinese companies. High-tech is a huge part of Chinese investment; energy and ICT have received a great deal of attention, but in the last 2 years, because of restrictions in those sectors, a higher proportion of funding has flowed into pharmaceuticals, biotech, and health care.[3] Beyond investment abroad, Chinese companies also are opening R&D centers in Silicon Valley and other high-tech hubs around the world.

Domestically, China has increased efforts to attract foreign talent to work for Chinese industry and uses the leverage of its large domestic market to persuade foreign companies to share their technology with local partners. As a consequence, China has been able to ameliorate the weaknesses of its own top-down innovation system by utilizing innovation nurtured in more hospitable environments. And finally, China has stepped up its efforts to shape global rules to legitimate its current system of economic governance and make decisions consistent with its own interests. China is deeply active in the G20, WTO, IMF, standards-setting bodies, and other existing institutions. It is also building alternative or parallel institutions, such as the Asian Infrastructure Investment Bank (AIIB), and advocating competing norms, such as Internet sovereignty, that better fit with its less liberal worldview.

Although China certainly has regulations and policies that contravene its commitments to the WTO and the United States, it makes greater use of discriminatory policies and behaviors that less obviously violate international rules. Chinese officials and companies have learned (in part from Western practice) how to "game" the system. The WTO covers many areas, but is far from comprehensive, and the global standards for finance, currency, antitrust, the digital economy, and elsewhere are either too vague or lack "teeth" to ensure compliance. Moreover, even in areas covered by the WTO, China can mask industrial policy as private commercial activity. For example, beyond official subsidies the State can decisively shape the decisions of creditors, investors, and borrowers in ways that fit its interests and create an entirely uneven playing field. Masking industrial policy makes it much harder to identify and constrain.

China's ambitions, motivations, policy tools, and approach toward globalization all come together particularly tightly in the context of information and communications technologies, the Internet and cybersecurity. Developing the Internet and related technologies serves economic, domestic security, and national security goals simultaneously. Chinese President and Communist Party chief Xi Jinping has repeatedly emphasized the multiple roles of the Internet and the importance of cybersecurity. For example, in a major 2016 speech, he said: "We have to take the initiative in the Internet development in our country. In order to protect cyber security and national security, we have to overcome the bottleneck of core technology. (We should) strive to leapfrog in certain areas and aspects."[4]

China's famed "social credit system" as well as its smart-cities and safe-cities programs serve multiple purposes. Collecting data about your finances and acquaintances may uncover unpaid bills that make you a high-risk borrower or genuine criminal behavior, but could also be used to determine your political leanings and if you are likely to take to the streets. Developing telecom hardware and mobile

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[3] Rhodium Group, "U.S.–China Investment Hub", *https://www.us-china-investment.org/us-china-foreign-direct-investments/data*; and Thilo Hanemann, et al., "Two-Way Street: 2019 Update", May 2019, *https://arraysproduction-0dot22.s3.amazonaws.com/rhodiumgroup/assets/icon/RHG-TWS-2019-Full-Report-8May2019.pdf.*

[4] "Speech to Cyber Security and Informatization Work Seminar", *People's Daily*, April 20, 2016, *http://cpc.people.com.cn/n1/2016/0420/c64094-28289000.html.*

technologies makes economic activity far more efficient and connects businesses and consumers, but it also gives the CCP and China's intelligence agencies greater understanding of potential opponents, at home and abroad. China has developed a complex and multifaceted policy and regulatory scaffolding for managing every aspect of the Internet and cybersecurity. While much of this would be needed in any circumstance, American industry and independent observers view much of this effort as overly burdensome and discriminatory. [5]

The Mixed Results of China's High-Tech Drive

China's ambitions are one thing, the actual results another. In general, China has made substantial progress in developing advanced technologies. In the most recent data provided by the Global Innovation Index, China has moved up to rank 17th among the 126 countries it tracks. [6] This index includes over 100 metrics related to both inputs (such as financing and education) as well as outputs (scientific publications, patents, and new products). China has separated itself from other developing countries, such as Brazil and Russia, and has moved closer to the United States (6th), Germany (9th), South Korea (12th), and Japan (13th). [7] China is now the world's largest source of patents, granting over 2.44 million patents in 2018. [8] Even if a large percentage are not reflective of truly innovative activity, a growing proportion are. It is no longer accurate to see the Chinese simply as a bunch of copycats. [9]

That said, there is a great deal of variation across sectors. In some industries, Chinese firms are doing exceptionally, creating innovations at an impressive rate. This is particularly true in ICT, from telecom equipment and handsets to Internet applications. This is in part because the technology barriers to entry in the Internet are lower than other sectors—you need a laptop and some coding skills—but it also a product of this sector being dominated by private companies. We know of larger firms such as Alibaba, Tencent, and Baidu, but there are hundreds of thousands, if not millions, of ICT start-ups, and they are part of a rich ecosystem of money, talent, and services that span the country and beyond.

China's pharmaceutical sector has been far less successful, but its prospects are relatively robust compared to many other industries because of the kinds of talent and firms entering the sector. Pharma is the most globalized of any Chinese industry. Most company founders and top researchers have studied in the United States and Europe and are deeply familiar with the pharma industry, the entire drug development process, and the regulatory systems developed by the Food and Drug Administration (FDA). Many of these firms have raised funds from American venture capital firms and have deep relationships with one or more of the leading Western pharma firms.

In contrast to sectors such as these, there are another group of high-tech industries in China that have seen some success, but at a tremendous cost. In these sectors, China has developed technology at home or acquired it from abroad, and then pushed massive investments to scale-up the industries. But in the process, they have attracted far too many firms and investment, with the result being mediocre technological progress but outrageous levels of overcapacity. This kind of problem originally emerged in industries such as steel, aluminum, glass, and paper, but in the last decade have spread to several high-tech sectors. Solar, wind, electric vehicles, and robotics are the most obvious, but overcapacity affect those industries where products are easily standardized, and funding is easily available. The results are fast-growing industries, but ones where the vast majority of producers are nowhere near the cutting edge, and supply outstrips likely demand. These industries are ripe for consolidation, but to avoid being stuck with unsold inventories, there is a huge incentive for companies to dump their products abroad. The result of such competition unconstrained by the penalty of losing is to put companies that face tighter budget constraints at a huge disadvantage. These circumstances threaten the vitality of supply chains and business models built on assumptions of a more competitive market environment.

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[5] Samm Sacks and Manyi Kathy Li, "How Chinese Cybersecurity Standards Impact Doing Business in China", *CSIS Briefs*, August 2018, *https://www.csis.org/analysis/how-chinese-cybersecurity-standards-impact-doing-business-china*.

[6] "Global Innovation Index", *https://www.globalinnovationindex.org/Home*.

[7] Scott Kennedy, "The Fat Tech Dragon: Benchmarking China's Innovation Drive" (Center for Strategic and International Studies, August 2017), *https://www.csis.org/analysis/fat-tech-dragon*.

[8] "China's National Intellectual Property Administration", Monthly Report December 2018, *http://www.sipo.gov.cn/docs/2019-01/20190129105822724812.pdf*.

[9] Shaun Rein, "The End of Copycat China: The Rise of Creativity, Innovation and Individualism in Asia" (Wiley, 2014); and Kai-Fu Lee, "AI Superpowers: China, Silicon Valley and the New World Order" (Houghton Mifflin Harcourt, 2018).

The last group of high-tech sectors in China are those that have yet to succeed and do not show much promise, at least in the next decade or so. These tend to be industries closer to the cutting edge, with very high technology barriers to entry. But the Chinese compound these difficulties by bringing the heavy hand of the State into play, in some instances dictating that State-owned firms must dominate or that commercial activity must closely follow State guidelines.

The best example is commercial aircraft. China has developed a regional jet, the ARJ21, to compete with Bombardier and Embraer. The plane has been a bust. It was launched far behind schedule, and only one airline currently has it in its fleet. Industry experts tell me that the plane is extremely loud, and so passengers are given earplugs. Individual aircraft are often grounded for maintenance. China has a somewhat more promising narrow-body larger aircraft, the C919, in development. Aimed to compete against Boeing's 737 and the Airbus A320, the C919 is technically an improvement over the ARJ21, but almost all of the critical technologies on the plane, from the avionics to the engines, are from the United States and Europe. Moreover, the plane is far behind schedule, and even once the plane can go into commercial operation, it will take a long time for the Chinese to be able to fully service an entire fleet. China also has a wide-body aircraft on the drawing board, the CR929, but this plane is really just notional, and there is a large chance it will never actually be developed. Wide-body aircraft are far more complicated than single-aisle planes, and the market is already well developed. Moreover, by the time the CR929 might be ready, the entire commercial aircraft industry may have moved on to new technologies and business models. In short, particularly compared to other sectors, it feels as if in commercial aircraft, the Chinese are far behind and not making up ground quickly.

Why? To some extent, it is because of the inherent difficulty of the industry. Planes have hundreds of thousands of parts, and they have to work together seamlessly and perfectly on every flight—in the air, with no tolerance for mistakes. Moreover, fleets have to be serviced on an ongoing basis at amazingly high standards. But China has tackled other high-tech challenges of this complexity. What matters here is the weaknesses of the company China has assigned with this task, the Commercial Aircraft Corporation of China (COMAC). COMAC is a subsidiary of the Aviation Industry Corporation of China (AVIC), which is primarily a defense contractor. AVIC and its subsidiaries work in a very closed environment with little international engagement and few market signals. Like its parent, COMAC is hierarchical and internally organized in a way to inhibit information sharing and learning. COMAC has hired a couple hundred international experts from leading companies and regulators, but they have little voice in company management and decisions. As a result, China's prospects in commercial aircraft are particularly dim. Eventually the C919 will likely be launched, and China can require its domestic airlines to put the C919 into service, and this will provide a chance for learning and improvement. But it is just as likely that the C919 will run into substantial problems and be a highly costly flop. [10]

There are a variety of high-tech industries that have similar prospects in China. The other most obvious one is semiconductors. There has been progress in some segments of the industry, but failure is far more common than success, and China shows little likelihood of achieving leadership in the industry any time soon. [11]

Given this variation, it is inappropriate to see China as a high-tech superpower, but rather as an aggressive competitor with both sizeable strengths and substantial deficiencies. Hence, it does not make sense to be either overly alarmist or comfortably dismissive of China's high-tech ambitions. The truth is somewhere in the middle, and it requires taking an empirical approach and examining industries one-by-one.

American Policy

In a narrow sense, current American policy appears to overestimate China's high-tech prowess, but it probably makes sense to err on the side of caution and prepare for a China that once again defies expectations to overcome many of the challenges

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[10] Amanda Lee, "China's Aviation Industry Has a Steep Climb to 'Made in China 2025' Goals", *South China Morning Post*, October 29, 2018, *https://www.scmp.com/business/article/2170746/chinas-aviation-industry-has-steep-climb-made-china-2025-goals*; David Fickling, "China Inc.'s Boeing Rival Just Won't Fly", *Washington Post*, March 21, 2019, *https://www.washingtonpost.com/business/china-incs-boeing-rival-just-wont-fly/2019/03/21/565b9bf6-4bad-11e9-8cfc-2c5d0999c21e-story.html?utm-term=.91e7db913869*.

[11] James A. Lewis, "Learning the Superior Techniques of the Barbarians: China's Pursuit of Semiconductor Independence" (Center for Strategic and International Studies, January 2019), *https://csis-prod.s3.amazonaws.com/s3fs-public/publication/190115-Lewis-Semiconductor-v6.pdf*.

described above. That said, the Trump administration's approach to responding to China's high-tech challenge is overly focused on a single approach: pressure. This stance is understandable given China's highly aggressive approach that threatens the health of individual companies as well as entire industry supply chains and business models. Under Xi Jinping China has made some modest adjustments to market access in some industries, for example, gradually reducing joint-venture requirements for automobiles and liberalizing access to its financial markets, but the overall trajectory is one of greater control and discrimination against foreign industry.

The United States is utilizing several tactics to put an immense amount of pressure on China and try to leave it isolated. The first is raising tariffs across a wide range of industries in order to hurt the economy's growth prospects. The U.S. has raised tariffs on three separate occasions, with tariffs of 25 percent now covering half of America's imports. The U.S. is now poised to place tariffs on the remainder of China's exports to the United States. The second component of this pressure strategy is to more directly deny China access to American technology and markets. The U.S. passed reforms in 2018 to our laws related to foreign investment and export controls, and these efforts are largely driven by concerns about China. The Committee for Foreign Investment in the United States (CFIUS) is expanding the range of industries and lowering the scale of investment that triggers a national security review. The Commerce Department is developing broader rules to limit exports of foundational and emerging technologies. These restrictions will include both physical technologies as well as individual human talent, what is called "deemed exports." Finally, the U.S. has modestly adjusted its visa policies, making it harder for Chinese graduate students in the sciences and engineering to gain access to American universities, and also limiting people-to-people exchanges amongst working scientists and other experts. Overall numbers of students and professionals engaging in travel has not fallen much, but the marginal effect has been quite noticeable.

This pressure approach has in the last few months been turned on specific Chinese companies, the most important of which is Huawei. Huawei is by far China's most successful company, but it is still highly dependent on suppliers from the United States and elsewhere for many of its components. In August 2018 and January 2019 the Trump administration issued two indictments against Huawei for violating sanctions against Iran and stealing American IP. In mid-May 2019 the Administration issued an Executive Order banning any American entity from purchasing Huawei equipment (an expansion of the late-2018 step to ban purchases by U.S. Government entities). At the same time it also placed Huawei on an "Entity List," denying it access to American-based components. [12]

It is understandable for the United States to have lost patience with China and utilize pressure as a way to force China to the negotiating table as well as simply better protect American technology central to our national security. In fact, I grudgingly supported the Administration's use of tariffs to capture China's attention and let it know that the United States was willing to use its power to protect its national interests and accelerate negotiations that would result in China putting substantial constraints on its industrial policies to reduce the damage caused to individual companies, entire industries, and our national security.

