

## Q1 Roundtable Discussion

March 2022

*This quarter, we address client questions posed directly to us, in a round-table format. The discussion in the attached has been edited for clarity and organized by topic.*

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### Introduction

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*Steven Bregman:* Welcome, everyone, to our first quarter review and to our experiment with a new format. If I were a marketing person, I guess I'd say enhanced format, but I'm just me, so I'll stick with experiment.

Now, on this occasion, we took questions in advance and those will direct the content of the review. We've collected about two dozen and we hope to answer them all. I say "we" because my associate Murray Stahl will join me in addressing them, which I *would* call an enhancement. It is said that great minds think alike, but ours think quite differently. If that adage is true, then maybe one of them isn't so great.

In deference to all of our collective attention and for what I hope is a more pleasing flow, the questions have been arranged in subject-matter order as opposed to first-come-first-served. I also placed first a number of questions that are readily answered by a mere provision of some readily available facts, because sometimes, at least for some topics, a sufficiency of facts speaks for itself. I'll probably take most of those questions, and I'm quite sure Murray will have some further thoughts, and save those that call for, let's say, some subtler evaluations or theorizing to him.

The questions will be read by Agustin Krisnawahjuesa, who makes elegant charts with her team out of purposeful scribbles that I send them. So, Agustin, would you proceed?

### Energy Markets and Texas Pacific Land Trust

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#### Are royalty companies subject to a windfall profit tax?

*Steven Bregman:* Well, that question, I'm sure, refers to a bill introduced by Senator Sheldon Whitehouse of Rhode Island on March 10<sup>th</sup>, called the Big Oil Windfall Profit Tax, intended to curb profiteering. And as a virtual quote, it says, among other things, that large oil companies that produce or import at least 300,000 barrels of oil per day, or did so in 2019, will owe a per-barrel tax equal to 50 percent of the difference between the current price and the pre-pandemic average price between the years 2015 and 2019. So, that's what it says in part. And that tax would be charged quarterly to the corporations. And the tax revenue would be returned to consumers as a quarterly rebate, which would phase out for single filers earning more than \$75,000 or joint filers earning more than \$150,000. And smaller companies, it says, accounting for roughly 70 percent of domestic production will be exempt, so that large companies cannot simply gouge consumers further without the threat of losing market share. It also says that, at \$120 a barrel, the tax would raise \$45 billion a year, equivalent to about a \$240 rebate for each single filer and \$360 each for joint filers.

Now, looking at those numbers, 300,000 barrels per day of volume implies that energy companies with market values below, more or less, about \$25 billion would be exempt. So, does this make sense? Will this happen? Will it be effective? I'm doubtful. When I say I'm doubtful, I'm particularly doubtful as to whether this will impact royalty companies, or TPL, which is what I expect the interest of the questioner is. I'll give you my reasoning.

First to consider, the companies targeted, aside from their purely statistical characteristics, have high political value as well, meaning they're large and recognizable and they're very specifically big oil companies. There is no suggestion of targeting landowners, for instance, like farmers or ranchers, who might lease land or mineral rights to an oil company. Nor would there be such an intent. TPL is not an oil company; it is a land owner and holder of mineral rights. Think about how politically charged that would be, and for what gain politically? So, being a politically suffused proposal, it's not unusual that it's internally inconsistent with other political messaging. At the same time that what are being called excess profits are to be taxed, Energy Secretary Jennifer Granholm said to energy companies in a speech a week ago Wednesday, "I hope your investors are saying these words to you as well. In this moment of crisis, we need more supply right now. We need oil and gas production to meet current demand." So, we'll talk about that inconsistency further in another question or two.

In any case, since the specific interest of the question is in respect of the royalty companies like TPL, understand that TPL has a second advantage, call it an exemption issue relative to the

proposed terms of this proposal. TPL’s share of crude oil, and natural gas, and NGL, Natural Gas Liquid production, was only 18,000 barrels per day last year; not 300,000. I don’t know how these terms precisely will be defined in the bill, whether they include natural gas or NGLs, but if you exclude those, TPL’s crude oil volumes were 8,400 barrels a day.

And, finally, this circumstance illustrates one of the beauties of the royalty business, because a producer of oil—one in which TPL might have mineral rights for some of the production—will not only have reduced revenues after such a tax, but a much-reduced profit margin. That’s because the producer has substantial operating costs; those won’t change. In this instance, though, a royalty company wouldn’t suffer lower revenues, because the royalty is based on the volume and price at the wellhead. But even if it were to have lower revenues, its profit margin really wouldn’t suffer greatly because there’s very little operating expense associated with royalties. It just receives payments and oversees its contracts.

And, of course, if we’re using the term “lower net revenues” to the oil producers, that’s not even a proper representation of the economics, because that presumes that future production and/or pricing won’t increase. If you follow through with that thought, there’s a difference between politics and pure macroeconomics. Just for your information, the average



Crude Oil Price; Source: <https://www.macrotrends.net/1369/crude-oil-price-history-chart>

oil price for the five years 2015 to 2019, to which the bill refers, and which the windfall profit tax calls a normalized level, that average price was about \$52 a barrel. The question to ask, though, is: was that normal? Are today’s prices abnormally high, or were those prior prices abnormally low? Because if you look at the prior five years for 2010-2014 or so, the average price was \$92 a barrel. But by December 2014, it had dropped to \$59, and by December 2015, to \$37.

