

Fossil Fuels: \$5 Trillion in International Subsidies

A nice mention from The Liscio Report, Philippa Dunne, and Doug Henwood.

Fossil Fuels: \$5 Trillion in International Subsidies

January 8, 2019 6:10 pm

We are honored that Cumberland Advisors picked up some work we did on climate change and the November California fires, and are happy to be seeing a change in the investment community's thinking on the subject.

Happy to share timely, well researched information. Check out the [The Liscio Report here](#).

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January 25th and California Fires

The January 25th GIC-USFSM conference on adaptive climate change, [Adapting to a Changing Climate: Challenges & Opportunities](#), to be held at the University of South Florida Sarasota-Manatee, includes discussion of fires as well as hurricanes. Here is a recent Bloomberg story for reference: “What Wildfires and Hurricanes Mean for the Global Economy” (<https://www.bloomberg.com/news/articles/2018-11-22/what-wildfires-and-hurricanes-mean-for-the-global-economy>).

2018 has been a horrible and murderous year for fires. We all know that. The issue for climate change deniers and for climate change believers is whether we can expect normalcy or whether something is different now, requiring adaptive solutions. January 25 will focus on that question.

Cumberland Advisors is proud to sponsor this conversation, which presents skilled professionals in a transparent and independent forum. Attendance costs only \$50 to cover lunch ([registration here](#)).

Now we offer a guest commentary about the California fires. We thank our good friend and GIC board colleague [Philippa Dunne](#) for sharing her essay with our readers. Philippa is coeditor

of three macroeconomic newsletters – The Liscio Report, which has a trading focus, Sightlines Bulletin, which offers “concise data-driven monthly analyses of the direction of the American economy,” for professionals and academics, and TLR Wire, frequent, short notes and graphs on important aspects of fresh data missed by the mainstream intended for all readers. You can learn more about both and subscribe at <http://www.tlranalytics.com>.

California Fires, by Philippa Dunne

Two differences jump out when we attend conferences with a higher percentage of speakers who were not born in the US, but may teach here, and we share these now as observations, not criticism. There is considerably more concern voiced about the effects of market concentration and pricing power, which we have outlined; and there is a general sense that US citizens, perhaps especially those in the financial markets, are not accurately anticipating the market impacts when, say, lawsuits and insurance claims caused by extreme weather start rolling in at an ever faster pace.

I grew up in Malibu, where fires were a central part of my childhood.

Every fire has its own unforgettable personality. One marches as a belligerent wall, missing little in its path to the shore; one changes its mind at the last minute, trapping the fire crews and their equipment on the wrong side of the column; and some, like the recent Woolsey fire, flame seemingly in all directions, pouncing on areas the size of football fields in a second.

And they all have different ways of introducing themselves. Sometimes a bunch of tumbleweeds thud into the house: the Santa Ana wind. Sometimes sirens race up the highway; by the time I was five, I could tell which canyon they turned into; and sometimes I would first see reflected flames flickering in

my window. Then it's grab all the animals and your toothbrush, unlock all the doors and gates for the firemen, kiss the ground by your bedroom door with hope, and head for the Georgian Hotel in town. From our rooms there we would stay up all night, looking out across the bay as the unspeakably beautiful flames winged up and down the mountains, seemingly in silence although we knew they were panting.

Firefighting is a male-dominated field. The first female firefighter in this country was Molly Williams, Volunteer #11, a slave owned by a New York City merchant. There have been all-female forest crews since the 1920s, but in the US only 2% of firefighters are women. Los Angeles Mayor Eric Garcetti promised that by 2020, 5% of the LAFD will be women; currently that's 3.5%. I'm not being sexist when I refer to my wonderful childhood heroes as men.

An owl lands on the beach; a coyote limps on singed foot pads, showing no interest in a fleeing rabbit. A firefighter staggers in the wind.

The fires have always been unpredictable and terrifying, but they have moved into a new dimension. The Paradise fire has set records, but the recent Woolsey fire that flew to the beach in west Malibu, bad as it was, isn't up to today's standards. In 1970, the Santa Ana, blowing at 80 miles an hour and gusting to twice that, drove a 30-mile wall of fire from Newhall to Malibu. First we heard it mentioned on the news, and then it was barreling over the mountain so quickly that we barely had time to load up the animals. It did take out the Spahn Ranch, where Charlie Manson and his crew lived (no comment), but also the iconic Serra Retreat, a real loss. That fire was a record-setter then, but it isn't even in the top twenty these days.