However, this approach has now gone too far and is in danger of backfiring to the detriment of the American economy, U.S. national security, and the global economy. Trade tariffs have already created a great deal of "collateral damage," including a large number of American farmers and companies who have lost export markets, and American consumers who are paying higher prices for goods. If the tariffs on all Chinese goods go into effect, it may be the highest increase in taxes on Americans since the early 1990s. Import tariffs are also highly regressive, disproportionately affecting low-income populations. But as long as there was a chance China could be brought to the negotiating table to reach a good deal, these costs may have been worth the risk. But the line between risky and a huge mistake was crossed when the U.S. placed Huawei on the "Entities List." Huawei is no saint of a company, and the U.S. intelligence community has signaled reasonable alarm about the

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[12] The White House, "Executive Order on Securing the Information and Communications Technology and Services Supply Chain", May 15, 2019, *https://www.whitehouse.gov/presidential-actions/executive-order-securing-information-communications-technology-services-supply-chain/*; "Addition of Entities to the Entity List," *Federal Register*, May 21, 2019, *https://www.federalregister.gov/documents/2019/05/21/2019-10616/addition-of-entities-to-the-entity-list*; and U.S. Department of Commerce Bureau of Industry and Security, Supplement No. 4 to Part 744—Entity List, *https://www.bis.doc.gov/index.php/documents/regulations-docs/2326-supplement-no-4-to-part-744-entity-list-4/file.*

threat of having Huawei's 5G technology in American networks and those of our allies. But the Entity List order was drafted far too broadly. It is costing American companies billions of dollars in business in nonsensitive areas such as consumer electronics. Equally important, the networks which are run on Huawei equipment are likely to become increasingly degraded and unstable in a matter of months if not weeks. Huawei operates in 170 countries, with networks for mobile communications, health care, finance, and other industries.

The U.S. does not so much as need to put aside an approach of pressure so much as dial it back modestly and complement it with two other initiatives. The first would be to reduce tensions with other countries who face the exact same challenges as the United States in China. Our allies in Europe, Asia, and Latin America face the same problems with IP theft and discriminatory policies from China. Instead of closely working together, the Trump administration has threatened or used tariffs against many of them. The global economy's largest challenge is from China, not everyone that has a trade surplus with the United States. Greater coordination, formally and informally, would make the choice for China far much clearer; the chances of it agreeing to serious reforms and engaging less in IP theft and other harmful practices would increase.

Finally, the U.S. needs to strengthen its own ecosystem for advanced technologies. Not only does the United States need to invest more in R&D for basic sciences and applied technologies, there needs to be greater investment in all levels of STEM education and physical infrastructure. Equally important, in some instances the United States Federal and local governments need to do more to spur demand for leading technologies. In some sectors, American experts have created new technologies only to find limited market interest at home. As a result, some of them are lured to sell their technologies to Chinese investors, who have a market ready to scale-up these ideas. Electric-car battery technology is an excellent example. The Department of Energy's ARPA-E Program has supported such research, but some of the successful results have been sold to or commercialized in China, not the United States. This trajectory needs to be changed, not by mandating where technology can be used, but by creating commercial incentives for them in the United States. In 2018, China's electric car market was over 1.2 million vehicles; the American market was one-fifth the size, and the gap will likely be larger in 2019 and beyond—unless the U.S. Government helps modify incentives for both auto producers and consumers.

I am not calling for an all-out industrial policy. As Congressman Rick Larsen (D-WA) recently declared, "The United States does not need to 'out-China' China; it needs to 'out-U.S.' the U.S." That said, if done carefully and humbly, the U.S. Government can promote new technologies with limited Government resources in a market-friendly way. And a more successful American high-tech sector is the best bulwark against the challenge from China.

PREPARED STATEMENT OF RICHARD NEPHEW

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JUNE 4, 2019

Thank you, Chairman Crapo, Ranking Member Brown, and other distinguished Members of this Committee for inviting me to speak here today. It is a privilege to offer my thoughts with respect to an issue that is so important to the United States, namely the use of U.S. sanctions policy to address the problem of fentanyl abuse in the United States and how those sanctions might affect U.S. relations with China.

The scope of the Committee's inquiry today is much broader than the Fentanyl Sanctions Act (FSA) or, for that matter, the use of sanctions in general in addressing policy differences with the People's Republic of China. But, it may be an important part of this larger whole and I appreciate the opportunity to discuss these issues with you today. I am also honored to join my fellow panelists here today who have long experience in issues germane to this Committee's consideration.

I'm particularly grateful that the Committee has decided to study and debate the issue of fentanyl sanctions rather than leap immediately into the business of applying sanctions against entities in China or, for that matter, any other country in which there are entities involved in fentanyl trafficking. I think the decision to explore sanctions as a possible means of securing additional leverage to manage the supply of fentanyl to the United States—and sanctions' active use in other foreign policy contexts with China—is fitting given the established utility of sanctions in

managing other policy problems. However, as I have written about extensively since I left Government in 2015, sanctions should neither be the only nor the dominant tool in managing every foreign policy problem. There are real dangers in the overuse of sanctions and in the reduction of U.S. policy interests with key countries—China foremost among them—to a sanctions management exercise.

That concern notwithstanding, I do think that the Fentanyl Sanctions Act is an appropriate step forward in the redress of our concerns with China in this regard. It has sound, clearly articulated objectives. It offers a flexible approach that provides substantial discretion to the Executive Branch. It provides for proportional and limited sanctions, and in a manner that is distinct from the existing sanctions structure, including the Kingpin Act. It can facilitate a diplomatic approach, especially in that it is not limited solely to China as a target. And, it is complemented by other steps—including the creation of a commission, establishment of an intelligence program dedicated to the problem, and the provision of funding—that can help to create a "whole of Government" approach to the problem.

In this written testimony, I will outline further the key tests for the development of a sanctions campaign that I believe the FSA passes as well as some legitimate concerns and challenges that exist for its successful use and placement within the broader range of U.S.–China relations.

Sanctions Tests

The FSA passes several tests for what I deem necessary in the development of a sanctions program. I should emphasize that my assessment is as a matter of sanctions design and implementation. I am not an expert in synthetic opioids or their trafficking, about which I would defer to others. I have found the community writing about this problem to be insightful and want to acknowledge, in particular, the writings of Liana Rosen and Susan Lawrence of the Congressional Research Service,[1] J. Stephen Morrison and Emily Foecke Munden of CSIS,[2] and Vanda Felbab-Brown of Brookings[3] [4]. Of course, the conclusions I reach regarding FSA are my own.

First and foremost, the FSA has a specific objective in mind that it states clearly in Section 2's findings on the scourge of synthetic opioid use in the United States. In paragraph two, FSA states that "the objective of preventing the proliferation of synthetic opioids though [sic] existing multilateral and bilateral initiatives requires additional efforts to deny illicit actors the financial means to sustain their markets and distribution networks." In paragraphs 5–7, the FSA acknowledges the "important strides" made by the United States, China, Mexico, and Canada in combating the illicit flow of opioids but also that these efforts have been insufficient. It concludes with a call for "precision economic and financial sanctions policy tools" to complement these efforts as well as other sanctions tools presently on the books.

By establishing a clear predicate as well as a sense of purpose, the text of the FSA offers a rationale for sanctions as well as their limited use. Sanctions provided in the FSA are, by extrapolation, not intended to address non-opioid foreign policy problems nor are they intended to be used in the pursuit of broader political, economic, or social interests with respect to China, Mexico, or any other country for that matter. As a consequence, were the FSA to pass and become law, the United States would be able to offer exceptionally clear guidance as to why sanctions may become necessary, their rationale and their purpose.

Second, the FSA is also clear in identifying the targets of the sanctions—the companies, financial institutions, other entities, and individuals involved in illicit trafficking of synthetic opioids—and the steps that the Governments responsible for those companies can take to avoid the imposition of sanctions. In this way, the Act would grant substantial flexibility to the Executive Branch to undertake a diplomatic campaign that is both multilateral in scope (the U.N., G7 and other bodies are explicitly identified) as well as bilateral. The Act's explicit authorization of a broad, 12-month waiver of sanctions with respect to financial institutions in countries identified as closely cooperating with multilateral efforts to prevent trafficking is valuable, as is the ability of the Executive Branch to invoke U.S. national security, humanitarian or U.S. pharmaceutical needs in order to waive sanctions. This waiver is proportional and useful for sanctions implementation purpose, especially as it serves to incentivize cooperation at the highest multinational level. A similar

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[1] *https://fas.org/sgp/crs/row/IF10890.pdf*

[2] *https://www.csis.org/analysis/fentanyl-opens-grave-new-health-security-threat-synthetic-opioids*

[3] *https://www.brookings.edu/blog/order-from-chaos/2018/04/30/how-synthetic-opioids-can-radically-change-global-illegal-drug-markets-and-foreign-policy/*

[4] *https://www.brookings.edu/wp-content/uploads/2019/03/FP__20190322__mexico__crime-2.pdf*

waiver for companies—in addition to financial institutions—that are operating in closely cooperating countries would also be useful and would help harmonize implementation.

Third, the FSA permits the Executive Branch to decide which sanctions would be most appropriate in which contexts rather than be limited to a specific, prechosen menu. This may allow the President to decide to tailor implementation to be comparatively lighter—as part of an inducement for cooperation—or comparatively harsher, in egregious cases. Either way, taken in combination with the waivers, the Executive Branch will be able to ensure that the use of sanctions matches the policy objective of preventing the trade rather than seeking punishment for punishment's sake.

I should note in this context the important role that the Kingpin Act can play in managing this crisis but also the distinction that I see between it and the FSA. The Kingpin Act is a very aggressive sanctions tool in that its one penalty is the blocking of assets and thereby the complete denial of economic access to the United States of any entity or individual designated under it. For many narcotics traffickers, this may be an entirely appropriate tool: many such individuals or entities are involved in widespread narcotics trafficking and may be unlikely to moderate their behavior if presented with a more modest sanctions threat. Moreover, the method of removing sanctions is likewise stark: designations can be rescinded but, otherwise, sanctions imposed are usually sanctions that remain. Licenses can be granted to facilitate any necessary transactions but, otherwise, the application of the Kingpin Act is blanket and comprehensive in its effect.

The FSA, by contrast, is a far more flexible tool in both the sanctions that can be applied and in their method of relief. As noted, the FSA offers many different paths for sanctions to be set aside, including for countries that demonstrate a serious and dedicated effort to address our fundamental concerns regarding the behavior of their entities. Additionally, though a formal designation and inclusion on the U.S. Specially Designated Nationals and Blocked Persons (SDN) list remains an option for sanctions under the FSA, there are also more discrete tools that can be employed, including prohibitions on imports, denial of investment, and sanctions on the principal officers of companies involved. The FSA, therefore, gives the U.S. Government a wider, deeper toolbox to apply in addressing this problem that, when coupled with a diplomatic strategy, may be more effective than simple reliance on the Kingpin Act. And, of course, Kingpin is not going away: it can still be used in the most egregious cases as well.

Fourth, and perhaps most important, though there is a heavy emphasis on China and Mexico in the findings, as well as in the context of our discussions here today (at least with regard to China), the bill itself does not focus on those two countries to the exclusion of the rest of the world. In this way, though China is an obvious country of attention, the sanctions proposed would have utility in addressing similar problems that either have or may emerge with other countries. This is important in the context of potentially changing supply circumstances, especially if China makes good on its commitments to reduce the illicit trade in fentanyl. Traffickers may adapt to Chinese implementation by sourcing their wares elsewhere and, in my research for this hearing, experts in fentanyl trafficking believe this may soon occur. The FSA wisely avoids being overly prescriptive in its selection of targets in this context. Moreover, by not explicitly singling out China for sanctions, at least some of the diplomatic blow that might otherwise be felt by the Chinese can be reduced, thereby preserving space for negotiations on the topic itself.

Last, the bill also provides a path away from sanctions. As noted previously, the diplomatic route is explicitly marked for countries that may find themselves the target of these sanctions. Implementation of the measures outlined in the bill will itself take time, enabling diplomacy and avoiding the necessity for sanctions enforcement in theory and, ideally, in practice. In this context, it would be helpful if the bill included explicit terms for the termination of sanctions against designated individuals and entities. As written, the bill would allow for designations to be removed every 180 days, with the submission of new reports on entities and individuals of concern. This may be sufficient, but additional flexibility could be useful in a negotiation. The FSA's invocation of IEEPA sections 203 and 205 (which include licensing and regulatory authorities) can help address this need, if amendment of the bill itself is not desirable.

Sanctions in Context

Of course, sanctions should not merely be evaluated on the basis of their nuts and bolts but also in their proper policy context. A sanctions bill that is well designed and executed may still not be desirable, if used in a context that is otherwise disadvantageous to the United States in some fashion. The question needs to be not

whether "sanctions work" but rather whether sanctions are the right tool for the job at hand.

In my view, there are three considerations or challenges that need to be addressed in deciding whether to proceed with the FSA and the diplomatic strategy that it would intend to support. (As this hearing is primarily focused on China and U.S.–China relations, I will concentrate on this relationship specifically.) The three considerations and challenges are:

1. How FSA sanctions should be placed in the broader U.S.–China relationship;
2. How FSA sanctions would be calibrated with other U.S. sanctions priorities; and,
3. Whether FSA contributes to the problem of sanctions overuse.

Bilateral Relations

One critique of the FSA is that it is adding to an already full roster of policy priorities with respect to China and that it would be unwise to create new problems in the relationship. In my opinion, this would be fair if the FSA was picking up an issue with China that had either been resolved satisfactorily or was sufficiently distant so as not to be a source of immediate concern. It would also be fair if the FSA's sanctions demands were so onerous as to make it practically impossible for progress to be reached on the broader priority while sanctions were pending in this area.

In my view, neither of these factors is present today. The FSA is seeking to address a current problem for the United States that, according to a variety of sources, is affecting the lives of millions of Americans. Though I am not an expert in fentanyl, the materials I consulted prior to this testimony underscore the degree to which overdoses and the complications that are created in the families and communities of fentanyl's users are a crucial problem for the United States. Moreover, this is a problem that has already been the subject of intense diplomacy between the United States and China and where progress has been made even in the context of a tense relationship. Chinese officials are already aware of U.S. concerns in this regard and have taken steps to address some core U.S. demands, such as scheduling the various fentanyl analogues that might have similar characteristics.