It turns out that the price level during the reference period for the proposed tax was uneconomic for the exploration and production companies to continue committing capital. And the consequence was that the oil industry—and for simplicity, I’m just using Exxon Mobil and

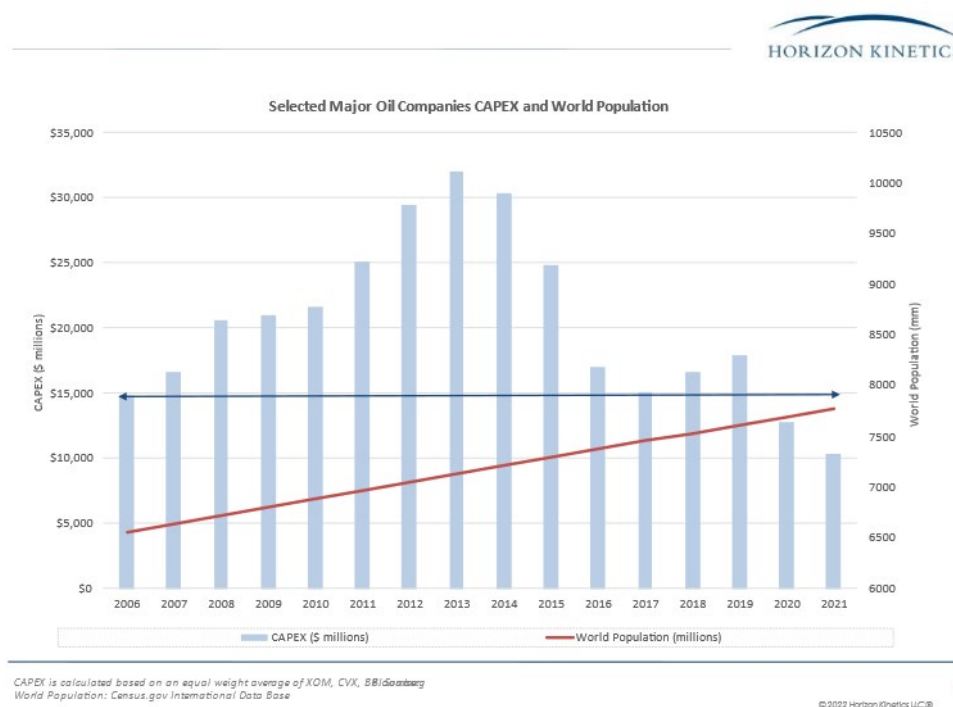
Chevron, which account for almost 60 percent of the S&P energy sector, along with British Petroleum—they reduced their capital expenditures by about 45 percent in the six years to 2019. And by 2020, they were spending almost 60 percent less.

So, that's pure macroeconomic forces at work. And reserves are now lower than in 2006, but the global population is higher and global consumption is 15 percent higher.

So, I suppose if it's politically feasible, and if the pressure to do so doesn't dissipate before such legislation can be negotiated—and one can't know when or how the Russia-Ukraine conflict will resolve relative to those particular questions—maybe the U.S. government could enact the tax. Maybe they could

even levy a greater windfall profits tax. But in light of the data we've just looked at, even if the oil companies make no profits whatsoever, the real problem is that the oil producers have done insufficient spending on exploration and production, and that disinvestment is what ultimately makes the prices higher, irrespective of any political censure of the profits. So, a windfall profit tax is in direct conflict with the economics of production and the policy of increasing oil and gas availability.

So, think of this business choice for an oil company, or if you're able to, put yourself in the position of a CEO. On the one hand, increased drilling activity, that's going to take time, and capital expenditure, and operating expense, and regulatory delays. While on the other hand, if prices just go higher because of a supply deficit, that's a 100 percent direct, immediate enhancement of profits. So, which is the easier choice?



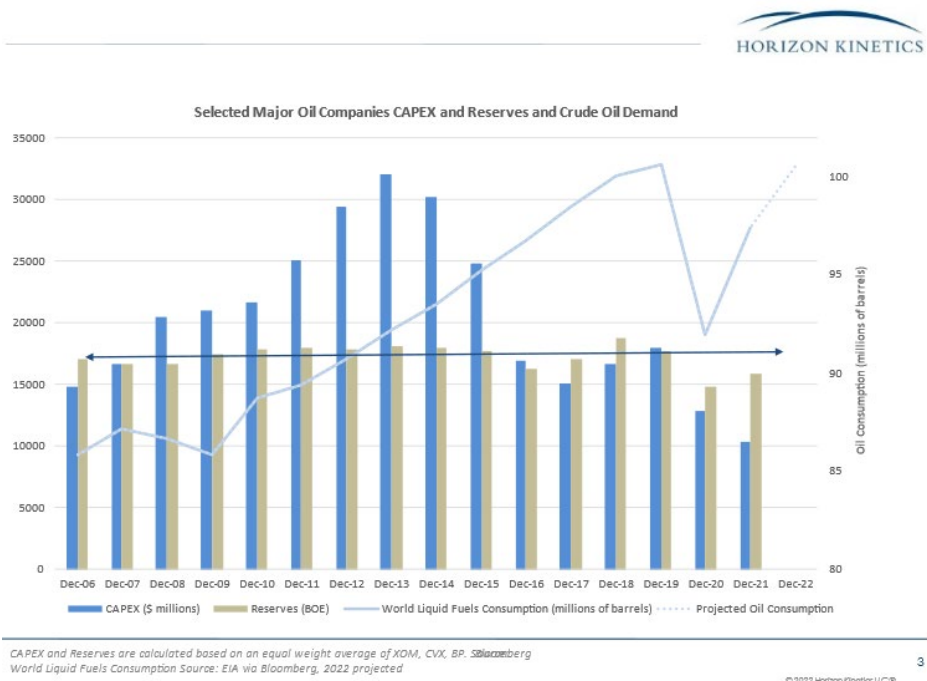
There's a second political restriction to add to that disincentive for the energy companies to expand production, and that's completely apart from the Big Oil Tax, if they pass it. In their 2020 annual reports, if you look at the annual report of any of the oil companies, pretty much every company finally mentioned ESG initiatives in the

Chairman's letter, and there was probably a separate page on their ESG goals—the Environment, Social, and Governance goals. And one year later, if you look at the 2021 annual reports, they contain pages, sometimes an entire section, not just a page, on ESG initiatives. Individual companies differ in their approaches to reducing greenhouse gas emissions and their carbon footprint, but you should understand that it's impossible for them in aggregate to achieve those goals while markedly increasing overall oil and gas production.

So, some have been investing heavily, or they say they will, in renewable energy projects or carbon capture projects to secure carbon credits; others are selling less productive or more emissions-intensive energy reserves in order to buy better assets. But the energy companies have been told, in no uncertain terms, to effectively limit production growth, and that's kind of what they're doing.