I recently visited friends in Santa Barbara and finally saw firsthand the incomprehensible destruction in the path of the fire and floods of last year. One friend, a real estate agent

in Montecito, one of the most idyllic places on earth, said that he is having a tough time determining if business is slow because of interest rates or because buyers are afraid to invest in multi-million-dollar properties threatened by fires and rushing mud. We drove through the slide area: Geologists are still calculating how much the mud ([A Look Inside the Montecito Disaster Probe](#)), the consistency of honey and traveling at up to 27 miles an hour, was needed to launch “giant boulders” down the washes.

Thank you, always, to the fire crews, both the pros and the inmate volunteers making \$2 a day (and \$1 an hour when they are fighting active fires) – may many more go on to join Cal Fire; to the California Highway Patrol – you haven’t lived until a CHP yells at you to “gun it” in order to get over a smoldering divider; and to the migrant farmers who kept working in the fields through the smoke.

My job during the fires was always to drag panicked horses out of their stalls and onto the beach. They really do run back into burning barns. To give you an idea what it’s like, during the Newhall-Malibu fire I was pulling a mare across the sand when I noticed I was stumbling inexplicably, or so I thought. I looked down at my foot, now in slow motion, which was sitting on a board. I picked up my foot and the board came with it, held by a large nail that I couldn’t feel. A stranger ran over, said “It’s okay to scream,” pulled the board off, and raced me across the sand to the vet’s office. I got a tetanus shot and no other treatment. There was no time for that. And mine was just an ordinary fire experience.

No horses were lost in that canyon, but we feel a bit like those horses right now. We’re not a political newsletter, and this is one of the most divisive topics in our country right now. Voicing these opinions could lose subscribers, but we are willing to take that risk. We all have different opinions and want to hear yours.

The optimistic approach is the one that takes steps to slow the climate changes that produce increasingly heavy weather and the historic droughts that make devastating fires more likely. Stephen Pekar, who runs the paleoclimate research lab at the City University of New York, among his many other activities, notes that climate changes are now taking place between 100 and 1000 times faster than they have in the past. To get to the point of taking steps to curb climate change, we have to change the conversation. The risk is asymmetrical – didn't that Schopenhauer guy have something to say about that? While it's true that there have always been dramatic shifts in climate, the drivers of those shifts can be measured, and they do not fully account for what we are seeing. We all need to know what the cores drawn from the Greenland ice sheet are telling us. That key research is beautifully chronicled in Richard Alley's *Two-Mile Time Machine* (<https://www.amazon.com/Two-Mile-Time-Machine-Abrupt-Climate/dp/0691102961>). Otherwise we have only opinions.

There are tremendous opportunities in the renewable energy sector, jobs that would help balance the increasingly unequal opportunities available to our working classes. For renewable sources to really take off, we'd have to drop subsidies for the fossil-fuel producers and let the markets work. When the mechanization of our farms sent farm work tumbling from something like 30% of the workforce to the current 1–3%, depending on how you jigger the numbers, the transition was largely enabled by the war effort. Workers were moved from the farms into the factories, and much of what they made was battle-related. Had they been left in the rural areas to fend for themselves, as so many of our machinists have been, what would have happened? Of course, we'd advocate for a green-energy rebuild and retrofitting, not more weaponry, and the tools are ready at hand.

Frank Nutter, head of the Reinsurance Association of America, told writer Eugene Linden a quarter of a century ago that

“global warming could bankrupt the [reinsurance] industry.” Linden also points out that while the Insurance Information Institute was singling out Florida as having the greatest exposure to the combined effects of a changing climate, Governor Rick Scott and Senator Marco Rubio went on record to dismiss the threat.

Cargill’s Gregory Page agreed to be on the board of bipartisan Risky Business, which aims to put a price on all of this. You can tell he doesn’t like being there, and good for him for stepping up. He did say he was willing to do so only because the outfit aims to document risks, not look for solutions. Whatever, but he did add that in agriculture the “threat of long-term weather-pattern changes cannot be ignored.”