True, if U.S. sanctions were to be eventually imposed on a variety of large Chinese financial or pharmaceutical firms, then the FSA could exacerbate existing tensions and difficulties. However, this is not the intent of the legislation, as I understand it. The intent is instead to convince China of U.S. seriousness and to persuade Chinese officials, as well as the Chinese private sector, to take steps to address U.S. concerns in this regard and to ensure that Chinese regulations on the same are fully enforced. In fact, it is arguable that our sanctions approach is complementary to China's own efforts to crack down on this trade given recent changes in how China schedules and controls opioids. It is for this reason that I believe the flexibility and discretion provided in the FSA is essential, but also why I believe sanctions in this area can be accommodated with broader U.S. interests in China.

Calibrating With Other Sanctions

A slightly different issue is where the FSA fits in the broader scheme of U.S. sanctions involving China.

To put things mildly, the sanctions picture with regard to China is congested. The United States has a wide range of sanctions in place that affect Chinese interests, significantly so in some cases. A short list includes:

- North Korea sanctions;
- Iran sanctions, particularly with respect to oil exports;
- Human rights sanctions, including Global Magnitsky measures;
- Technology sanctions, including the newly announced Executive Order measures against Huawei;
- Russia sanctions, particularly with respect to energy trade and financing;
- Nonproliferation sanctions; and,
- Syria sanctions.

To put things in some context, there are 152 individuals or entities identified as being "Chinese" for purposes of U.S. sanctions on the Specially Designated Nationals and Blocked Persons (SDN) list. There are 174 North Korean entries. Another way of looking at the issue: in 2018, China was the number one trading partner of the United States according to the U.S. Census Bureau.[5] Canada, Mexico, Japan,

[5] *https://www.census.gov/foreign-trade/statistics/highlights/top/top1812yr.html*

and Germany round out the top five. With the exception of Mexico—which has a very large number of resident narcotics traffickers subject to U.S. sanctions—U.S. designations of Chinese persons are nearly double the total number of designations from the rest of the top five. This is a relatively weak way to assess the volume and impact of U.S. sanctions decisions, particularly as some measures imposed against China have not included an SDN designation. But, between the number of programs touching upon China and the number of explicit designations, the picture is still one of a country that is subject to a diverse range and fairly robust scale of U.S. sanctions.

The point is simple: for such a significant trading partner of the United States as well as a significant economy internationally, the United States has imposed a lot of sanctions against China and certainly plans to do more. For example, in this context, I take note of the recent bill introduced by Senators Rubio and Cardin—with a number of cosponsors—that would threaten sanctions against Chinese entities for their involvement in China's activities in the South China Sea.[6]

I recognize that it is beyond the scope of this hearing to debate the wisdom of some of the sanctions decisions that we have already made with respect to Chinese interests or what may be planned (or, indeed, not planned as the case may be). That said, it is necessary to step back and consider whether, in the broader sanctions policy context, we would be over-burdening the sanctions agenda with respect to China if the FSA were to become law.

As I have written extensively about since I left the U.S. Government in 2015, there are reasons to be concerned about the use of sanctions against China in particular (as well as overuse, in general, as I discuss below)[7] beyond the overall foreign policy context. For instance, at the most elementary level, the more the United States imposes sanctions against China and Chinese entities or individuals (for whatever reason), the greater the likelihood that China will itself elect to impose sanctions against U.S. interests. For better or worse, we have shown China that it is possible to maintain a trading relationship with a country while still imposing targeted sanctions against particular entities and individuals located within it. The Iran case is particularly salient, as the United States has designated dozens of entities and individuals in countries that range from U.S. allies like Germany to close partners like Israel and the UAE. China has applied this lesson itself, though usually involving discrete issues and obviously smaller economies than the United States, and using different means (e.g., with respect to the soft sanctions with respect to South Korea's Lotte Group and Chinese citizen travel to South Korea after the THAAD deployment in 2016[8]). Adding more sanctions to this saturated space will do nothing to convince China that it should not develop similar capacities and continue to apply its economic muscle.

The tit-for-tat nature of the trade war may already be reinforcing this dynamic. A senior academic in China, Associate Dean Jin Canrong of the School of International Studies at Renmin University, published an editorial on 15 May that explicitly encourages China to impose specific sanctions against the United States in response to the tariff decision made by the President in mid May 2019.[9] They echo measures previously employed by China, such as a reduction on the export of rare earths to the United States, as well as suggest restrictions on U.S. companies' access to China. Regardless of what happens in trade talks, the fact that Chinese academics are beginning to discuss more seriously the idea of sanctions against the United States underscores the degree to which we ought to be careful when considering measures against China ourselves.

That said, there are sanctions and then there are sanctions. The measures proposed by the FSA are, as I've noted, proportional, modest and flexible. They are of a very different character than, for example, a broad prohibition on the import of Iranian oil or on providing banking services to Russian oligarchs. The ramifications for China are different from these types of sanctions than what is envisioned under the FSA. Moreover, as noted previously, there are enough off-ramps to sanctions that, if implemented alongside a patient, deliberate, and concerted diplomatic strategy, the actual imposition of measures can and should be avoided.

Furthermore, the acknowledgement of other sanctions priorities that exist should not and need not be an argument against having the ability to impose measures

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[6] *https://www.rubio.senate.gov/public/__cache/files/80e0c63e-b521-4929-a48c-db042c096d6a/26BE75C8B05BC1ECB3636E0C2AA42902.south-china-sea.pdf*

[7] *https://energypolicy.columbia.edu/research/report/future-economic-sanctions-global-economy*

[8] *https://www.reuters.com/article/us-lotte-china-analysis/with-china-dream-shattered-over-missile-land-deal-lotte-faces-costly-overhaul-idUSKBN1CT35Y*

[9] *http://www.globaltimes.cn/content/1150061.shtml*

against illicit traffickers of fentanyl. Instead, this is a reason for the United States to be more diligent and careful in its consideration of sanctions priorities more generally. I do believe that we cannot impose sanctions against Chinese entities on a constant basis and expect to avoid repercussions that can affect our broader interests. But, this is as much an argument for not imposing sanctions in those other areas as it is for denying the development of sanctions tools to deal with fentanyl; indeed, I could suggest a few sanctions choices made by this Administration that I would suggest that they reconsider if needed to provide space for fentanyl-related measures.

Sanctions Overuse

Beyond China specifically, there is a broader issue about whether the United States is overusing the tool of sanctions more generally. I have been outspoken in my concern that we are turning the U.S. economy into an increasingly difficult operating environment given the complexity of U.S. compliance demands and the ever-changing nature of our sanctions policies. A quick count of U.S. sanctions programs available of OFAC's website underscores how many different sanctions regimes exist—30 [10]—and this does not include programs administered by the State or Commerce Departments, much less the requirements of U.S. export controls. As I wrote with former Secretary Jack Lew in Foreign Affairs last year, the United States is not in imminent danger of losing its economic primacy or becoming too difficult to do business with, but the over-use of sanctions can contribute to the development of mechanisms that avoid the United States and its rules to the extent possible. [11] That is not good for the U.S. economy or the power of U.S. sanctions.

Moreover, this is no mere theory: in the case of Iran sanctions, we are seeing today a concerted attempt by U.S. allies in Europe to deal with U.S. sanctions they oppose by setting up structures that seek to avoid conventional banking methods and thereby dilute the impact of U.S. secondary sanctions. Regardless of how one feels about this development (or its likely efficacy), this is a problem if institutions eventually develop that have this as their central mission. The value of U.S. sanctions—particularly those involving financial means—is that it is too hard to avoid U.S. institutions and too profitable to use them. This is not a static situation and commercial decisions could be different if the cost/benefit equation were to shift. If other options exist, then—in time—U.S. sanctions will lose their potency. It is not in our interest for such instruments to exist or to get practice in operations.

Notwithstanding this point, the sanctions outlined in the FSA are unlikely to serve as the trigger for construction of such mechanisms. As an abstract matter, the FSA will contribute to an unhelpful trendline by being yet another complication for companies operating in the United States and with potentially targeted firms. But, the discrete nature of the sanctions envisioned and, importantly, the desire to avoid their use by instead prioritizing diplomatic efforts with China (and others) can help to minimize this danger. There are sanctions regimes currently in place that will likely prove far more consequential in steering foreign behavior with respect to sanctions over-use concerns, not least being U.S. sanctions against Iran. That said, the broader issue merits study and examination, especially by the U.S. Congress. I understand there are proposals under consideration by various members and committees on Capitol Hill that would examine U.S. sanctions policy writ large and encourage assessment of sanctions' use, misuse, overuse, and best practices. In my opinion, these proposals have considerable merit.

Conclusion

Altogether, though I believe that there are legitimate questions of both efficacy and broader policy focus surrounding the FSA, I believe that it is a reasonable next step to take in our efforts to redress our concerns regarding the supply of fentanyl to this country. The sanctions proposed are proportional, reasonable, subject to executive discretion, consistent with a diplomatic approach, and manageable in the overall policy context. In an ideal world, no sanctions measures included in the FSA would ever need to be used, as their mere existence would contribute momentum to ongoing diplomatic efforts to confront the challenge of illicit fentanyl trade. Even if sanctions had to be imposed, I believe there are mechanisms in the FSA to manage their deleterious impacts as well as to provide relief in the context of future diplomatic progress. There are some modest changes to the text that would be advisable—specifically, with respect to an explicit termination clause as well as expand-

[10] *https://www.treasury.gov/resource-center/sanctions/Programs/Pages/Programs.aspx*

[11] *https://www.foreignaffairs.com/articles/world/2018-10-15/use-and-misuse-economic-statecraft?cid=soc-tw-rdr*

ing the scope of "cooperating country" waivers to cover companies—but as written, these issues can be accommodated regardless.

I appreciate the opportunity to speak with you today and to offer my testimony. I look forward to your questions. Thank you.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR SASSE FROM KEVIN WOLF

Q.1. The U.S. Government has primarily relied on the Kingpin Act to combat international drug trafficking but this legislation is over 19 years old. In your opinion how has the trafficking business—whether it's fentanyl, heroine, other hard drugs, or human trafficking—evolved in the last 19 years and have our authorities been able to keep up with how these networks operate in practice?

A.1. I am not an expert in such topics,[1] so I will not respond because it would not be of use to the Senator. From what I learned during the hearing, however, I applaud the Senator's and the Committee's efforts to address aggressively the topic. There seems to be bipartisan consensus on spending the time and resources necessary to address the serious issue.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR MORAN FROM KEVIN WOLF

Q.1. This Committee shepherded the passage the Export Control Reform Act (ECRA), which enjoyed a strong bipartisan consensus due to its careful approach toward pursuing important U.S. national security objectives while preserving U.S. leadership in technological innovation. The Commerce Department is now leading implementation of export control reforms for emerging and foundational technologies called for in the legislation. What steps does the Commerce Department need to take in order to ensure that new export controls do not undermine the ability of U.S. companies to innovate and compete on at the frontiers of technology?

A.1. First, I agree with the characterization of ECRA and its status. Second, my thoughts on the steps needed to fully implement the new law are set out in detail in my prepared remarks.[1] From the testimony, the following is a summary of my suggested steps to respond to your question:

The Committee and HFAC need to engage in regular and significant oversight of BIS and the other export control agencies to ensure that ECRA is implemented faithfully and any new controls are consistent with the requirements and standards in ECRA. In particular, this Committee and HFAC should ensure that BIS:

a. Reaches out to all available Government, industry, and academic resources for information as part of its technology identification effort;
b. Publishes new controls as proposed rules to get industry input on their clarity and ECRA consistency before imposing them as final, except in truly emergency situations;
c. Not propose unilateral controls on technologies that are widely available outside the United States;
d. Solicit and take seriously industry input on whether any proposed new unilateral controls would harm domestic research into affected technologies;

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[1] *https://www.banking.senate.gov/imo/media/doc/Wolf%20Testimony%206-4-19.pdf*

[1] *https://www.banking.senate.gov/imo/media/doc/Wolf%20Testimony%206-4-19.pdf*

e. Confirm that any new controls would actually stem their flow to China and other countries of concern (rather than merely harming U.S. companies to the benefit of their foreign competition);
f. Justify why the technology proposed to be controlled is "essential" to U.S. national security;
g. Identify what the specific weapons-, military-, or intelligence-related application the control is designed to address that is not now being addressed by a control;
h. Explain the results of BIS's full consideration of the impact on the U.S. economy that would result from the unilateral control and BIS's responses to industry views on the question; and
i. Explain why any new proposed control is of a type that would be accepted by the multilateral export control regimes (or why a unilateral control would be justified and effective).

The Committee and HFAC should ensure that ECRA does not become a tool of trade policy and the economic impact of any proposed new controls is fully studied based on Government and affected industry data. Indeed, ECRA section 4811(1) states that the United States should "use export controls only after full consideration of the impact on the economy of the United States and only to the extent necessary—(A) to restrict the export of items which would make a significant contribution to the military potential of any other country or combination of countries which would prove detrimental to the national security of the United States; and (B) to restrict the export of items if necessary to further significantly the foreign policy of the United States or to fulfill its declared international obligations."

The Committee and HFAC should ensure that any new controls are as multilateral as possible given that ECRA section 4811(5) states that "[e]xport controls should be coordinated with the multilateral export control regimes. Export controls that are multilateral are most effective, and should be tailored to focus on those core technologies and other items that are capable of being used to pose a serious national security threat to the United States and its allies."

The Committee and HFAC should be open to BIS's addressing concerns regarding China and other countries through controls on specific end uses and end users rather than only through lists of controlled technologies.

Because perception can become reality with respect to economic decisions involving U.S. companies, the Committee and HFAC should ensure that BIS describe its plans for new China-specific controls publicly with clarity, certainty, and with as much ECRA-consistent emphasis on multilateral solutions as possible. This is vital to reducing uncertainty, and thus unnecessarily lost business opportunities for U.S. companies involving benign items, among those who do not follow the nuances of the EAR, ECRA, and the regulatory process.