But even if the E&P companies were to begin to spend heavily on new reserves, it's a long-term project, that's measured in years, to develop greater sustainable supply, and even while the supply demand insufficiency situation is developing in the here and now. So, that's what I have to say about the windfall profits tax. Murray, would you opine any further on it?

*Murray Stahl:* Yes, I'll be very Brief. So, to begin with, no company's going to pay it, ever. And the reason no company's going to pay it is, if the line of demarcation is 300,000 barrels, all you really have to do is, A, move some of your production—if you're a worldwide company like Exxon





or Chevron—move some of your production outside of the United States, where it's not subject to windfall profits, and you're going to go below 300,000 barrels a day. Or, alternatively, you—you being a company like Exxon—can sell a certain amount of assets for cash to an American company that is well below 300,000, so that it won't get pushed to 300,000 by what that sale, and you'll just buy the oil for your refineries from that company. So, I don't take it seriously, basically. And I can go on, but I think that's enough.

*Steven Bregman:* That reminds me of charts we've seen periodically of the highly variable tax rates that have been charged to individuals over time. They're higher and lower, and they raise the tax and lower the tax. But if you look at the actual tax collections, what the government actually collects, that's almost a flat line, as a percentage. Individuals do exactly what you're suggesting the companies will do, which is they figure out what to do. Agustin?

## Drilling and Drilled, Uncompleted Wells

*Have the majority of DUCs, drilled uncompleted wells, been completed? DUCs have declined by 35 to 40 percent since the beginning 2020. The rig count is still below pre-COVID levels and permits are rising but not by much. Do you anticipate the Permian production to level off or decline this year as a result of the above?*

*Steven Bregman:* DUCs, that acronym—Drilled, Uncompleted—those are wells that have incurred the largest portion of fixed drilling costs. They're almost completed but they have yet to be prepared to be in production. There are a number of requirements, like casing the wells and cementing them and some other things. But since most of the work has been done already—sometimes it's done to maintain a lease, which can have expiration provisions if no activity's been undertaken—they can be completed relatively quickly. That doesn't mean days. It could be a matter of a few months. But they can be thought of as a form of working inventory. So, analysts pay attention to that.

We have—data per the U.S. Energy Information Administration—that the short answer to that question is yes, a majority of DUCs have been completed in the Permian Basin. The decline for the U.S. is about 40 percent overall, relative to year-end 2019. But in the Permian Basin, the decline has been about 60 percent. That's through the end of February.

	Dec '19	Dec '21	Feb '22	Change	
				12/19 – 12/21	12/21 – 2/22
Permian Basin	3,612	1,446	1,396	(60%)	(3.5%)
U.S.	7,573	4,616	4,372	(39%)	(5.3%)
<a href="https://www.eia.gov/petroleum/drilling/">https://www.eia.gov/petroleum/drilling/</a>					

A more granular view of the existing DUC footprint, that kind of view our analyst James Davolos investigates, suggests that what are called the core Permian DUCs could be down more than 60 percent, with a lot of the remaining inventory being the more peripheral kind of wells.

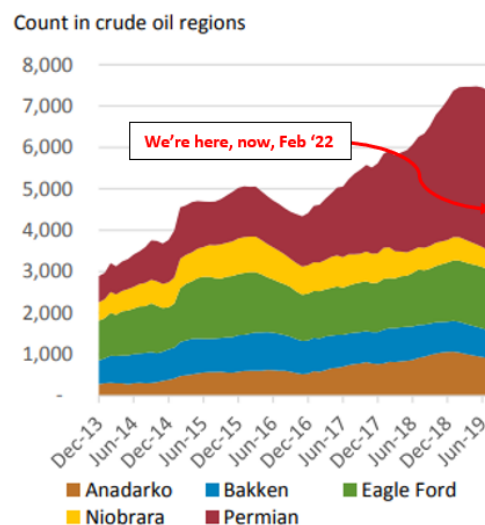
With a high inventory of DUCs, producers have the flexibility to avoid or reduce the expense of new drilling activity by increasing the number of completions. In the last year or two, though, they've been doing more completions, and one can probably suppose that, at a lower inventory, producers now have less flexibility to avoid new drilling activity.

And if you look at the longer historical figures for DUCs, that's instructive. There's a chart here that shows it. DUCs, that inventory of uncompleted drilled wells hasn't been this low since about 2014. And the Permian, at this point, now accounts for a much larger proportion of U.S. production and for substantially all the growth in production. So, it would be suggestive that a lower level of DUCs might result in higher drilling activity. Murray actually knows a lot more about this than I do. Murray?

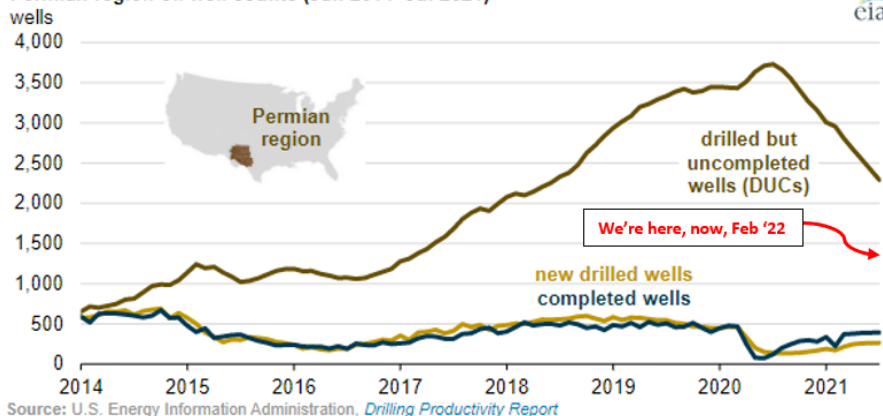
*Murray Stahl:* It's really a very simple thing. You'll see this DUC figure; it waxes and wanes. You don't want your inventory to be too high, because then you're wasting money on wells you're not going to produce; and you don't want to be too low,

because you want to have flexibility for future activity. So, I don't pay that much attention to DUCs. The statistic I pay attention to is what's called miles of lateral. You see, fracking is horizontal, not vertical. Miles of lateral tells you how much underground rock is exposed, and therefore gives you a much better predictive view of how much production there's going to be.