The IMF produced a 2015 report (<https://www.imf.org/en/News/Articles/2015/09/28/04/53/sonew070215a>) showing that around the world fossil fuel subsidies amount to \$5.3 trillion, or 6.5% of world GDP. Climate-minded economists reckon it would take 1% of world GDP to devise and implement remediation. But that \$5.3T amounted to more than total health spending of all the world’s governments at the time. Apparently, the IMF rechecked their work when they saw their results, and we rechecked ours. (Read that again if you need to.)

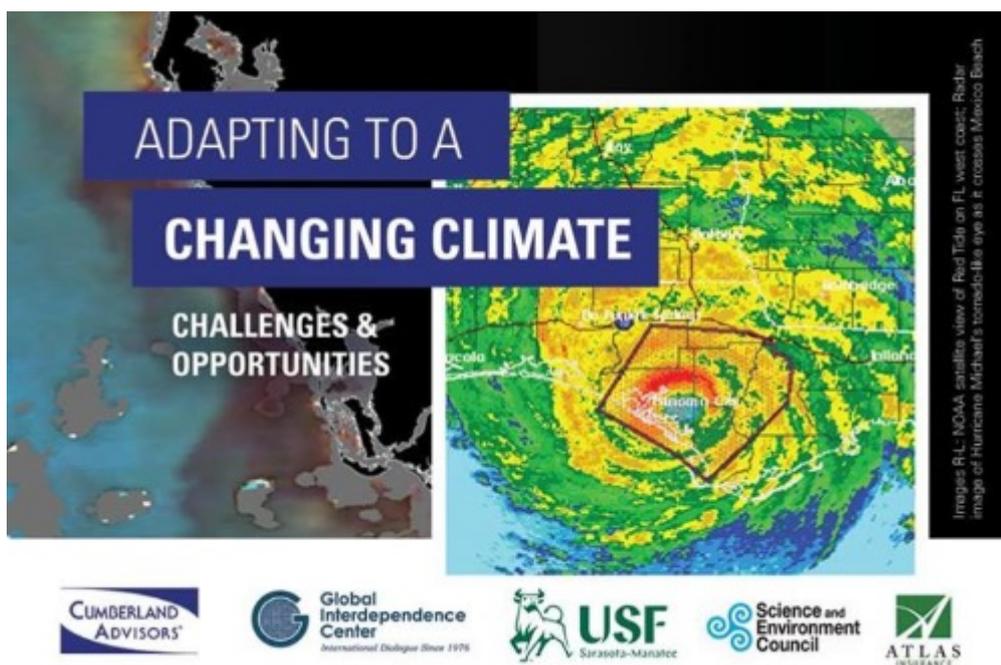
Around the world we’re using big tax dollars to support a backward-looking sector, making it harder to implement programs tailor-made to get us beyond stagnant wage growth of our middle classes. Although fossil fuel operations lift wages in a slim tranche of well-paid workers, they are not engines of job creation. Green projects, whether they be high-tech explorations or muscle-power retrofits, create jobs that pay well, and retrofits are labor-intensive. They also offset municipal costs for heating and cooling, and cutting back on the time we spend stuck in traffic jams would raise productivity. There’s a lot more data; but as long as people see climate change as an ideological battle, data do not help

much. We'll be happy to send links; just email Philippa:
philippa@panix.com

Cue in the creative destruction of a true market economy.

Here is the link to the latest US government report on climate change. We recommend perusal with an open mind and a willingness to alter views: Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States, <https://nca2018.globalchange.gov>.

For more information on how to join us in this important conversation at the January 25th GIC-USFSM conference, please visit www.usfsm.edu/climate.