This Committee and HFAC should do what they can to provide the Bureau of Industry and Security and the other export control agencies substantially more financial and other support for it to do

its work. As described in my testimony, the issues are far more complex than they ever have been and more people are needed to fully implement ECRA.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR MENENDEZ FROM KEVIN WOLF

Q.1. One of the provisions that I authored in FIRRMA requires CFIUS to develop regulations to ensure that State-owned entities are declaring their transactions with CFIUS and not using complex financial structures to conceal their ownership or evade CFIUS review. We saw this situation at work in December, when the *Wall Street Journal* reported that a firm owned by China's Ministry of Finance was able to use offshore subsidiaries to purchase a U.S. satellite firm and was thereby allegedly able to access information that may be restricted under U.S. export controls.

What is your assessment of CFIUS's ability to evaluate the extent of foreign Government control or influence over foreign firms seeking to invest in the U.S.?

A.1. They are good. The relevant regulations impose significant disclosure requirements regarding direct and indirect owners of the parties to the transactions. CFIUS staff routinely go back to the parties to ask for more such information and detail. More importantly, from my experience on CFIUS, the Intelligence Community performs a robust review of the parties to the transaction in order to spot red flags regarding other parties that might have the ability to influence the activities of the target U.S. business contrary to national security interests. In my 7 years as a representative to CFIUS, I do not believe that we lacked sufficient information in reviewing a transaction to determine whether there was an unresolved national security concern associated with an indirect owner.

The real issue, in my view, is resources, particularly since such issues are becoming far more complicated. The statute and the regulations are sufficient to require the collection and review of such information. Although I have been out of Government for over 2 years, my sense is that, with the change in investment strategies that have been much discussed, there needs to be more CFIUS staff dedicated to researching and reviewing complex ownership structures of notified and non-notified transactions. My sense is that the Intelligence Community risk assessments could be improved with more IC analysts—particularly those who are fluent in Chinese—to review SIGINT and public information to provide even more refined assessments of when indirect ownership or controls could create concerns.

With respect to the satellite-specific aspect of the question, I refer the Senator and his staff to Senator Bennet's amendment to the NDAA that is now section 6207 (Report on Export of Certain Satellites to Entities With Certain Beneficial Ownership Structures) of S. 1790. I believe that it would address many of the issues motivating the question. I personally would endorse the addition of resource (as suggested in section 6207(c)(6)) to the Bureau of Industry and Security so that it can better study such ownership issues during the license application process.

With respect to other space-related technology transfer issues pertaining to China, please see my testimony at: *https://www.uscc.gov/sites/default/files/Kevin%20Wolf%20USCC%2025%20April.pdf.*

Q.2. Are there additional disclosure requirements—on beneficial ownership, for example—that are necessary for Chinese entities that want to invest in the U.S. or access our financial markets?

A.2. I am not an expert [1] on the existing disclosure requirements with respect to access to financial markets, so I will pass on responding to this question in detail. From the congressional commentary and media coverage, however, it appears to clearly be an area worthy of study. I agree with the general theme from the hearing that the U.S. financial system should not have built-in incentives for U.S. investors—deliberately or subconsciously—to make decisions or take actions that would be in their financial interests but would simultaneously be contrary to our national security interests.

Q.3. More broadly, how should we think about how to best compete with Chinese State-owned enterprises that often make decisions based on strategic or political considerations as opposed to market forces?

A.3. At the macro and extremely general level, we do not want to move in the direction of becoming a State-planned economy outside the global dispute resolution systems similar to the Chinese economy in order to compete with China. I understand the temptation to do so because it is difficult to fight unfair trade and economic behavior with principled and fair economic behavior. Although I am not an economist, my instincts and experience tell me that the way for the United States to prevail economically is to not try to pick winners and losers in the U.S. economy, particularly through protectionist measures that are inconsistent with the world trading system that the U.S. helped build after World War II and that has, in the main, served us and the world well ever since. This system already contains a suite of well-tested tools, such as those designed to address dumping, State-subsidies, and intellectual property theft. Of course, none is perfect, but working within the existing system is better than the alternative.

One of the Government's other roles in responding to this issue is to support in every way possible domestic innovation, fundamental research, and creativity in an open, low regulatory burden capitalist economy so that U.S. companies and research institutions have the opportunity to out-innovate their foreign competition, particularly in high-value services and technology sectors that are needed to support and drive much of the rest of the economy.

Another of the Government's roles in this topic must be to work with our allies, each of which face similar issues with respect to China. No one country's actions alone can respond to the Chinese policies and practices that are motivating the question. For example, if the U.S. and most of the non-China Pacific Nations were to align together in a trade partnership to reduce barriers to trade among such countries, they could act collectively to respond to un-

[1] *https://www.banking.senate.gov/imo/media/doc/Wolf%20Testimony%206-4-19.pdf*

fair Chinese trade practices far more effectively—while at the same time benefiting U.S. companies and advancing U.S. environmental and labor standards. (This is why I believe the U.S. withdrawal from even a TPP—modified to address various labor, human rights, and environmental issues—was a mistake on a variety of levels.)

At the individual transaction level, one of CFIUS's important roles is to evaluate foreign direct investments to ensure that there is a legitimate economic reason for the investment. If the investment is (or appears to be) motivated for foreign policy reasons of a foreign country (rather than expected economic gain for the parties), then CFIUS should aggressively mitigate the transaction or recommend a block. From my experience on CFIUS, we would periodically see transactions that were "too good to be true," suggesting that there was another motive. This is why I was pleased to see the additional authority FIRRMA gave to CFIUS to require mandatory filings of investments by foreign Governments or by those for which a foreign Government had a substantial interest. I look forward to reading (and potentially commenting on) the proposed implementing regulations CFIUS will publish this fall to addresses the concern motivating the question.

On the technology transfer side, the export control rules and interagency review process are designed to identify proposed exports that may be motivated for reasons that are not exclusively economic in their motivation. That is, if based on the license application and the follow-on questions, it appears that the proposed export to China would not be in connection with a purely civil end use and end user that was motivated by economic considerations, then Commerce has denied and should continue denying such applications.

Q.4. Are there particular sectors of regions, like Latin America, where we need to be smarter and more agile in responding to and getting ahead of this challenge?

A.4. The Intelligence Community is the one to answer such questions. In my experience in Government, however, the primary source of investments (or proposed exports) that did not appear to be based on clearly economic motives was China. Most such transactions were motivated for financial reasons, but there were certainly cases where there was an apparent Chinese foreign policy or other noneconomic motive behind the investment.

Q.5. What is your assessment of the risk posed by the current treatment of Hong Kong as a separate and favorable customs entity for the export of dual-use and other sensitive U.S. technologies which can then be reexported to the PRC? Given the continued erosion of Hong Kong's autonomy and Beijing's ever-greater control, has the time come to treat Hong Kong and the mainland the same for purposes of these sensitive technology exports under U.S. law?

A.5. I do not know. The United States–Hong Kong Policy Act of 1992 effectively requires the U.S. Government to treat Hong Kong and mainland China as two separate destinations for export control purposes. In addition, section 103(8) of the Act states that the "United States should continue to support access by Hong Kong to sensitive technologies controlled under [the then existing multilateral export control regime that is the predecessor to the Wassenaar

Arrangement] for so long as the United States is satisfied that such technologies are protected from improper use or export." Because the United States has not made a determination to the contrary, the statutory and regulatory prohibitions pertaining to the export and reexport of space-related (and other controlled) items subject to U.S. jurisdiction that are applicable to mainland China do not apply if the destination is Hong Kong. The export control regulations, however, still require licenses to export and reexport space-related and other controlled items to Hong Kong. Applications for such exports and reexports are reviewed by U.S. Government export control authorities to determine, for example, whether Hong Kong is indeed the ultimate destination and whether the export or reexport otherwise presents any national security or foreign policy concerns.

Before the hearing, I was asked to comment on whether items, particularly space-related items, subject to U.S. export controls are being illegally exported out of Hong Kong to China or other countries of concern. I left the Government on January 20, 2017, and thus no longer have access to such information, whether positive or negative. I can, however, say that on January 19, 2017, a rule that I signed expressing concerns about the issue remains in effect. The rule imposes additional support document requirements on exports and reexports to Hong Kong. In essence, the rule leveraged the EAR to effectively compel compliance with Hong Kong export and import permit requirements by requiring proof of compliance with Hong Kong law as a support document necessary for shipping under an EAR license or license exception. As stated in the preamble, BIS took "this action to provide greater assurance that U.S.-origin items that are subject to multilateral control regimes . . . will be properly authorized by the United States to the final destination [such as Mainland China], even when those items first pass through Hong Kong." My thought at the time was that if we had regular, robust assurances and intelligence that diversions of U.S.-origin items were not occurring, then the additional requirements would remain in effect as is or be removed. If not, then the stricter licensing policies, including policies of presumptive denials, would need to be imposed. I would encourage you to ask this question of current BIS officials. In addition, I would encourage you to ask current BIS officials whether there is an advantage in treating Hong Kong differently, notwithstanding the issues referenced in the question, because it allows for more access to information and cooperation on nonproliferation objectives than would otherwise be the case.

Q.6. I was shocked when the Administration rolled back penalties for ZTE last year in the rush to get a trade deal. And I'm still concerned with the President's recent comments suggesting that loosening restrictions on Huawei could again be part of some transactional give-and-take in the broader trade dispute. Do you believe the Administration's approach with respect to ZTE and Huawei will achieve our goals of protecting our national security and communications infrastructure?

A.6. As the former Assistant Secretary who was responsible for the use of the Entity List for 7 years and who also was the one who

helped shepherd the interagency effort to add ZTE to the Entity List, I have thought a lot about this question and the proper use of the list. It is a valuable tool for advancing our national security and foreign policy interests, but it must be used carefully in order to not provoke responses that are more harmful than helpful to the same interests. Putting all my thoughts on the topic in writing would be a significant effort, however. One day I will. In the meantime, Members of the Committee or any of its staff should feel free to call me to come up to the Hill discuss the topic. Without advocating for or against any particular listing, I would be happy to discuss what the tool is and is not, its history, its effect, and how I think it should best be used.[2] As part of the Committee's oversight responsibilities, it should have such background given the prominence the Entity List is taking in export control, law enforcement, and bilateral activities. A lot of nuance and detail is lost in the current discussions, which is understandable because it has historically been a rather esoteric tool known generally only to trade practitioners and those affected by a listing.

For example, the President's ZTE-related tweet was actually with respect to a Denial Order imposed after I left Government service rather than the Entity List action I was involved in. The two tools are substantially similar (and limited only to the export, reexport, or transfer of items "subject to the Export Administration Regulations"), but a denial order is the result of a civil or a criminal enforcement settlement. The Entity List tool is generally used before a civil or criminal investigation and, as was the case with ZTE, can be useful as leverage in addressing the national security or foreign policy concerns that would later be addressed through law enforcement efforts.

In any event, I agree with the premise of the question, which is that the Entity List should never be used as a tool of trade policy or as a negotiating chip for anything other than achieving actual national security (as opposed to economic or political) or foreign policy objectives. It devalues both and could lead to the tool's becoming less effective if foreign companies and Governments see it, in reality or perception, as a transactional or political tool to be negotiated against on issues unrelated to the bad acts that caused the foreign entity to be added to the list. Successive Administrations have forcefully (and truthfully) emphasized to foreign Governments and foreign companies that U.S. export controls in general, and the Entity List in particular, were not used for political or economic purposes. (Indeed, this is why we published ZTE's internal documents describing its plans to violate U.S. law when we added ZTE to the Entity List in March 2016. We wanted the company and the Chinese Government to see that our actions were motivated exclusively by national security and law enforcement concerns, rather than political objectives.)

With respect to the Huawei matter, it is hard for me to answer the question because neither I nor anyone I know knows (or can say) what the Administration's objective is with respect to the listing. That is part of the problem. I've read the transcript of the

[2] Eric Hirschhorn, my former boss and the former Under Secretary for Industry and Security has also thought a lot about such issues and I would encourage the Committee to reach out to him as well.

President's press conference, heard the speeches by Commerce officials, and have read the press reports of the topic. From the outside, I cannot tell whether (i) the Administration plans to forever list Huawei as part of an effort to significantly harm the company financially for broader "disentangling" objectives, (ii) trade away the listing for more agricultural purchases from China, (iii) focus the effort on Huawei's 5G capabilities, or (iv) remove Huawei from the list once it can confirm that it is no longer engaged in the sanctions-related activities the notice stated was the basis for the listing. Given that I am no longer in the Government and know that most information on such issues cannot be made public, I am willing to give the Administration the benefit of the doubt that there is a plan that will achieve its national security objectives without unnecessarily harming U.S. industry, such as through the issuance of some types of licenses. By the way, the issues involving the Huawei are indeed extremely serious and I am not in any way challenging the Administration's desire to take action against it. Rather, I am merely puzzled by the process to achieve the goal.

Even if, however, there is a clear, interagency-cleared and agreed-upon plan on how to handle the matter, the perception of unrelated Chinese companies, based on their comments to the U.S. companies I work with, is that the Entity List has become a political and a trade policy tool. This view, whether justified or not, and the resulting general uncertainty are motivating Chinese buyers of benign, commercial U.S.-origin items to begin dual-sourcing with non-U.S. alternate suppliers or moving away from U.S. sellers completely. This, of course, harms U.S. companies economically, helps their foreign competition, and has no impact on the Chinese economy. Without the income from sales of benign commercial items to Huawei and other Chinese companies, U.S. companies have less to invest in R&D, which reduces their ability to advance their technologies to stay competitive. This ultimately harms the U.S. defense industrial base and our national security because the Defense Department depends upon advances in the commercial technologies generated by such R&D to be able to acquire more advanced items, particularly in the microelectronics sector, and at low per-unit costs.

To avoid such responses or beliefs from developing when I was the Assistant Secretary, I tried to ensure that the addition of an entity to the list was a means to an end rather than an end in itself. Being added to the list is not imposing denial order. It is not settling a civil or a criminal enforcement action. It is not a sanction imposed by the Treasury Department, which is much broader in scope than the Entity List prohibitions. Rather, the addition uses the EAR's leverage over exports, reexports, and transfers of items subject to the regulations to motivate foreign parties to stop engaging in the acts contrary to foreign policy and national security interests that led to the listing. Historically, once (and if) the listed foreign party could confirm with confidence that it has stopped engaging in the bad act that led to the listing, then BIS would remove it from the list. If it could not, then it would stay on the list. Without such a possibility being understood, then its effectiveness as a tool of leverage is lost.