Figure 1. DUCs in crude oil and natural gas regions



Permian region oil well counts (Jan 2014–Jul 2021)



The miles of lateral is up, like, 35 percent. Going back to the so-called DUCs that are placed in production, how do you know how much they're going to produce? Well, it's a question of how far out you can go, and that's miles of lateral. So, since miles of lateral are up roughly 35 percent, I'm looking for something like a 35 percent increase in production.

Incidentally, you can follow this month by month if you want, because if you go to the Texas Railroad Commission website, there are all kinds of statistics on monthly production, for gas and oil and various other activities. If you're interested in Texas Pacific, or TPL, you want to look at District 8, because that's where almost all their land is. Look there, and you'll see what's happening month by month.

*Steven Bregman:* Interesting. That would suggest also that another classic statistic to measure suggested or inferred future drilling activity, the rig counts, might no longer be as reliable, since the laterals, the length of the wells they drill, is getting longer per rig. Would that be correct?

*Murray Stahl:* Yes. And there are other considerations, now, too, because now they have something called pads. It's really the equivalent of drilling several wells simultaneously using one rig. It's a way of saying the rigs themselves are more productive. And you can do more with them. You can do two laterals simultaneously, one deeper than another one, for instance. Think of it this way: imagine you were in the sky above a well pad, and you were looking down at the ground and you draw a circle. The circle is the radius of how far the lateral can go. So, it's like a pie. You can go out to a radius of so much length, and you're getting that much of the pie. And then you turn 15 degrees, and you get another slice of the pie, and so on and so forth.

So, that's very different than traditional drilling where you're just trying to access a pool. And that's the problem with the statistics that people are likely to read. They don't mean what people think they mean. It's the same thing for statistics other than about drilling. Think of the discussions people have about energy production, and renewables, and solar power. I think they draw very improper conclusions from the statistics they read.

### Do you expect more drilling in the Permian Basin?

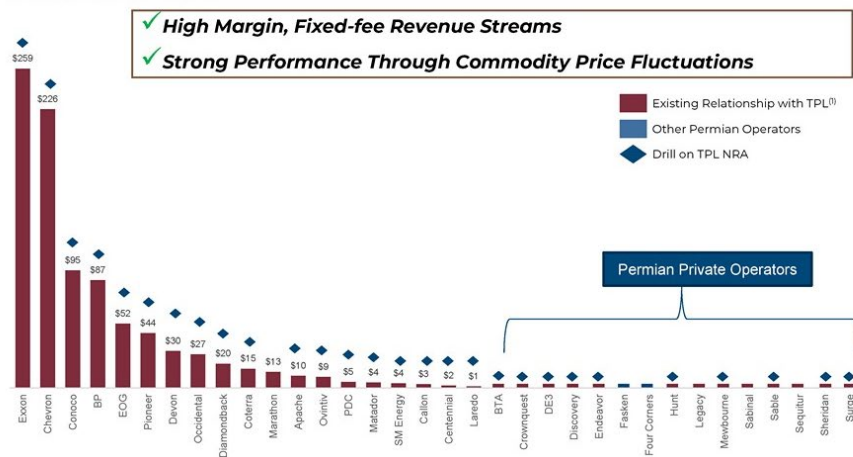
*Steven Bregman:* I don't know how helpful this question is, as specifically asked—do *we* expect more drilling? If I can reframe it, it's not about what we expect. You've heard our reasoning many times, based on the two most basic factors there are in terms of any kind of pricing in the marketplace or, with respect to oil, they are: rising global demand versus reduced capital spending and the gradual reserve depletion by the major energy companies in the last decade or near decade.

## Exposed to Diverse Client Base Required to Utilize TPL Surface / Water



### E&P Companies on TPL

Market Cap (in \$ billions) as of 12/31/2021



### Midstream Companies on TPL



TPL has Existing Relationships with Over 90% of the Top E&P and also Blue-Chip Midstream Companies

Source: Company data and Bloomberg as of 12/31/21.  
(1) Relationships established through surface operations and/or water sourcing / produced water.

NYSE: TPL | 7

But for the nearest future, which is I think what the question's asking about, I'll conduct a little experiment, an exercise: Let the companies themselves tell you. So, here are some figures I selected quasi-randomly. I was just looking at the most easily available information when I looked at one company or another from among the major players in the Permian Basin. And don't pay too much close attention to the numbers themselves, because precise numbers aren't important—they'll just be distracting. But just get the feel of it.

I'll start with some recent capital expenditure numbers, since that's what determines if there's going to be more exploration or drilling. **Chevron** has capital expenditures for what they call their upstream assets, as opposed to refining, which they call downstream operations. Their capital expenditures in 2021 were \$8 billion. And of that, \$3 billion was for the Permian Basin, almost 40 percent of the total, so that tells you something. And going forward, their planned capital expenditures in the Permian is for \$4 billion a year through 2030.

But to keep this in historical context—and if you don't study this, why would you have that historical context—Chevron's development expenditures in 2013, not even including separate spending for the categories they call exploration and property acquisition, that was \$26 billion. So, what does that say? That, yeah, current spending is rising, which is what you'll hear in the news reports. But you won't hear that it's rising from a level that's now 70 percent below what it

was nine years ago. And that within this modest renewed spending, the major focus is in the Permian.

And you've got **Exxon Mobil**, and their total capital expenditures in 2021 were \$17 billion. And for this year, they're expecting something in the neighborhood of \$21 to \$24 billion. The company doesn't tell you what they're spending specifically in the Permian, but it states that it's increasing investment in key growth projects, and they mention only the Permian Basin and Guyana. But, again, like Chevron, capital expenditure in 2013, at \$34 billion, was twice as high as last year.

You've got **Occidental Petroleum**. Their capital expenditures for oil and gas were \$2.4 billion last year. They're planning for about \$3.3 billion this year. And 30 percent of Occidental's acreage is in the Permian Basin, but 44 percent of their spending is for the Permian.