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Chairman and Chief Investment Officer

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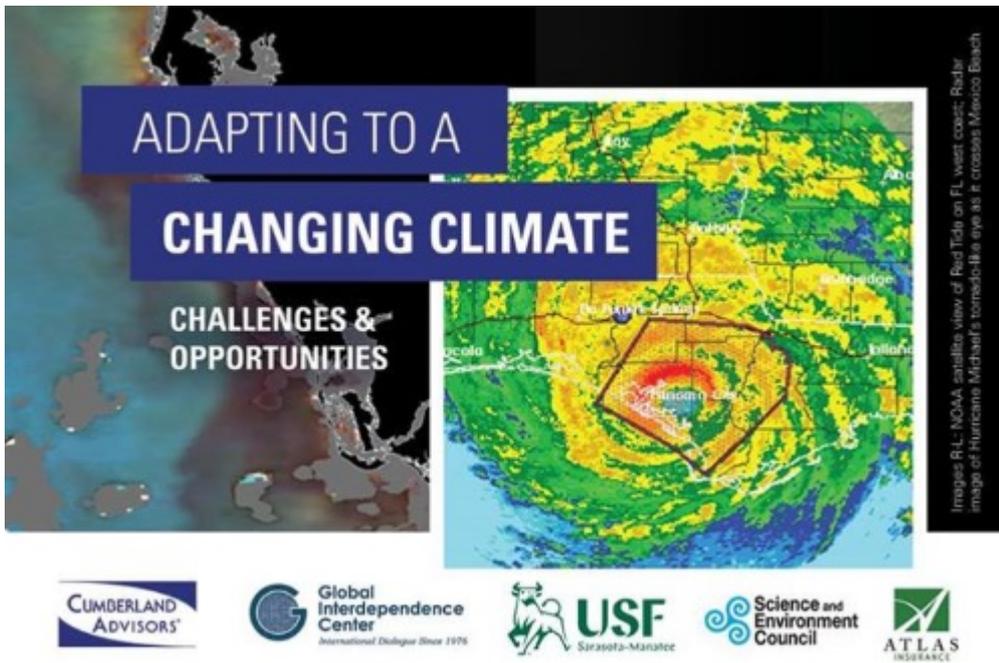
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Red Tide, January 25th Sarasota Conference on Climate Change

The January 25th GIC-USFSM conference, [Adapting to a Changing Climate: Challenges & Opportunities](#), to be held at the University of South Florida Sarasota-Manatee, is open to the public. The sponsors, including Cumberland, helped so as to allow the cost of registration to be held to \$50, a registration fee that covers the lunch.



Climate-change believers and deniers are welcome. The purpose of the event is to put facts and details in the public domain for discussion.

Red tide and the toxins it carries are among the issues we will take up. Ask any Sarasota restaurateur or hotel manager what has happened to business these last few months, and the economic impact on Florida becomes clear. All political personalities interested in mitigating the effects of red tide on their jurisdictions are welcome to attend or send staff.

Let me get to a specific health issue related to red tide. I will start with a quoted email from a national personality whom I know personally. He contracted an illness believed to be a result of breathing red tide toxin or the related algae bloom toxin.

He wrote:

"I've easily found articles with various analyses of probable causality between bodily responses to Brevetoxins and auto-immune system responses generally associated with organizing pneumonia.

"The experts I have want to identify similar episodic

correlations in order to study specific trends and narrow the range of potential causality.

“Has your group associated among any Florida pulmonologists that have seen similar cases?”

*“One of the fundamental issues may be that the primary group at risk of serious chronic illness is visitors that have no prior immunities from low doses of Brevetoxin exposure. They suffer the effects of a red tide bloom of *Karenia brevis* algae and then leave Florida before any of the major chronic illness symptoms appear.*

“They know they are sick but have no contact with medical professionals that understand normal red tide irritations. That now seems to be the primary missing link.

“Research is so much fun (if only I didn’t have to concurrently live the experience).”

My friend also sent this report:

“David,

“Initial biopsy result on the biggest spot in my lung found ‘organizing pneumonia’ and no malignancy – good news.

“The point at which the coughing and respiratory irritation that resulted in this particular ‘pneumonia’ began, however, directly coincides with my exposure to red tide in April. My med records are very clear that there was no cough or other irritation symptoms before that exposure.

“If there would be any interest in this situation among you and your friends, let’s talk.

“I’m going to enjoy Thanksgiving with family and head to FL. If there’s interest, maybe we can gather and discuss a follow-up for the public health of FL, as Judy and I traverse the Tampa area after Thanksgiving.

"My AA pulmonologist and I will do more to follow up in Dec. I've got numerous other spots we need to analyze further before declaring 'victory.'"