Finally, the Entity List tool is, as is the whole EAR, focused on the export, reexport, and transfer of commodities, software, and technology "subject to the Export Administration Regulations." Such items are primarily U.S.-origin items and all items that are in the United States. A small number of foreign-made items outside the United States are "subject to the EAR" if they contain specific amounts of U.S.-origin content controlled for national security reasons. (The exact rule is more complicated and can be found in EAR Part 734.) Contrary to many media reports, the list does not prohibit U.S. companies from shipping to listed entities from outside the United States foreign-made items that are not subject to the EAR. Unlike Treasury's sanctions (which are vastly broader in scope), the EAR's Entity List prohibitions are not based on the nationality or ownership of the shipper, only the nature of the underlying item being shipped. My point in listing these differences is that such limitations should be understood before deciding to use the list to take action against a foreign company. That is, if the entity does not need a significant amount of U.S.-origin items, for example, to function, then the listing will not be that effective and other regulatory tools need to be considered.

Another implication of the Entity List's structure is that it is not a tool that can be used to control the import into the United States of Chinese-made or equipment into the United States, such as with respect to that which would be used in the 5G infrastructure. President Trump has recently issued a supply chain-related Executive Order that requires BIS to publish regulations implementing inbound and other transaction controls related to information and communications technology.[3] I understand that BIS will be publishing regulations on this topic this summer or fall. This Committee will want to study such regulations to see how well or not they address some of the concerns implicit in the question.

Q.7. I have made the point to the Administration that if we are going to compete with Huawei on 5G architecture it's not enough to confront China on predatory economic practices or security risk—both of which are real—but that we must also be at the forefront of constructing public–private partnerships, with our allies and partners, to assure that there is an alternative architecture—economically viable, secure, and with appropriate privacy safeguards. What is your assessment of this sort of approach?

A.7. Absolutely. As mentioned above, multilateral cooperation with common objectives with respect to China is vital to the success of any such plan. Industry must be involved in the solution. And the imposition of export controls, sanctions, and tariffs can only be one part of what must be a broader whole-of-Government effort to address the issues in the question. Let me know how I can help.

Q.8. Are there particular sectors—AI, machine learning, genomics, biometrics, quantum computing—where you see particular U.S. vulnerabilities? How do we best safeguard our edge in those areas?

A.8. The regulations are already quite broad and capture any type of commodity of any sensitivity and all stages of its development

[3] *https://www.akingump.com/en/news-insights/international-trade-alert-executive-order-and-huawei-entity.html*

that is in any way specially designed for military applications, and the technologies and software related to them. There also has been a robust interagency and international process for decades to identify commercial items that have proliferation-related or significant military applications. Thus, I do not know the delta between what is not now controlled and what should be. I do, however, have complete confidence in the process and standards for what should be controlled that are set out in the Export Control Reform Act. My prepared remarks set out the standards and my views on the topic in detail.[4] The technologies in the question are all certainly worthy of study to see if there are subsets of such technologies that meet the ECRA standards for control. From the outside, it appears as if the Administration has a regular order process for analyzing such questions. This Committee should follow that process closely to ensure that it and any amendments to the EAR that result are consistent with the standards of ECRA.

Identifying emerging and foundational technologies to be added to control lists is only one part of what is needed to keep our edge, as noted in the question. The agencies that administer and study such technologies need significantly more resources in order to properly conduct an ever-more complicated task. The enforcement agencies need more resources to investigate and prosecute violations, which motivates more internal compliance. The agencies need more resources to conduct outreach and training so that companies can be on the front line of compliance.

The other key to keeping the edge is that list-based controls cannot do it alone. There are many other types of Government support that are needed. Funding for fundamental research, for example, is critical to maintaining the edge. Keeping open markets with allies and others for less sensitive technologies in a low regulatory burden environment is also key for the companies that develop such technologies. I'm not an expert in all the other ways to help. I just want to note that export controls are only a part of the solution to the issue identified in the question.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR WARREN FROM KEVIN WOLF

Q.1. What steps should the United States be taking, that it is currently not taking, to counter the influence of China's Belt and Road Initiative (BRI) in countries that have a demand for infrastructure and other public projects, so that those countries have a viable alternative to surrendering their strategic infrastructure to China?

A.1. I am an expert in the law, policy, practice, and administration of export and foreign direct investment controls to achieve national security and foreign policy objectives.[1] I am only an amateur in topics involving the best way to respond to the BRI issues.

Q.2. Does the successful penetration of China's Belt and Road Initiative (BRI) into economies in Europe, Latin America, and Africa increase the likelihood that authoritarianism and corruption will

[4] *https://www.banking.senate.gov/imo/media/doc/Wolf%20Testimony%206-4-19.pdf*
[1] *https://www.banking.senate.gov/imo/media/doc/Wolf%20Testimony%206-4-19.pdf*

corrode the political systems of countries in those parts of the world? Please give a brief assessment.

A.2. Again, I'm not an expert in such areas, but my general sense of the issue is that the answer to your question is clearly "yes."

Q.3. Aside from using tariffs, sanctions, export controls, and other tools of economic statecraft to punish China for anticompetitive and coercive economic practices, what domestic policy tools should the United States be using to strengthen our competitiveness and reduce wealth inequality here at home—regarding basic and applied research, public education, infrastructure, and other investments?

A.3. Again, I'm not an expert outside the export control and foreign direct investment areas, but I absolutely agree with the essence of the question, which is that tariffs, sanctions, and export controls are not the solution to all the problems before us, particularly those involving China. It is relatively easy to sanction a company, impose a control over a technology, or impose a tariff. It is, however, relatively hard to help U.S. companies, and their employees, "run faster" and stay internationally competitive through the types of investments identified in the question. A proper answer to the question would essentially require the preparation of an entire economic agenda for an Administration. There are others far more qualified than me to set out such an agenda.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR SINEMA FROM KEVIN WOLF

Q.1. Many experts say a multilateral approach will ultimately be needed to hold China accountable for its role in the production and distribution of illicit fentanyl. Do you share that view?

A.1. I am not an expert in such topics,[1] so I will not respond because it would not be of use to the Senator. From what I learned during the hearing, however, I applaud the Senator's and the Committee's efforts to address aggressively the topic. There seems to be bipartisan consensus on spending the time and resources necessary to address the serious issue.

Q.2. Do you feel that the Administration's policies and rhetoric on trade could undermine the necessary goodwill to work collaboratively with our trading partners to hold China accountable and stop the flow of fentanyl?

A.2. Again, although I am not an expert in the area, as discussed during the hearing in detail, solutions to such issues clearly require multilateral cooperation.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR SASSE FROM SCOTT KENNEDY

Q.1. The U.S. Government has primarily relied on the Kingpin Act to combat international drug trafficking but this legislation is over 19 years old. In your opinion how has the trafficking business—whether it's fentanyl, heroine, other hard drugs, or human traf-

[1] *https://www.banking.senate.gov/imo/media/doc/Wolf%20Testimony%206-4-19.pdf*

ficking—evolved in the last 19 years and have our authorities been able to keep up with how these networks operate in practice?

If not, where should improvements be considered?

Do we have any good data driven evaluations of the effectiveness of the Kingpin Act and its utilization almost 20 years after enactment?

Are there other related tools, perhaps the Transnational Criminal Organization (TCO) designation, that we could utilize in a more effective manner to combat these trafficking networks?

Fentanyl trafficking is particularly concerning because of its potency, addictiveness, and lethality but also because of its Chinese origin. Last year, the U.S. Government used the Kingpin Act to designate Chinese fentanyl traffickers for sanctions. That action represents an evolution in utilization of the Act. How do you assess this development, especially given the large amount of fentanyl production in China from pseudo-State entities?

Given the blurring of the lines between the Chinese Communist Party and private sector entities in China, how would you suggest we adjust our thinking and utilization of these and other sanctions authorities to combat fentanyl trafficking from China?

Are there any adjustments we need to be making to address financial flows related to fentanyl trafficking?

If so, what adjustments would you recommend?

Are there any recommendations you would make that are unique to fentanyl trafficking as opposed to things we should be doing to strengthen our anti–money-laundering (AML) regime?

If not, why not?

A.1. I am not an expert on fentanyl, so cannot comment.

Q.2. Some of our hearing touched on the implications 5, 10, 20 years down the road for U.S. preeminence in the international financial system. China and Russia have both developed an alternative to SWIFT and some in Europe have called for alternative payment systems that do not touch the United States. How viable are these Chinese and Russian alternatives at the moment?

A.2. In the short term, those Chinese and Russian alternatives are not viable.

Q.3. How viable are they over the long run?

A.3. In the long term, if the U.S. is perceived to exploit SWIFT for its own interests and therefore undercut SWIFT as an independent platform for interbank transactions, that will increase the incentive for Chinese and Russian alternatives. The U.S. needs to reassure everyone that SWIFT is a public good that serves global interests, not its own.

Q.4. What are the metrics we should look at to evaluate whether these alternative systems are becoming viable and could potentially displace U.S. preeminence?

A.4. We should look at the number of financial institutions, the number of transactions that go through the system, and other key financial institutions' media coverage that looks to other alternatives.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR MENENDEZ FROM SCOTT KENNEDY

Q.1. One of the provisions that I authored in FIRRMA requires CFIUS to develop regulations to ensure that State-owned entities are declaring their transactions with CFIUS and not using complex financial structures to conceal their ownership or evade CFIUS review. We saw this situation at work in December, when the *Wall Street Journal* reported that a firm owned by China's Ministry of Finance was able to use offshore subsidiaries to purchase a U.S. satellite firm and was thereby allegedly able to access information that may be restricted under U.S. export controls.

What is your assessment of CFIUS's ability to evaluate the extent of foreign Government control or influence over foreign firms seeking to invest in the U.S.?

A.1. Historically, CFIUS has done a good job in determining ultimate control of company due to the fact that the number of cases have been low enough that the Members of the Committee have been able to get information about the foreign acquirer. Additionally, if CFIUS increases its examination of American subsidiaries abroad, that will increase the challenge of understanding the true ownership of Chinese companies.

Q.2. Are there additional disclosure requirements—on beneficial ownership, for example—that are necessary for Chinese entities that want to invest in the U.S. or access our financial markets?

A.2. I do not know.

Q.3. More broadly, how should we think about how to best compete with Chinese State-owned enterprises that often make decisions based on strategic or political considerations as opposed to market forces?

A.3. Outside of China, American companies have been able to successfully compete with Chinese SOEs in many industries. The main challenge is sectors that have complex financing and institutions which provide financing for the customers. Chinese SOEs and large private companies receive export support by the involvement of the China Development Bank and China Export–Import Bank. The U.S. Export–Import Bank operates at a much smaller scale, which puts U.S. firms at a disadvantage when it comes to financing terms. In the Chinese market, the key is to level the playing field and open more sectors to foreign investment. One particularly helpful step would be to have China join the WTO's Government Procurement Agreement; they pledged to join the agreement as soon as possible after joining the WTO, but 18 years later, they are still not signatories.

Q.4. Are there particular sectors of regions, like Latin America, where we need to be smarter and more agile in responding to and getting ahead of this challenge?

A.4. The U.S. needs global policies to monitor the activity of Chinese SOEs, and increase cooperation in Latin America in order for them to understand the challenges of doing business with Chinese SOEs and the political obligations and security risks that come with it. The U.S. and the West also need to provide good alternatives to this region in terms of proper financing options. The U.S.

can actively take part in setting international norms in international development, foreign aid, and the development of multilateral institutions.

Q.5. What is your assessment of the risk posed by the current treatment of Hong Kong as a separate and favorable customs entity for the export of dual-use and other sensitive U.S. technologies which can then be reexported to the PRC? Given the continued erosion of Hong Kong's autonomy and Beijing's ever-greater control, has the time come to treat Hong Kong and the mainland the same for purposes of these sensitive technology exports under U.S. law?

A.5. For the time being, Hong Kong is being treated as separate from mainland China in terms of tariffs and export controls, but the situation should be closely monitored. It would be helpful for the U.S. Congress to hold public hearings on this subject. Beijing should not take Hong Kong's external commercial status for granted.

Q.6. I was shocked when the Administration rolled back penalties for ZTE last year in the rush to get a trade deal. And I'm still concerned with the President's recent comments suggesting that loosening restrictions on Huawei could again be part of some transactional give-and-take in the broader trade dispute. Do you believe the Administration's approach with respect to ZTE and Huawei will achieve our goals of protecting our national security and communications infrastructure?

A.6. No, the Administration's approach will not protect our national security infrastructure. The biggest challenge from ZTE and Huawei is whether having their equipment in U.S. and Western networks increases national security vulnerabilities. There is general consensus that this is the case for core parts of a country's network, but there is not consensus about whether this applies beyond the core and with regard to handsets. The Administration's May 2019 Executive Order addresses this risk, and the Administration is engaging with other Governments to come to decisions about Chinese telecom equipment.

A separate issue is whether the operation of these companies themselves or their activities in non-Western countries poses a threat to the United States. That is the logic behind placing Huawei on the Commerce Department's Entities List in May 2019. There are potential multiple rationales for taking this action: it could slow Huawei's growth, reduce Huawei's progress in 5G, or even lead to the company's demise. It also could give the U.S. Government more information about what U.S. technology is being sold to the company (since companies have to receive approval for such sales). The Administration has yet to articulate which of these rationales undergirds its policy. This is made more confusing by the creation and extension of the Temporary General License, as well as the President's comments that U.S. could potentially remove Huawei from the Entities List if the U.S. and China reach a major trade deal. All of these complexities aside, my own view is that the Entities List action is not serving American national security interests effectively, and that the U.S. can take a wide variety of other steps to respond to national security challenges posed by any individual company.

Beyond all of this, the U.S. needs to operate on the assumption that international telecommunication networks are not 100 percent clean, and as a result, put primary energy on mitigating risks instead of decoupling from China entirely.

Q.7. I have made the point to the Administration that if we are going to compete with Huawei on 5G architecture it's not enough to confront China on predatory economic practices or security risk—both of which are real—but that we must also be at the forefront of constructing public–private partnerships, with our allies and partners, to assure that there is an alternative architecture—economically viable, secure, and with appropriate privacy safeguards. What is your assessment of this sort of approach?