And then you've got— I'm not even going to go further. There are so many of these examples and they all tell you the same thing. Well, I'll read you one more, **ConocoPhillips**, because they spent \$22 billion last year for two different companies that had Permian Basin acreage. And relative to Conoco's year-end market value of \$95 billion, \$22 billion's a lot. That tells you what their mindset is.

Now, ConocoPhillips also said they intend to dispose of about \$5 billion of assets by year-end 2023 to help, I guess, pay for those purchases, with \$2 billion of that coming from the Permian Basin. So, what does that suggest? It suggests that they're divesting lower return, or perhaps less ESG-attractive assets, to pay for those Permian Assets and even trading up within the Permian, which probably means they're shifting assets from the older Midland Basin to the Delaware Basin.

Anyway, capital expenditures have to do with the return-on-capital or return-on-investment expectations of management. In which case, we also shouldn't ignore decisions about dividend distributions and share repurchases.

**Occidental** announced a \$3 billion repurchase program recently. For a scale comparison, their year-end market cap was \$32 billion. So, that's almost a 10 percent buyback program. Now, the share price is a lot higher now, but we're talking about management's intent, not what they can actually achieve.

**Exxon Mobil** announced a \$10 billion repurchase program.

**Devon Energy.** It had a \$1.6 billion repurchase program and they repurchased just about \$600 million worth of shares just in the last quarter of 2021. And that program's about five percent of the company's year-end market value.

**Pioneer** repurchased \$1.2 billion of shares between 2018 and 2021, but \$250 million of that was done in the fourth quarter of last year. And in December, they announced a new \$4 billion share buyback program, and that's almost 10 percent of the company's year-end market value.

So, if you look at all those numbers in the context of the past decade and the last few years, there would appear to be plenty of tactical adjustments with capital expenditures, particularly relative to the draconian reductions these companies made in spending in 2020, but these are not the actions of companies that seem hell-bent on an extended overall expansion of exploration and production. They might be increasing spending here and there, but they're not doing it overall, with the exception of the Permian Basin.

### Current thoughts on Texas Pacific Land Corporation and the current oil situation?

*Steven Bregman:* Okay, here I'm going to talk a bit and then I'll mostly be through. The reason is Murray can speak probably all day long on TPL, being, as he is, a member of the Board. But that cuts both ways—being a member of the Board, there are things he can't say. So, I'm just going to provide some facts. Then, rather than having me tell you what I think, Murray's at a much better place to talk about these topics, maybe in broader terms. He can certainly talk about publicly available figures. I'm just going to present you some figures that will allow you to form your own assessment. They're all publicly available, they're not difficult to find.

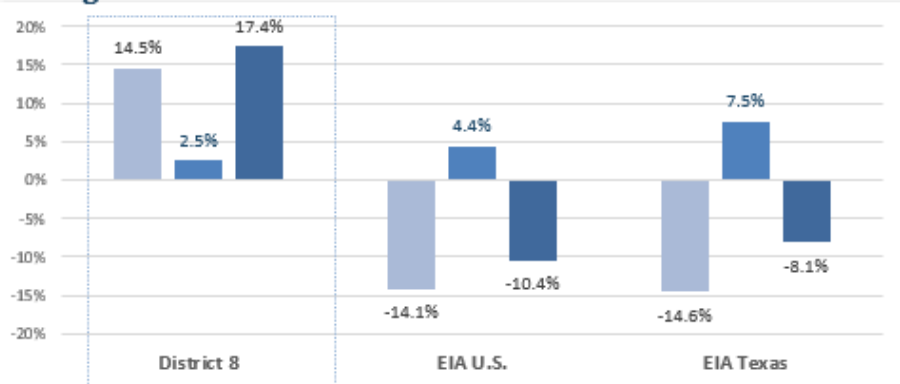
What I've done, as an exercise, is organize this data so you have a sense of what the supply development of oil and gas has been in the U.S. in the past couple of years. And then we'll see the same data for Texas, and then we'll see the same data for District 8 in Texas, which includes the Permian Basin, where TPL's assets are located; and then we'll go even narrower to perhaps just one or two counties within the Delaware Trend of the Permian Basin where expansion activity is fairly robust. And then, finally, the same data for TPL itself. You might think about this information as successively smaller concentric circles, in the center of which is the object of our avid interest, perhaps fervid interest for some of us on this call— that's what I'm doing.



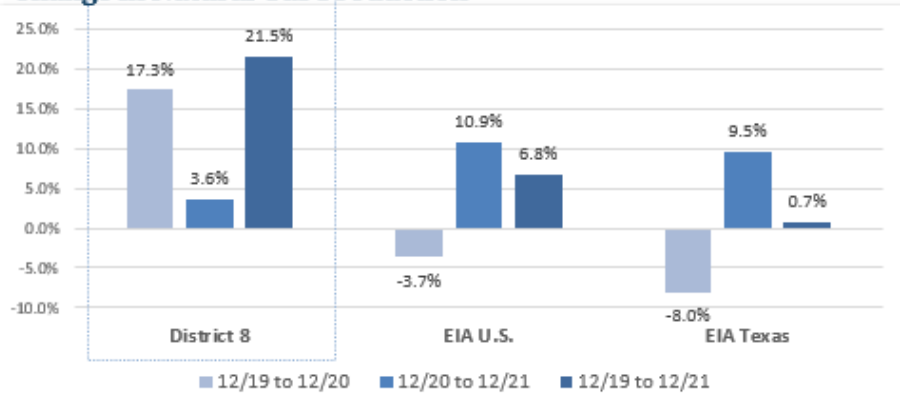
So, crude oil production in the U.S.—and we’ve got some charts here if you have access to them—declined by about 10 percent between year-end 2019 and year-end 2021, those two years. For Texas overall, the volume’s declined a little more modestly, eight percent. I can’t say how important that is or how much information content is in that difference. But what is interesting is this District 8.

In District 8, volume actually *rose* over 14% in those two years through the end of 2021. And just without District 8 within Texas, total U.S. oil production would’ve been down 14% or 15% instead of 10 percent. And that’s very significant as a variance in the national energy supply market.