Dear reader: My point of this personal story is direct. This could be you or me. Research and discussion are needed. And what we're dealing with here is a second-order effect of climate change, just like growing hurricane intensity and rising sea levels.

We are going to have a full auditorium on January 25, with thorough presentations and discussions of facts.

Below is a series of extracts and links on the red tide and toxin issues:

"Harmful Algal Bloom (HAB)-Associated Illness... Harmful algal blooms (HABs) are the rapid growth of algae that can cause harm to animals, people, or the local ecology. A HAB can look like foam, scum, or mats on the surface of water and can be different colors. HABs can produce toxins that have caused a variety of illnesses in people and animals. HABs can occur in warm fresh, marine, or brackish waters with abundant nutrients and are becoming more frequent with climate change."

(Centers for Disease Control and Prevention, <https://www.cdc.gov/habs/index.html>)

"Exposure to harmful algal bloom toxins found in cyanobacteria (blue green algae) or *Karenia brevis* red tide can cause severe illness in pets, livestock, and wildlife when contaminated water is ingested or when animals lick their fur after swimming."

(Florida Dept. of Health, <http://www.floridahealth.gov/environmental-health/aquatic-toxins/aquatic-toxins-program-animal-health.html>)

“About Red Tide... Algae are vitally important to marine ecosystems, and most species of algae are not harmful. However, under certain environmental conditions, microscopic marine algae called *Karenia brevis* (*K. brevis*) grow quickly, creating blooms that can make the ocean appear red or brown. People often call these blooms ‘red tide.’

“*K. brevis* produces powerful toxins called brevetoxins, which have killed millions of fish and other marine organisms. Red tides have damaged the fishing industry, shoreline quality, and local economies in states such as Texas and Florida. Because *K. brevis* blooms move based on winds and tides, pinpointing a red tide at any given moment is difficult.

“ASSESSING THE IMPACT ON PUBLIC HEALTH

“In addition to killing fish, brevetoxins can become concentrated in the tissues of shellfish that feed on *K. brevis*. People who eat these shellfish may suffer from neurotoxic shellfish poisoning, a food poisoning that can cause severe gastrointestinal and neurologic symptoms, such as tingling fingers or toes.

“The human health effects associated with eating brevetoxin-tainted shellfish are well documented. However, scientists know little about how other types of environmental exposures to brevetoxin—such as breathing the air near red tides or swimming in red tides—may affect humans. Anecdotal evidence suggests that people who swim among brevetoxins or inhale brevetoxins dispersed in the air may experience irritation of the eyes, nose, and throat, as well as coughing, wheezing, and shortness of breath. Additional evidence suggests that people with existing respiratory illness, such as asthma, may experience these symptoms more severely.”

(Centers for Disease Control and Prevention, <https://www.cdc.gov/hab/redtide/pdfs/about.pdf>)

Here are additional red tide resources:

“Harmful Algal Bloom (HAB)-Associated Illness... Publications, Data, & Statistics”

(Centers for Disease Control and Prevention, <https://www.cdc.gov/habs/publications.html>)

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The California Wildfires' Financial Toll

Excerpt below from "The California Wildfires' Financial Toll"
By Randall W. Forsyth, Nov. 16, 2018 1:06 p.m. ET



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In The News



In every disaster, natural or man-made, a price is exacted first in human terms. From the relative safety of where I write this, I can recall the damage from superstorm Sandy that crippled the Northeast six years ago, and from which many in the area have yet to recover. Yet that pales next to the

wildfires that have engulfed California, which follows this year's crop of hurricanes in the East. The toll isn't only human, either; our foster dog rescued after Hurricane Florence just left for her permanent home on Thursday.

One has to wonder, though, what effect the seemingly annual wildfires will have on the perceived livability of California and on the state's population trends, Patricia Healy of Cumberland Advisors writes in a client note.

If California were a sovereign nation, its gross domestic product would be the fifth largest in the world, ahead of Britain's. Given that, California's strengths and resilience are formidable. Even so, Healy points out, municipal-bond investors should diversify among credits within the state—something the wild fires have emphasized again.