A.7. It is not reasonable to expect the U.S. and the West can create an entirely alternative architecture that does not include any Chinese participation. We do not have the technology, the funding or the companies for this. No private–public partnership can fill this gap. Instead, global architecture risks should be mitigated, which is a more cost-effective approach and addresses national security concerns.

The United States has been successful in the last 100 years not only because it is powerful but because it is seen as a more stable, mutually beneficial, and ultimately beneficent partner.

It remains in our interest to not only use our strength for our needs of the moment, but also to reinforce these views so that we can harness these strengths in the long term. A long-term approach that builds in the partnership of private sector entities and foreign Governments to create a stable, durable architecture would be far more effective.

Q.8. Are there particular sectors—AI, machine learning, genomics, biometrics, quantum computing—where you see particular U.S. vulnerabilities? How do we best safeguard our edge in those areas?

A.8. There are areas in which the Chinese are doing well, some of which are beneficial to the U.S. and some of which are concerning to the U.S., particularly in areas where applications serve Chinese military interests or surveillance technologies. The U.S. already has in place regulatory systems to monitor China and protect U.S. national security, but the U.S. needs to improve their technology and improve the market for it, including commercialization, which would be the best way to protect itself.

Q.9. In your testimony, you stated that "the U.S. needs to strengthen its own ecosystem for advanced technologies" and that "a more successful American high-tech sector is the best bulwark against the challenge from China." I wholeheartedly share those views and am working on legislation to address shortfalls in our own education, infrastructure, and research and development investments. What do you think are the most efficient ways for Congress to promote a vibrant high-tech sector and assure that the U.S. remains on the cutting-edge in developing the technologies that will drive the next century? Are there specific programs or commercial incentives Congress should look to create, change, or augment?

A.9. There are a few ways Congress can promote a vibrant high-tech sector and assure that the U.S. remains on the cutting-edge

in developing the technologies that will drive the next century. First, greater funding for basic research in science and technology. Second, a more targeted support for projects identified by the Pentagon and the Department of Energy that are new emerging technologies and overseen by DARPA and ARPA-E. Third, greater funding for America's national science labs. Finally, the use of tax incentives to increase the demand for emerging technology by consumers in the private and Government sectors. For example, this should include greater rebates for NEVs in order to create a better market for them in the U.S.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR WARREN FROM SCOTT KENNEDY

Q.1. What steps should the United States be taking, that it is currently not taking, to counter the influence of China's Belt and Road Initiative (BRI) in countries that have a demand for infrastructure and other public projects, so that those countries have a viable alternative to surrendering their strategic infrastructure to China?

A.1. The U.S. Government and private sector needs to provide greater financial support for infrastructure-related projects for developing countries. This shouldn't be viewed as corporate welfare (as all of the funds are usually paid back to the U.S. Treasury, with interest), but rather as a way to promote American export of goods and services and strengthen the development process of these countries.

Q.2. Does the successful penetration of China's Belt and Road Initiative (BRI) into economies in Europe, Latin America, and Africa increase the likelihood that authoritarianism and corruption will corrode the political systems of countries in those parts of the world? Please give a brief assessment.

A.2. We should not worry about BRI's effect on the political systems in those regions. The U.S. and the West need to increase their activity in those regions, not only the Chinese. We need to increase best practices in lending and in auditing projects afterward. Also, promoting a healthy civil society in these countries and increasing their knowledge about China is important so that those regions are able to independently make judgements on deals and Chinese motives.

Q.3. Aside from using tariffs, sanctions, export controls, and other tools of economic statecraft to punish China for anticompetitive and coercive economic practices, what domestic policy tools should the United States be using to strengthen our competitiveness and reduce wealth inequality here at home—regarding basic and applied research, public education, infrastructure, and other investments?

A.3. There are a few ways the U.S. can strengthen its competitiveness and reduce wealthy inequality. First, increase support for basic research. Second, develop tax and rebate incentives for the consumption of American technologies. Third, examine the pros and cons of limiting intellectual property licensing rates for technology that is clearly meant to serve as public goods. Fourth, increase the opportunities to advance STEM education and employment opportunities for people from lower-income communities and

minorities. There should be more diversity amongst scientists. Fifth, increase the opportunities to study abroad and study a foreign language. With greater diversity amongst scientists and engineers and the tech sector generally, it will more likely its benefits will be more widely diffused across society.

Q.4. *Fentanyl*—In Massachusetts, health providers, first responders, and public officials have worked together in their communities in an effort to tackle the opioid crisis that has affected families across my State. While there are signs that many of these efforts are having an impact in reducing the number of opioid overdose deaths, the illicit use of fentanyl, an extremely dangerous synthetic opioid, continues to fuel this epidemic. In 2018, for opioid-related overdose deaths in which a toxicology screen was available, fentanyl was present in 89 percent of them.

The State Department's most recent annual International Narcotics Control Strategy Report (INCSR) observes, "In December 2018, China committed to control fentanyl compounds as a class. Once implemented, this move should help thwart illicit chemists and manufacturers who quickly change their illicit formulations to nonregulated analogues to evade law enforcement." Has China's commitment produced this outcome?

Referring to China, the State Department's INCSR observes, "U.S. law enforcement reports that the most common diversion tactic used by traffickers is the intentional mislabeling of shipments containing precursors. Perpetrators caught mislabeling precursor shipments often face only civil penalties and small fines rather than criminal charges. The challenge of preventing precursor diversion is further exacerbated by China's ineffective enforcement of land, air, and sea transport regulations." Aside from revising its laws and regulations, working with U.S. law enforcement partners and the Postal Service, and cooperating with international regulatory efforts like the International Narcotics Control Board (INCB), what additional steps should the Chinese Government be taking to ensure that its relevant authorities are properly scheduling fentanyl analogues, tracking trends in the illicit fentanyl market, and holding traffickers and their affiliates accountable?

Do you believe that Justice Department indictments of, and Treasury Department sanctions against, alleged Chinese fentanyl manufacturers and distributors have a meaningful deterrent effect on Chinese fentanyl trafficking networks?

A.4. I'm not an expert on fentanyl, so not able to comment.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR CORTEZ MASTO FROM SCOTT KENNEDY

Q.1. I have heard repeatedly from U.S. companies that are concerned about forced technology transfer as a precondition for doing business in China. The Chinese Government passed a new Foreign Investment Law earlier this year, which the Government claims will address some of those issues.

Since the passage of China's Foreign Investment Law earlier this year, have you seen any indications that the Chinese Government may actually curtail forced technology transfer, and other tactics used to steal intellectual property?

A.1. The Trump administration's 301 investigation, launched in August 2017, identified four ways in which the Chinese engaged in forced technology transfer. There has been mixed progress across these areas:

1. Unreasonable licensing terms: Recent changes in China's regulations may modestly improve the situation in terms of licensing fees. Data from the U.S. Department of Commerce shows that China's payment of licensing fees has increased over the last 2 years: *https://www.csis-cips.org/news/2019/8/19/show-me-the-receipts.*
2. Preconditions for technology sharing in exchange for approving American investment. China new Foreign Investment Law bans this practice, but 20–25 percent of American companies in China, according to an AmCham China survey, say they still feel some sort of pressure.
3. Chinese State-led investment abroad, with a focus on tech acquisition. Chinese outward investment has plummeted in the last 2 years, including in advanced technology. This is a product of greater restrictions of outward flows of funds due to Chinese internal financial weakness and external barriers created by the U.S. and others. China's financial situation will improve and more funds will be permitted to be invested externally, but recipients' walls are not likely to be lowered until there is greater strategic trust between China and others.
4. Cybertheft: Cybertheft by China apparently improved in the period directly after the Xi–Obama meeting in September 2015, but the latest reports show a return to pre-agreement levels in cybertheft emanating from China.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR SINEMA FROM SCOTT KENNEDY

Q.1. Many experts say a multilateral approach will ultimately be needed to hold China accountable for its role in the production and distribution of illicit fentanyl. Do you share that view?

Do you feel that the Administration's policies and rhetoric on trade could undermine the necessary goodwill to work collaboratively with our trading partners to hold China accountable and stop the flow of fentanyl?

A.1. I'm not an expert on fentanyl, so cannot comment.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR SASSE FROM RICHARD NEPHEW

Q.1. The U.S. Government has primarily relied on the Kingpin Act to combat international drug trafficking but this legislation is over 19 years old. In your opinion how has the trafficking business—whether it's fentanyl, heroine, other hard drugs, or human trafficking—evolved in the last 19 years and have our authorities been able to keep up with how these networks operate in practice?

A.1. My field of expertise is in sanctions design, rather than in international narcotics trafficking. I would therefore submit that

experts in narcotics trafficking would be better positioned to answer questions about how trafficking has evolved.

From a purely sanctions design perspective, however, it is important to note that the increased use of chemical precursors and prescription medications as illicit drugs has broadened the scale of the problem and brought new potential suppliers into the mix.

Now, companies that make medicine or the chemicals that can be used in it are potential contributors to the drug epidemic. Given this, in my view, it is appropriate to expand the tools available to the United States to respond, including via sanctions.

The Fentanyl Sanctions Act would give the United States such tools, including scalable penalties for those who engage in illicit fentanyl trafficking. The presence of such options is—in my view—helpful as the U.S. Government adopts a flexible, adaptive, and resourceful approach to preventing such trafficking.

Q.2. If not, where should improvements be considered?

A.2. In my view, the passage of the Fentanyl Sanctions Act would improve the U.S. ability to respond to incidents of trafficking of synthetic opioids, which I understand represents a serious new threat to the United States.

Q.3. Do we have any good data driven evaluations of the effectiveness of the Kingpin Act and its utilization almost 20 years after enactment?

A.3. I am not aware of any particular study of the Kingpin Act as a stand-alone piece of legislation. I do believe, though, that as part of a multifaceted strategy for addressing narcotics trafficking, it is useful to have sanctions tools, just as it is useful to have diplomatic, law enforcement, customs, and other tools to prevent trafficking.

I am aware of a hearing on this subject in 2017 that includes testimony that both acknowledges the value and the deficiencies of the Kingpin Act. [1]

Q.4. Are there other related tools, perhaps the Transnational Criminal Organization (TCO) designation, that we could utilize in a more effective manner to combat these trafficking networks?

A.4. A TCO designation could also be employed alongside a Kingpin designation, though practically they would have the same legal effect: both require an asset freeze and property block on the designated individuals or entities.

Given this, a TCO designation would not provide any greater flexibility or utility than a Kingpin designation. For these reasons, I continue to believe that the tools provided by the Fentanyl Sanctions Act merit consideration.

Q.5. Fentanyl trafficking is particularly concerning because of its potency, addictiveness, and lethality but also because of its Chinese origin. Last year, the U.S. Government used the Kingpin Act to designate Chinese fentanyl traffickers for sanctions. That action represents an evolution in utilization of the Act. How do you assess

[1] *https://docs.house.gov/meetings/FA/FA07/20171108/106606/HHRG-115-FA07-Transcript-20171108.pdf*

this development, especially given the large amount of fentanyl production in China from pseudo-State entities?

A.5. I believe that the designation of those particular traffickers was merited on the basis of the information provided by the Treasury Department.

But, the fact that the fentanyl problem continued after the designation suggests that other traffickers remain active in the business and that either due to an absence of appropriate intelligence or concerns about the implications to otherwise legitimate trade, the Treasury Department did not believe it had grounds to impose further sanctions.

Given this, I believe that there remains utility in adopting new authorities that may improve the overall effectiveness of our sanctions component to the countertrafficking strategy.

I also believe that the Chinese authorities themselves have committed to addressing this problem. The Fentanyl Sanctions Act would contribute to these efforts by encouraging further diplomatic work with China in this regard.

Q.6. Given the blurring of the lines between the Chinese Communist Party and private sector entities in China, how would you suggest we adjust our thinking and utilization of these and other sanctions authorities to combat fentanyl trafficking from China?

A.6. I believe that the Chinese authorities are motivated at present to address this problem, as has been demonstrated by their readiness to work with the United States on this matter notwithstanding other bilateral problems.

It is vital that we continue to encourage Chinese Government improvement on this matter, especially by reinforcing that our intention is to address this problem with foreign Governments through diplomacy first.

I believe that the most important next step that we should take is to further incentivize Chinese cooperation with our efforts to prevent illicit fentanyl trafficking through the passage of the Fentanyl Sanctions Act. It has off-ramps for the imposition of sanctions that China can use and it incentivizes cooperation with international efforts to prevent this trafficking.

Q.7. Are there any adjustments we need to be making to address financial flows related to fentanyl trafficking?

A.7. The most important element in addressing financial flows is to create disincentives for banks to look the other way for transactions that are suspicious. Banks need to be motivated to ensure their compliance programs are capable of identifying and denying such transactions.

Q.8. If so, what adjustments would you recommend?

A.8. The creation of penalties and disincentives in the Fentanyl Sanctions Act would be a good first step. In my experience, most banks and other institutions are prepared to cooperate with enforcement efforts if they are shown what is required and given information to support these requirements.

But, for other institutions, they need to be motivated by the risk of consequences if caught engaging in illicit conduct. It is here that sanctions are useful but also structures to avoid them, as provided

in the Fentanyl Sanctions Act that would allow for the waiver of penalties in circumstances where Governments are addressing the problem.

Q.9. Are there any recommendations you would make that are unique to fentanyl trafficking as opposed to things we should be doing to strengthen our anti–money-laundering (AML) regime?

A.9. I do not believe there are any unique solutions to the financial problem attached to fentanyl trafficking. The issue now is helping banks identify transactions of concern and know how to handle them when so identified.

More generally, programs for training in sanctions compliance—for foreign Governments, foreign banks, and foreign companies—would be a welcome addition to the U.S. policy toolkit in strengthening the AML/counter–illicit-finance regime internationally.

Q.10. If not, why not?

A.10. In my opinion, the fentanyl-related financial issues are less about fentanyl and more about the kinds of companies and entities that may be implicated. For this reason, it is more important—in my view—to strengthen the overall system than it is to specifically call out fentanyl.