**Change in Crude Oil Production**

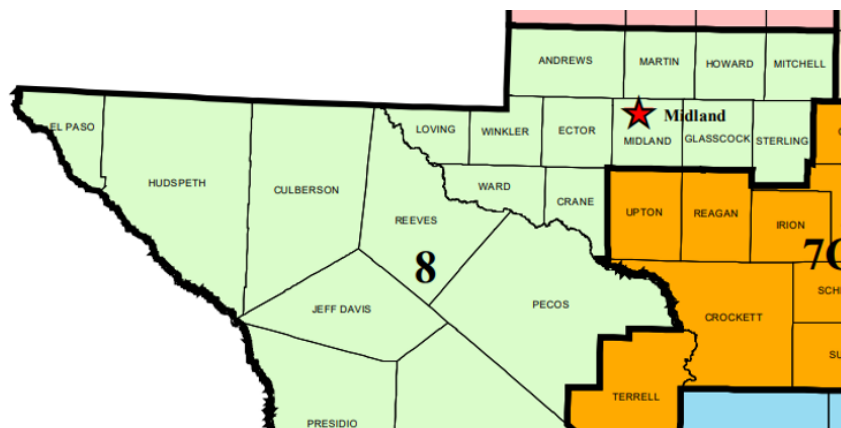


**Change in Natural Gas Production**



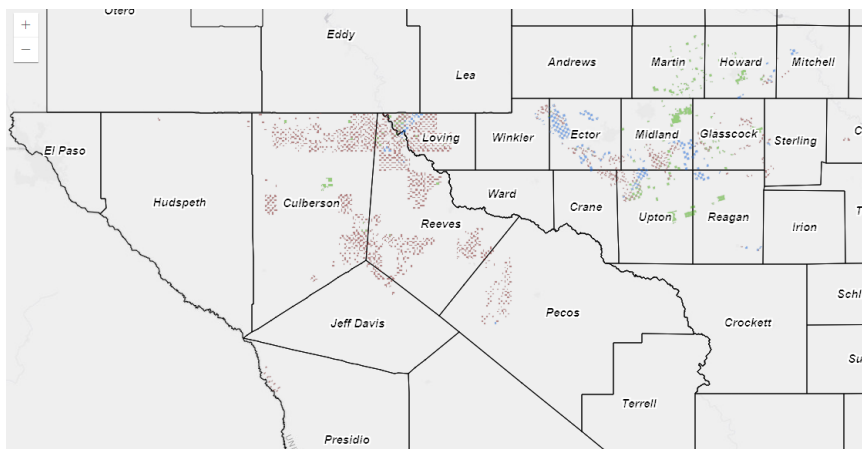
Source: <https://www.rrc.texas.gov/oil-and-gas/research-and-statistics/production-data/texas-monthly-oil-gas-production/>  
<https://www.rrc.texas.gov/oil-and-gas/research-and-statistics/production-data/monthly-crude-oil-production-by-district-and-field/>  
<https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFPUS1&f=M>

So that you know what the more intimate relevance of District 8 is in various strategies of ours, first see that those are the counties in the accompanying map, the first map, that are represented in green. That's District 8. And this occupies the remote westernmost corner of Texas. And by eye, it looks to be only about 20% of the area of the



whole state. The second map shows the very same counties, but marked with the locations of TPL's royalty interests, which are substantially all in District 8. And especially in Loving and Reeves Counties, about which more in another couple of charts.

You might recall from prior quarterly reviews that I said the population of Loving County in was below 200. This time I actually looked it up and it apparently was 169 people as of 2019. Of that number, 29 lived in town, Mentone, which is *the* town, as far as I know. Loving, had a population boom lately, having had



only 45 residents in 2008. That population of 169 people have 677 square miles in which to array themselves. And that's about 26 miles by 26 miles. Reeves County has a population—at least as of 2019; I'll bet it's higher now—of 15,976 people. And its largest city, which is Pecos, has 10,108. That means the remainder of the county—2,600-odd square miles, that's about 50 miles on a side—contains the remaining 5,800 people. Now, Reeves County actually lost population since 1982, when it was over 17,000, but it's been rising lately, as you might imagine. If you were to see a separate map of TPL's surface acreage, which, odd as it might sound, is probably more economically significant than their royalty interests, that would show even greater density across District 8 and its counties.

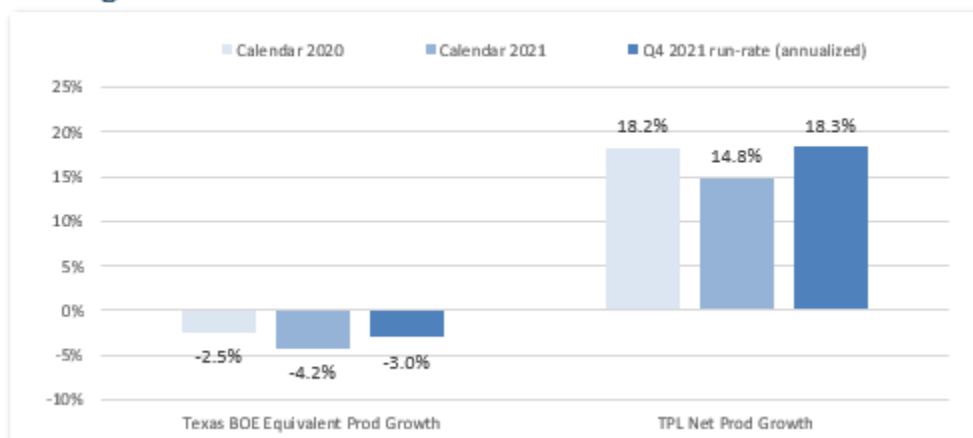


Now, getting down to the state level, if you look at Texas as a contributor to total U.S. oil production, you'll see that it was 42% or so of the nation's crude volumes in 2019 and 2020, and rose slightly in 2021. District 8 though, that's risen from 53% of total Texas production volumes in 2019 to 59% this past year, and there's a similar pattern for natural gas. Texas accounted for 24% of U.S. natural gas production in 2021; 26% in 2019. But District 8 rose from 16% of Texas natural gas volumes to 25% last year, just in the last couple years.