Taxes are a powerful incentive for California muni investors to stick with in-state credits, which are exempt from state and federal taxes. The top state income tax bracket is 13.3%, and under the new tax laws, the federal deduction for state and local taxes is capped at \$10,000. Diversification among various types of credits and sectors, from tax-supported general obligations to revenue bonds for water and health-care systems, can mitigate risk for investors sticking to their home state, she adds.

There are considerations other than dollars and cents, however. Philippa Dunne of the Liscio Report, who grew up in Malibu, writes that the fires were a central part of her childhood. Dragging panicked horses from their stalls for the safety of the beach when fires raced through her area was her job, which provided a unique perspective.

Read the full article at www.barrons.com

California, Land of Natural Disasters?

Last week we conducted a review of our California municipal bond holdings along the San Andreas Fault looking for holdings that may be more susceptible to credit deterioration in the event of a disaster. At the time, little did we know that wildfires would engulf large swaths of California.



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The Advanced Rapid Imaging & Analysis (ARIA) team at NASA's Jet Propulsion Lab in Pasadena, CA, created these Damage Proxy Maps (DPMs) depicting areas in California likely damaged by the Woolsey & Camp Fires.

First, our hearts and prayers go out all those affected by the wildfires and their loved ones and friends, including firefighters, volunteers, and those housing the displaced.

We monitor our portfolios on a regular basis. The majority of our holdings are in AA-rated credits that have economic diversity, good wealth and income indicators, and strong financial management, exemplified by ample reserves and

liquidity. During the monitoring process we look for changes in credit quality of our holdings and we evaluate bonds that new clients have sent us to manage; and if they do not meet our credit parameters we sell them.

A state of emergency and a major disaster have both been declared in California. The declarations by the governor of the State of California (and the governor elect) and the president ensure that the Federal Emergency Management Agency (FEMA) will provide funding and other resources to help rebuild and provide shelter and other aid in the wake of the fires. We have seen from other disasters that the rebuilding effort generally produces an increase in spending and other economic activity, such that sales taxes and other revenues flow to the municipalities in the state and sometimes improve credit quality in the long run.

Many areas of the state have been affected, including the town of Paradise, which lies in ruins, and no socioeconomic class has been spared. See this CNN piece on the fire damage: “44 dead in California fires as the Camp Fire becomes the deadliest in state history,” <https://www.cnn.com/2018/11/12/us/california-wildfires-woolsey-camp-hill-missing/index.html>. And here is a Bloomberg report: “California Ablaze: The State’s Devastating Wildfires in Pictures,” <https://www.bloomberg.com/news/photo-essays/2018-11-09/massive-wildfires-rage-across-california>. Statewide, damage estimates are large and continue to grow. Some of the damage will be covered by insurance proceeds and local money, in addition to FEMA funds.

The state and many local California governments do have the liquidity to foot the initial costs – though as we have written, some municipalities do not have reserves as robust as might be expected this far into an expansion. See our Q3 municipal credit commentary: <http://www.cumber.com/q3-2018-municipal-credit-com>

[mentary/http://www.cumber.com/q3-2018-municipal-credit-commentary/](http://www.cumber.com/q3-2018-municipal-credit-commentary/). So there could well be initial financial stress as communities address the damage.

The continual onslaught of disasters afflicting California this year, on top of the fires last year, gives us pause. What do these events mean for the livability of the state, and what will be the effect on population flows going forward? The past has shown that the state remains desirable, but from time to time growth and related financial stability have varied. We should also remember that California is the fifth largest economy in the world in terms of GDP. It has substantial financial wherewithal to mitigate concerns.

Diversification is a tenet of investment management. The proverbial “Don’t put all your eggs in one basket” comes to mind. Cumberland strives to construct diverse portfolios of municipal bonds, including state-specific portfolios where the client benefits from state tax exemption. The portfolios of many of our California clients are also state-specific, because of the high local income taxes charged in the state. We look for geographical diversification, including having out-of-state bonds in state-specific portfolios. We also diversify among types of credits or sectors, from general-obligation to water or healthcare-system revenue bonds. In addition we diversify through bonds that have been prerefunded (secured by US obligations in an escrow account) or that are insured. Diversification provides a level of insulation from a regional disaster or an industry dislocation, among other risks.

Patricia Healy, CFA

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