Q.11. Some of our hearing touched on the implications 5, 10, 20 years down the road for U.S. preeminence in the international financial system. China and Russia have both developed an alternative to SWIFT and some in Europe have called for alternative payment systems that do not touch the United States. How viable are these Chinese and Russian alternatives at the moment?

A.11. At this point, there are no viable alternatives to the payment systems that presently exist.

Q.12. How viable are they over the long run?

A.12. I believe that alternative systems are viable in the long run.

These systems will not necessarily displace the role of the United States altogether. The United States remains a crucial part of the international financial system and the convenience and other advantages of operating in the United States will remain powerful for the foreseeable future.

However, it is possible that there will be complementary systems that will be usable by those who seek to avoid the U.S.-led financial system. The creation of such systems will be a boon to U.S. adversaries and those who wish to evade U.S. sanctions enforcement.

It is worth noting, in this context, that the Shanghai Cooperation Organization (SCO) issued a statement on 14 June that said: "Serious attention will be given to increasing the share of national currencies in mutual financial transactions and settlements."[2] This effectively means: "bypass the U.S. dollar where possible."

A major element in U.S. sanctions effectiveness is that the U.S. financial system remains too attractive to sidestep. It is precisely this dynamic that is at risk in such a scenario.

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[2] *http://eng.sectsco.org/news/20190614/550955.html*

Q.13. What are the metrics we should look at to evaluate whether these alternative systems are becoming viable and could potentially displace U.S. preeminence?

A.13. I believe there are several metrics of merit, including:

1. *Number of countries involved*—obviously, the greater the number of jurisdictions involved, the greater the utility of an alternative
2. *Size/value of the countries involved*—numbers of countries may not matter nearly as much as the scale of their economies. If a substantial part of international financial transactions can be facilitated via an alternative (e.g., 20 percent or greater), then the alternative system may be viable. Imagine, for example, a system involving most of Africa, Latin America, China, and Russia. Such a system may not be the same size as the United States and European-dominated system, but it still will present opportunities and advantages for the countries involved.
3. *Number of financial institutions de-risking from the United States*—the United States is at greatest risk where companies and banks refuse to conduct transactions in the United States that have international components. Banks and companies that have solely "U.S. subsidiaries" that are kept at a remove from other business operations would dramatically lower the costs of sanctions imposition for violating U.S. sanctions rules.
4. *Currency composition in trade*—at present, the United States is able to perform an invaluable service internationally and profit from the use of the U.S. dollar as an intermediary currency. If you wish to conduct transactions between many countries in the world, then you will likely convert currencies by using the dollar (e.g., you will trade your pesos for dollars and then the dollars into francs in order to move goods from Mexico to Switzerland). If we see foreign countries choosing to transact directly—despite the costs and complexities—then this would suggest a decision to avoid the United States, particularly if as part of an alternative system.
5. *Invoicing/trading commodities outside of the U.S. dollar*—as with the currency composition of trade, many commodities are traded in dollars for ease of use and the stability the dollar affords. Choosing to avoid the dollar would be an important part of a viable alternative system.
6. *Speed/convenience of the alternative*—a simple, but important, factor is the speed and convenience of an alternative system. If it becomes easy to use and with quick processing and clearing times, then an alternative system is viable.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR MENENDEZ FROM RICHARD NEPHEW

Q.1. One of the provisions that I authored in FIRRMA requires CFIUS to develop regulations to ensure that State-owned entities are declaring their transactions with CFIUS and not using complex financial structures to conceal their ownership or evade CFIUS review. We saw this situation at work in December, when the *Wall*

Street Journal reported that a firm owned by China's Ministry of Finance was able to use offshore subsidiaries to purchase a U.S. satellite firm and was thereby allegedly able to access information that may be restricted under U.S. export controls.

What is your assessment of CFIUS's ability to evaluate the extent of foreign Government control or influence over foreign firms seeking to invest in the U.S.?

A.1. I believe that CFIUS has considerable ability to evaluate foreign Government control or influence over foreign firms seeking to invest in the United States.

Prior to FIRRMA, however, CFIUS lacked the ability—in my opinion—to reject transactions where such suspicions were unproven or more amorphous. The issue was less one of evaluation and more legal mandate to act.

I participated in CFIUS decisions while at the State Department and while confidentiality requirements prohibit me from discussing specific cases, there were several instances in which I believed that a transaction was inappropriate or dangerous, but was informed that the legal mandate that we had to reject investment decisions was so narrow as to preclude taking action in those cases.

The changes introduced via FIRRMA should—in my view—avoid many of these problems in the future.

Q.2. Are there additional disclosure requirements—on beneficial ownership, for example—that are necessary for Chinese entities that want to invest in the U.S. or access our financial markets?

A.2. Yes, I believe that additional disclosure requirements (such as beneficial ownership) would be useful in helping the United States to evaluate investment decisions.

Ultimately, though, disclosures are only as good as the Executive Branch has the ability to evaluate their veracity and to act to deny investments or access to U.S. markets. For this reason, I also believe that additional investigatory resources—including intelligence gathering—would be useful.

Q.3. More broadly, how should we think about how to best compete with Chinese State-owned enterprises that often make decisions based on strategic or political considerations as opposed to market forces?

A.3. From my perspective, I believe there should be three overall elements of our approach:

- *Vigilance/awareness as to what Chinese State-owned enterprises are doing*. We cannot prevent that of which we are unaware and we do ourselves no favors by failing to look. This is a problem that exists beyond China. In our interest to pursue market opportunities, we sometimes lose sight of the competing interest perspectives that other countries have. We need to be far more mindful of the different Government approaches that exist and structure our domestic regulations and enforcement approaches to manage these competing approaches.
- *Play to our strengths.* The United States is unlikely to ever approach economic decisions as China does. We do not structure our economy as the Chinese do nor is there any real interest in doing so. Consequently, direct competition with China on

the same terms is both unlikely and ill-suited to our approach to economics. We do have considerable strengths, however, starting with the competitive nature of our economy, its openness to external investment and adaptability. As we look to counter what China (and other countries) are doing, we need to ensure that we do not stymie these forces unnecessarily. We should be strategic in how we police investment and technology transfer activities, maintaining our competitive edge along the way.

- *Build coalitions.* It remains unfortunate, in my view, that the Trump administration exited the Trans-Pacific Partnership (TPP) agreement. For its imperfections, it—and other trade agreements—plays to our strengths, including setting regulatory standards and creating open spaces in which our market actors can operate. China is forced to compete on a national level because it does not have the diversity of partners and allies (trade and otherwise) that we do. We have partners and allies for a reason: they amplify U.S. strengths and help us to operate more successfully in the international economy. We should be broadening and deepening these relationships to take advantage of what has been built over the last 70 years.

Q.4. Are there particular sectors of regions, like Latin America, where we need to be smarter and more agile in responding to and getting ahead of this challenge?

A.4. I believe that, in Latin America and in Africa, there are opportunities for us to be far more effective in our economic diplomacy. The United States should be identifying opportunities for U.S. economic activity as well as development support, and should make the investments necessary to take advantage of these opportunities.

In my research, I have seen clear frustration with China in Latin America and Africa. The Chinese model of operations is not popular. We can and should provide an alternative that empowers local populations, invests in them and creates deep, sustainable relationships.

Q.5. What is your assessment of the risk posed by the current treatment of Hong Kong as a separate and favorable customs entity for the export of dual-use and other sensitive U.S. technologies which can then be reexported to the PRC? Given the continued erosion of Hong Kong's autonomy and Beijing's ever-greater control, has the time come to treat Hong Kong and the mainland the same for purposes of these sensitive technology exports under U.S. law?

A.5. I would defer to others on the specifics of how Hong Kong is treated for export control purposes, but I would agree that treating Hong Kong as a completely separable entity is inconsistent with realities on the ground. It does make sense to me to harmonize our approaches with respect to Hong Kong and China, though I would be reluctant to do so if it helped the Chinese Government assert in legal terms its ability to dominate the Hong Kong Government.

Q.6. I was shocked when the Administration rolled back penalties for ZTE last year in the rush to get a trade deal. And I'm still concerned with the President's recent comments suggesting that loos-

ening restrictions on Huawei could again be part of some transactional give-and-take in the broader trade dispute. Do you believe the Administration's approach with respect to ZTE and Huawei will achieve our goals of protecting our national security and communications infrastructure?

A.6. No, I do not believe the Administration's approach is in our national security interest vis-a-vis ZTE and Huawei, nor in our overall messaging to China.

Trade is a crucial national interest and resolving the trade dispute with China is important.

However, in my view, it is vital to maintain distinctions between instruments that we use to address trade disputes—such as tariffs—and instruments we use to address national security problems, such as sanctions and export controls.

In my view, the president's conflation of these sets of tools and interests creates dangerous perceptions in China and precedents more generally. It suggests that we do not use sanctions as a means of securing our national security interests, but rather as a cudgel to receive trade benefits. This undermines our credibility when we argue that sanctions against third parties—such as Iran—are entirely separate from our domestic economic priorities. It also creates a sense that we are prepared to discount our national security interest for improved trade access.

In this way, the Trump administration has implicitly argued that it is worth compromising our Iran sanctions (with ZTE, for example) in order to improve our trade balance. I do not believe this is necessary or sound.

Q.7. I have made the point to the Administration that if we are going to compete with Huawei on 5G architecture it's not enough to confront China on predatory economic practices or security risk—both of which are real—but that we must also be at the forefront of constructing public–private partnerships, with our allies and partners, to assure that there is an alternative architecture—economically viable, secure, and with appropriate privacy safeguards. What is your assessment of this sort of approach?

A.7. I agree with this approach.

The United States has been successful in the last 100 years not only because it is powerful but because it is seen as a more stable, mutually beneficial, and ultimately beneficent partner.

It remains in our interest to not only use our strength for our needs of the moment, but also to reinforce these views so that we can harness these strengths in the long term. A long-term approach that builds in the partnership of private sector entities and foreign Governments to create a stable, durable architecture would be far more effective.

Q.8. Are there particular sectors—AI, machine learning, genomics, biometrics, quantum computing—where you see particular U.S. vulnerabilities? How do we best safeguard our edge in those areas?

A.8. I would defer to others with respect to particular sectors, but believe that the systemic vulnerability that we face is lost confidence in the durability of trade and investment relationships with the United States.

The United States faces a credibility issue right now internationally that is making it harder for foreign partners to want to invest here, conduct R&D here, and to trust that their interests will be respected in the long term. A drift toward mercantilism is, in my view, our greatest vulnerability, as well as a sense of a persistent zero sum game with partners as well as adversaries.

This, in many ways, can affect each one of those technological subsectors.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR WARREN FROM RICHARD NEPHEW

Q.1. What steps should the United States be taking, that it is currently not taking, to counter the influence of China's Belt and Road Initiative (BRI) in countries that have a demand for infrastructure and other public projects, so that those countries have a viable alternative to surrendering their strategic infrastructure to China?

A.1. In my opinion, BRI is an attractive proposition for many countries because of the absence of alternatives. These countries may not be interested in supporting the Chinese political agenda but they have a natural and strong desire to advance their own national interests, and may not be concerned about the geostrategic implications of their actions.

The United States has three sets of options, which are not mutually exclusive but would involve somewhat different tools.

First and foremost, the United States can and should work with countries considering participation in BRI to ensure that projects are undertaken with the greatest possible transparency. BRI is creating real risks of corruption in countries that participate as well as unsustainable debt problems. The United States can and should shine a light on these projects so that national business communities and populations understand what is involved and, where necessary, encourage more appropriate and sustainable terms.

The Sri Lanka case demonstrates clearly what can happen when debt problems as well as unfavorable terms combine.[1] The United States should use its diplomatic presence to advise Governments against entering into such arrangements and to offer advice as how to manage the opportunities created by BRI.

Second, the United States should encourage China to reconsider its approach to debtor States. Through the Paris Club and other mechanisms, the United States has been a beneficent lender, offering debt relief and cancellation when necessary and appropriate. China should be encouraged to do the same, with political pressure applied on a multilateral basis to offer weight to this encouragement. Here, cooperation with States that intend to participate in BRI is essential to avoid this becoming another in a long line of U.S.–China disputes.

Third, the United States should consider carefully whether it wishes to compete on similar terms with the Chinese in advancing development projects through the BRI-targeted areas.

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[1] *https://www.france24.com/en/20190324-sri-lanka-new-chinese-silk-road-disappointment-economy-debt-italy-france-investment*

Financially, this would be difficult and costly. However, the United States continues to have advantages that China does not, including the support of a large network of partner and allied States that may be willing to work with the United States to develop and execute infrastructure projects in the same areas. The United States can utilize the multilateral development banks, including the World Bank, in order to develop and execute these projects.

I do not believe that a more aggressive approach—including the threat of U.S. sanctions and other pressure mechanisms—will be effective. Threats of consequences and punishment are likely to be counterproductive politically and do not address the sorts of interests that make BRI attractive to these countries.

Q.2. Does the successful penetration of China's Belt and Road Initiative (BRI) into economies in Europe, Latin America, and Africa increase the likelihood that authoritarianism and corruption will corrode the political systems of countries in those parts of the world? Please give a brief assessment.

A.2. I do have some concerns about the possibilities of corruption being attached to BRI projects. Large-scale development projects do come along with a substantial risk of graft due to the sums of money involved as well as the absence of appropriate controls to manage these risks. It is not clear to me that BRI has been appropriately structured to avoid these risks, though certainly Chinese officials have underscored their own concerns about corruption (which is also an important issue at home as well).

Authoritarianism is a somewhat different issue. My assessment is that some of the countries involved are already under authoritarian regimes and that BRI projects may reduce pressures that might otherwise undermine these regimes. By granting these Governments economic opportunities for development, BRI may help them burnish their domestic credentials and help manage domestic constituencies that otherwise could push for political change.

At the same time, I do not think that BRI in and of itself will create these dynamics. Rather, it may reinforce these dynamics that do exist because of an absence of interest on the part of Chinese officials on political modernization and change.

Q.3. Aside from using tariffs, sanctions, export controls, and other tools of economic statecraft to punish China for anticompetitive and coercive economic practices, what domestic policy tools should the United States be using to strengthen our competitiveness and reduce wealth inequality here at home—regarding basic and applied research, public education, infrastructure, and other investments?