Now, within District 8, just Loving County and Reeves County together, they rose from 10% of total Texas natural gas production to 14% in the last couple of years. So, you can see where the action is for the time being, and you might recall from the previous map that the greatest concentration of TPL's royalty interests is in Loving and Reeves Counties, along with the adjoining Culberson County.

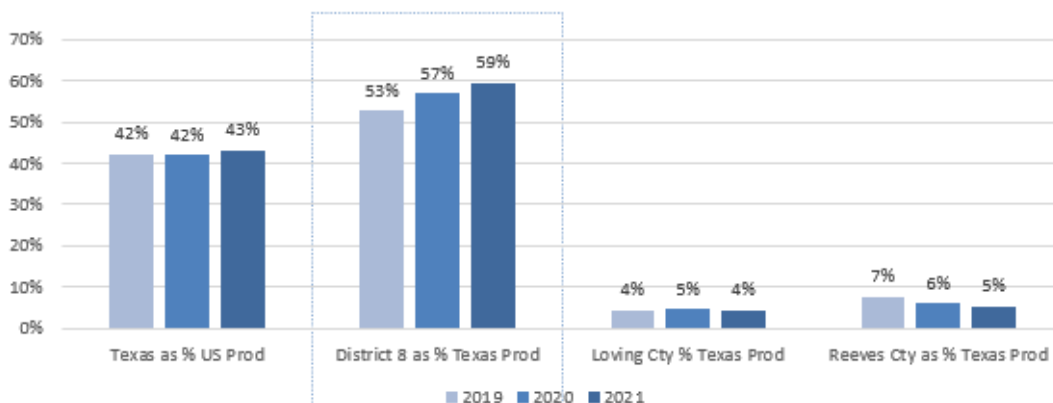
So, that's probably why, getting to our smallest concentric circle, whereas total Texas energy production in terms of barrels of oil equivalent, which includes oil, and natural gas, and natural gas liquids, was down 2% and 4% in 2021, and it's down at a 3% rate for 2022, based simply on the last three months of 2021, TPL's production volume was up 18% and 15% in each of the last two years. And on a run-rate basis, just taking the last few months of 2021 and multiplying by four, it's up 18%. So, TPL's production volume growth is that high.

## Change in Production Volume

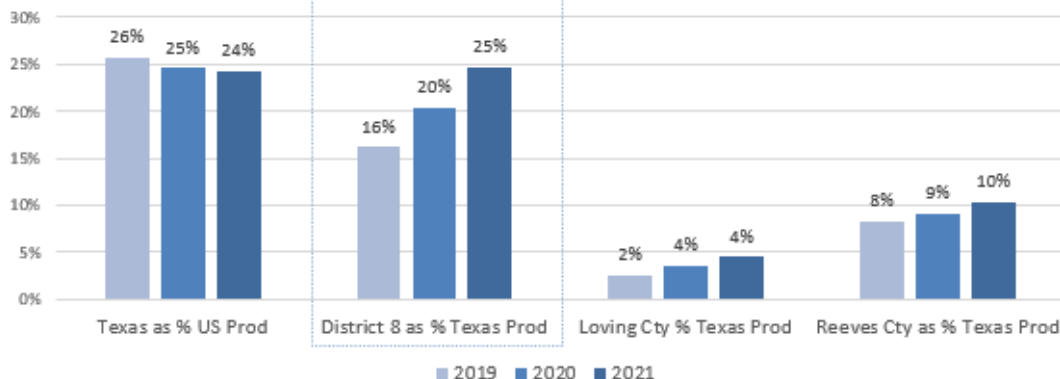


Source: <https://www.rrc.texas.gov/oil-and-gas/research-and-statistics/production-data/texas-monthly-oil-gas-production/>, TPL Reports

## Crude Oil Production



## Natural Gas Production



Source: <https://www.rrc.texas.gov/oil-and-gas/research-and-statistics/production-data/texas-monthly-oil-gas-production/>  
<https://www.rrc.texas.gov/oil-and-gas/research-and-statistics/production-data/monthly-crude-oil-production-by-district-and-field/>  
<https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFPUS1&f=M>

As to profitability, TPL's net profit margin in the fourth quarter was about 67%. That figure is astounding only for a non-royalty or non-Securities Exchange business. For such businesses, it's actually normal.

### Texas Pacific Land Corp (TPL)

#### Recent Profitability, Production Growth, Realized Oil & Gas Prices

	Run-rate Q4 2021	2021	Calendar 2020	2019
Revenue (mill)	\$ 588.7	\$ 450.9	\$ 302.6	\$ 490.5
Net income	396.8*	270.0	176.0	318.7
Net income growth	47.0%**	53.4%	-44.8%	
Net after-tax margin	67.4%	59.9%	58.2%	65.0%
Realized prices:				
Oil (\$/bbl)	\$74.60	\$66.62	\$41.13	\$57.00
Natural gas (\$/mm Btu)	4.56	3.67	1.24	2.55
* At 21% tax rate to exclude one-time tax true-up; reported net income, run-rate: \$316.2 million				
** Growth relative to FY 2021 net income				

Source: TPL Company Reports

And net income in the fourth quarter on a run-rate basis was just under \$400 million, versus \$270 million in all of 2021.

And a large part of that—because we already know what the production volume growth was—is pricing. TPL’s realized oil price in the fourth quarter of last year was \$75 a barrel, and it was \$67 for the full year. We know what the oil price is today because it’s on the radio every hour. We don’t hear natural gas quoted very often, but that’s also higher than what the company realized last year. So, I didn’t provide you much in the way of thoughts about TPL; just some facts. Murray might have some thoughts about it.

*Murray Stahl:* Well, first of all, I’m on the Board, so I really can’t tell you much other than what’s out there in documents. I’ll just point you to the documents, and you can reach your own conclusions. I did tell you that the laterals in that district are 35% larger. Well, if the lateral is 35% bigger, you’re going to get a lot more production, as far as that factor goes. The prices, you know what they are. Now, when you look at TPL’s earnings, be aware that in the fourth quarter there was a \$14 million tax item, which had to do with the depletion of assets that you cannot deplete. So, on an accounting basis going forward, that depletion charge is not going to be there. And the taxes to adjust for what the company wasn’t paying in taxes for four-and-a-half years are not going to be there either.