A.3. As a scholar of economic statecraft, it is apparent that the absence of investment in U.S. domestic projects (from R&D to education to infrastructure) is a long-term threat to U.S. economic viability and national power.

The United States has obtained a privileged international position economically and politically because of the attractiveness of business opportunities here, the stability of our Government and economic structures, the rule of law, and our relatively well-educated and capable population. But, these are the results of invest-

ments made domestically—especially following the Second World War—that are not necessarily self-sustaining.

I would support expanded investment in domestic capacities at home, particularly as relates to managing income and wealth inequality, as essential elements of maintaining our international economic power and the continued viability of our general economic model.

In my view, this would require a range of policies including, among other things:

- Restoring fairness in our tax code to reduce the wealth gap, especially with the mega-rich;
- Addressing the burdens created by excessive student loan debt, which drags on the economy as a whole and undermines the generations now joining the work and consumer force;
- Investing in research and development for new technologies and techniques in manufacturing;
- Investing in research and development for new technologies and techniques for the production of carbon neutral energy;
- Establishing incentive structures for companies that appropriately compensate their workers and impose consequences on those that do not;
- Investigating and prosecuting corruption, particularly when involving Government officials; and,
- Addressing problems of systemic economic unfairness and wealth inequality, which creates a variety of social and economic ills.

In my opinion, the United States has a rare opportunity to demonstrate that its economic model can be reformed and work in support of its entire population, presenting a counter example to the Chinese model and others that may seek to compete with us in the future.

Q.4. *Fentanyl*—In Massachusetts, health providers, first responders, and public officials have worked together in their communities in an effort to tackle the opioid crisis that has affected families across my State. While there are signs that many of these efforts are having an impact in reducing the number of opioid overdose deaths, the illicit use of fentanyl, an extremely dangerous synthetic opioid, continues to fuel this epidemic. In 2018, for opioid-related overdose deaths in which a toxicology screen was available, fentanyl was present in 89 percent of them.

The State Department's most recent annual International Narcotics Control Strategy Report (INCSR) observes, "In December 2018, China committed to control fentanyl compounds as a class. Once implemented, this move should help thwart illicit chemists and manufacturers who quickly change their illicit formulations to nonregulated analogues to evade law enforcement." Has China's commitment produced this outcome?

A.4. Yes, China has modified its legislation to address this problem in early April. The revised legislation went into effect on 1 May.

It is still too soon to be able to say with any authority whether the changes in legislation have been matched by changes in enforcement.

Q.5. Referring to China, the State Department's INCSR observes, "U.S. law enforcement reports that the most common diversion tactic used by traffickers is the intentional mislabeling of shipments containing precursors. Perpetrators caught mislabeling precursor shipments often face only civil penalties and small fines rather than criminal charges. The challenge of preventing precursor diversion is further exacerbated by China's ineffective enforcement of land, air, and sea transport regulations." Aside from revising its laws and regulations, working with U.S. law enforcement partners and the Postal Service, and cooperating with international regulatory efforts like the International Narcotics Control Board (INCB), what additional steps should the Chinese Government be taking to ensure that its relevant authorities are properly scheduling fentanyl analogues, tracking trends in the illicit fentanyl market, and holding traffickers and their affiliates accountable?

A.5. The most important step for China to take now is to resource and empower adequately those enforcement entities in the country that are responsible for countering illicit trafficking.

Creating a legislative mandate is useful but absent officials who are empowered to identify, investigate and arrest those engaged in illicit trade, this mandate will be ultimately useless.

Importantly, a result of these investigations will be additional insight into how traffickers operate and how they are adapting to the legislation that is now in effect.

Ideally, internal Chinese developments will then be fed back into a diplomatic process—run by the State Department's INL Bureau in cooperation with domestic law enforcement agencies—that will allow the United States to adapt its own approaches here. For example, if Chinese investigators learn of a new tactic to evade postal inspections, then it would be appropriate (and, in my view, necessary) for China to share that with the U.S. State Department.

Such an evolution in the U.S.–China relationship on this matter would also demonstrate that China is not merely attempting to convince the United States that fentanyl is no longer a problem but rather taking concrete steps to ensure that it is not one.

Q.6. Do you believe that Justice Department indictments of, and Treasury Department sanctions against, alleged Chinese fentanyl manufacturers and distributors have a meaningful deterrent effect on Chinese fentanyl trafficking networks?

A.6. I believe that indictments probably have a limited deterrent effect on Chinese manufacturers and distributors who have no intention of traveling either to the United States or to jurisdictions where extradition is likely.

Sanctions may likewise have a limited effect if their only operative mechanisms are asset freezes and visa bans. On the other hand, if the U.S. sanctions toolkit were to expand (as with the Fentanyl Sanctions Act), then distributors and traffickers may have a more complicated set of decisions to make. For this reason, I believe that sanctions utility is directly related to the range of options that are available to the U.S. Executive Branch. With more

options, the United States can choose to impose sanctions against a wider range of entities and individuals (including companies that are engaged in the provision of precursor chemicals to illicit traffickers) and with more specificity in the measures selected so as to ensure the pain applied is targeted, tailored, and severe.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR CORTEZ MASTO FROM RICHARD NEPHEW

Q.1. I have heard repeatedly from U.S. companies that are concerned about forced technology transfer as a precondition for doing business in China. The Chinese Government passed a new Foreign Investment Law earlier this year, which the Government claims will address some of those issues.

Since the passage of China's Foreign Investment Law earlier this year, have you seen any indications that the Chinese Government may actually curtail forced technology transfer, and other tactics used to steal intellectual property?

A.1. I believe that it is probably too early to say whether the law will be implemented in a manner that is consistent with U.S. and other countries' expectations for the protection of intellectual property.

Certainly, China is making clear that it understands the importance of this issue to its investment attractiveness. For example, on 20 June, Chinese Premier Li Keqiang met with 19 large multinational companies and restated the Chinese Government's intention to "create a market-oriented, law-based internationalized business environment." [1]

But, this is an issue that requires constant scrutiny, monitoring, and evaluation.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR SINEMA FROM RICHARD NEPHEW

Q.1. Many experts say a multilateral approach will ultimately be needed to hold China accountable for its role in the production and distribution of illicit fentanyl. Do you share that view?

A.1. I believe that, as a general rule, sanctions are most effective when they have multinational support. Such a structure helps to prevent evasion and cheating; manage political debates about the value, utility, and ethics of sanctions; and, create the maximum pressure on sanctions' intended targets.

That said, in the near term, I would anticipate that the unique nature of this problem—which, as I understand it, still is largely confined to North America as a crisis—may lend itself to more unilateral approaches. But, as this problem becomes more global and as political pressure builds on all potential suppliers to do more to arrest illicit trafficking, then I would also anticipate other States being willing to join our efforts.

Q.2. Do you feel that the Administration's policies and rhetoric on trade could undermine the necessary goodwill to work collabo-

[1] *https://www.straitstimes.com/asia/east-asia/chinas-premier-tells-foreign-ceos-china-will-commit-to-reform-opening-up*

ratively with our trading partners to hold China accountable and stop the flow of fentanyl?

A.2. Yes, I believe that the Trump administration's approach to international relations—particularly with our partners but also with China—are a hindrance in our efforts to address this problem.

Thus far, China has continued to make progress—at least in a legislative sense—in working to prevent trafficking, notwithstanding the broader challenges that exist in the U.S.–China relationship.

But, China scholars have warned that the U.S. approach may undermine China's willingness and ability to work on this problem.

Moreover, the degree to which the United States is perceived as sanctioning everyone and everything in reach and for a variety of reasons (in pursuit of trade deals; to manage the situation with Iran and North Korea; to support human rights) may make it much harder to bring international partners into a workable coalition with us.

ADDITIONAL MATERIAL SUPPLIED FOR THE RECORD

The Washington Post: Fighting Fentanyl

Trump called the opioid epidemic a priority, but fentanyl deaths soar as resources fail to keep pace

By Sari Horwitz, Scott Higham, Steven Rich and Shelby Hanssen
Photos by Salwan Georges and video by Dalton Bennett and Whitney Shefte

May 22, 2019

WASHINGTON COURT HOUSE, OHIO — In a dungeon-like jail in the center of this depressed farming town, 18 women in orange-and-white-striped prison uniforms are crammed into a two-story cellblock. Many of them are withdrawing from fentanyl.

The jail, built in 1884 to hold 24, now houses 55 men and women, a number that can swell to as many as 90. The inmates are sprawled on metal bunk beds and mattresses that line the floors as they wait for court appearances or serve time on low-level drug offenses.

The medical exam room, used to treat minor ailments, is tucked into a broom closet beneath a concrete stairwell. With few drug treatment options, prisoners strung out on fentanyl go through days of withdrawal with little help, shivering and curled up on the beds and floors of the jail.

"It's definitely our detox center right now. They just sit there, and they withdraw there," Fayette County Deputy Health Commissioner Leigh N. Cannon said. "Treatment is where we need help. We keep hearing that money is coming, but we haven't really seen it."

The inmates here are at least alive — unlike so many drug users in this part of central Ohio, 40 miles southwest of Columbus. Fayette County has the seventh-highest number of fentanyl overdose deaths per capita in the nation, according to internal data from the Centers for Disease Control and Prevention obtained and analyzed by The Washington Post.

While the Trump administration has made the opioid epidemic a priority, people in communities across the country continue to die in record numbers from fentanyl, and health officials are struggling to provide treatment for tens of thousands more, like the men and women warehoused inside this jail.

President Trump has taken a number of steps to confront the crisis, stem the flow of fentanyl into the country from China and Mexico, and step up prosecutions of traffickers. Congress also has increased spending on drug treatment.

"Everyone here today is united by the same vital goal — to liberate our fellow Americans from the grip of drug addiction and to end the opioid crisis once and for all," Trump said at a drug abuse summit in Atlanta on April 24. "It's happening. It's happening."

But health policy experts say drug treatment funding is not nearly enough, and the administration's response was hobbled by the failure to appoint a drug czar in its chaotic first year and confusion over who was in charge of drug policy. The depth of the problem continues

to overwhelm the government's response, and the administration has yet to produce a comprehensive strategy that is legally required by Congress.

John P. Walters, director of the White House Office of National Drug Control Policy during the George W. Bush administration, said that after two years and a presidential commission to study the problem, the Trump administration is still struggling to confront the deadliest drug crisis in U.S. history and is not dedicating nearly enough federal resources.

"What other threat that is preventable is going to kill tens of thousands of Americans?" Walters said. "We're spending much more money on terrorism, as we should, but we're not spending a similar amount on the source of death to many more Americans right now."

In 2017, the first year of the Trump presidency, a record 28,869 people died from synthetic-opioid-related overdoses, a 46.4 percent increase from the year before. Most were from fentanyl, which is 50 times more powerful than heroin. Estimates for the first eight months of 2018, the most recent available, show that an additional 20,537 Americans died — a toll on pace to exceed the previous year's.

"The scale of death here is really unprecedented, and so you have to judge the response against the scale of the problem," said Joshua M. Sharfstein, vice dean at the Johns Hopkins Bloomberg School of Public Health. "You can have some progress, but it's really insufficient if you are not up to the scale of the problem."

Sharfstein and other public health experts also note that the administration is seeking to repeal the Affordable Care Act and cut $1.5 trillion over 10 years from Medicaid. More than 500,000 people addicted to opioids could lose their drug treatment coverage if the ACA is repealed, according to the Kaiser Family Foundation. The proposed Medicaid cuts could further reduce coverage.

Trump officials said they are making progress against the epidemic on a range of fronts, including interdiction, prosecution and treatment, but they acknowledge that it remains a huge challenge.

"We didn't get into this crisis overnight. We're not going to get out overnight," Kellyanne Conway, counselor to the president and the administration's leading voice on the epidemic, said in an interview.

Conway said Trump views his handling of the crisis as a "legacy issue" and continually asks her for updates about what is taking place in the states.

"It can't all be gloom and doom. You can't just have the negative, harrowing, so-sad statistics of grief and loss and devastation. We have to start talking about solutions," she said. "The battleship is starting to turn in the other direction."

Highest annual rate of synthetic opioid deaths

Highest annual rate of synthetic opioid deaths	
Cabell County, W.Va.	62.9
Baltimore City, Md.	40.8
Montgomery County, Ohio	36.3
Berkeley County, W.Va.	31.1
Harrison County, Ky.	30.0
Clark County, Ohio	28.6
Fayette County, Ohio	28.5
St. Louis City, Mo.	26.2
Butler County, Ohio	25.7
Hamilton County, Ohio	24.8

Note: Death rates are a per-year average, per 100,000 people from 2013-2017 • Source: Washington Post analysis of CDC data

Note: Death rates are a per-year average, per 100,000 people from 2013-2017 • Source: Washington Post analysis of CDC data

The CDC data obtained by The Post documents for the first time the 10 places with the highest per capita fentanyl-related overdose death rates: five counties in Ohio, two in West Virginia and one in Kentucky and the cities of Baltimore and St. Louis. Local health officials told The Post they are still not receiving enough federal money to fund drug treatment programs to wean people off highly addictive opioids or launch prevention programs to warn people of the dangers of fentanyl.

In Cabell County, W.Va., the county with the highest fentanyl overdose death rate in the nation, there are long waiting lists for treatment.

"When somebody is saying, 'I'm ready for treatment' and they want help, they shouldn't have to wait six months, six weeks or six days," said Steve Williams, mayor of Huntington, the county seat of Cabell. "They should be able to get in a treatment program within six hours."

In Ohio, deaths from fentanyl have ravaged vast sections of the state. In 2015, there were 1,255 synthetic-opioid-related deaths, most from fentanyl. By the end of 2017, that number had nearly tripled to 3,572.

In rural counties of Ohio, federal money recently appropriated by Congress has started to arrive, but health officials there say it is not enough.

"The situation four years ago was looking desperate. Today, it's looking dire," said Scott Gehring, president of the Community Health Alliance, a drug treatment facility in Butler County, Ohio, which has the ninth-highest fentanyl overdose death rate in the nation. "People are sicker. More people are dying."