Also, some days ago, there was a share repurchase program announced, \$100 million. One of these 10B-whatever programs. That means a company is obligated to buy a certain amount of stock every day, irrespective of blackout periods or other ordinary restrictions. And yours truly, meaning me—you can see my filings—I buy stock every day. So, I hope, as far as that goes, that’s a good answer.

### A Few Things About the Oil Business

*Murray Stahl:* I’ll tell you a few things about just the oil business that you should bear in mind, because a lot of what you read about this topic are generalizations of numbers that really shouldn’t be generalized.

Number one, when a company is drilling for oil, any company, you drill your best land first. Also, oil, on a British thermal unit (BTU)-equivalent basis, is much more valuable than natural gas. So, you first drill the properties with the highest quantity of oil. It cost the exact same money to drill a well with more oil content than natural gas. Over time, though, the proportion of oil that you’re going to get from any drilling activity is going to decline. And that’s one of the problems for the tightness of the market. It’s just a fact. So, you have to take that into account.

Secondly, this business of capital expenditure declines has had an important spillover effect. The oil service industry, for eight years, that’s from 2014 to now, has been through the greatest

depression in its history. And that includes the post-1980 environment, until now the greatest depression ever. And all you can say right now is it's a little bit better than it was in the second quarter of 2020. It's not a lot better. It's a little bit better, from their unique point of view. They don't make any money to speak of. So, we're going to get price increases, and that's going to happen because they don't have the money to buy new equipment. This is a capital-intensive business. So far, they're cannibalizing old equipment, but they're about at the end of that process right now. Therefore, when some energy company states that it is going to spend X billion dollars in capital expenditures, the unfortunate thing is that, in short order, that money, whether it's \$1 billion, or \$2 billion, or \$3 billion, or \$4 billion, is not going to buy what it bought last year. It's the same money but it will buy less, and that's going to constrain production.

And the third thing is, we all talk about oil as if it's homogeneous, but it's not homogeneous. Refineries are configured for different types of oil, heavy oil, light oil. Those names refer to what's called API gravities. API stands for American Petroleum Institute. There are certain kinds of oil that are just better for extracting asphalt and diesel fuel, and there are certain oils that are better for getting gasoline out of it. It has to do with the length and the strength of the hydrocarbon chain.

What this means is that if you run a refinery and you're configured to run on heavy oil, you can get that from Russia, you can get it from Canada, or you can get it from Venezuela. Those are the main sources. If, because of sanctions, or whatever the reason happens to be, you lose the Russian oil, it's not as if oil from Texas can replace that supply you lost, because your refinery isn't configured to run on light oil. You'd have to totally rebuild your refinery.

So, what you could have done is get heavy oil from Fort McMurray in Canada. You could have done that if the Keystone Pipeline extension was a reality. But we're not going to have that. So, that's out. The only realistic option you have for heavy oil is Venezuela. But there are a couple of problems with that. Apart from the fact that, at the moment, the United States is not in a very good relationship with Venezuela—that's the least of the concerns—the first problem is the Venezuelan oil industry itself. That's located in a delta—what's called the Orinoco River—in a place called Lake Maracaibo. Even though it's inland, if you see a picture of it, it's functionally like offshore oil drilling. If the oil service industry is in a depression, which it is, the offshore oil service industry, with those kinds of specialized rigs, the semi-submersibles, the jack-ups, they've been in a worse depression.

So, whatever agreement might be made or might not be made with the nation of Venezuela, whether you approve of it or don't, it may be that the capital for increased production might not even be available. And even if it is, the equipment might not even be available. And even if the equipment is available, it's going to cost a lot more than what otherwise would be the case. And,

therefore, the price of oil is going to go up anyway, because the price has to reflect the input cost. So, there's a problem right there.

And then, the Venezuelan oil is heavy oil. It has three times the sulfur content of light oil. It's polluting, it's just not a very good thing. But you need diesel fuel for trucks, you need diesel fuel for ships. Without diesel – for cargo ships, for trucks, and so on – you couldn't have the kind of international trade that we do and which the world runs on.

That's a longwinded way of saying that we're very lucky in this country that we have the Delaware Basin.

Coming back to the subject of diesel, inventories are at the lowest level I personally have ever seen. Maybe I have to go back and see if they ever at lower levels at some other point in history. But they're shockingly low. And there's very little that can be done in the short run to improve that situation. So, some real bad things are getting ready to happen. If that's the case, what exactly do you want as an energy investment?

One other thing I'll just mention in passing is that it's very hard for institutional investors to make energy investments, since they took the pledge to divest themselves of energy. That's another factor. Therefore, the energy companies will not be spending a lot of money to gear up to produce oil when the major institutions, the financiers of the world, have said they're going to be divesting. So, that's not going to happen, either.

Anyway, we knew something bad was going to happen in energy. So, consider, if you wanted to prepare for that eventuality, what kind of company would you want? For one, you want a company with minimal capital expenditures. All you have to do is look at the SEC filings and see what the quarterly capital expenditure is, certainly in relation to the cash flow, and it really is minimal. And almost all of those expenditures have to do with the water business, so it makes sense to spend that money.

So, the statistics don't always mean what they might seem to mean. But rather than try to disaggregate and parse them to try to figure out what indeed they do mean, just sidestep the whole problem. With a royalty company, theoretically, if the energy prices rise and the production volumes rise, but the spending need not go up because you don't even have any material capital expenditures, that's the investment you want. There are a handful of companies in the world that have those characteristics. Add up the market capitalizations of all of them, it doesn't amount to much in relation to market capitalization of just the S&P 500, let alone all the other indexes. And

now you can see why this business was so intriguing to me. Anyway, I hope that's a complete answer to your question.

*Steven Bregman:* Let me add two facts. One is not going to be of practical help at all for considering an investment in TPL or oil. It's just of passing interest. Have you ever heard the expression sweet Texas crude, or a reference to oil that's sour? That actually has to do with the sulfur content. Before the days of modern labs, Texas oilmen, as they say, they would actually taste the oil, and if it tasted sour, that's heavy crude—it's got more sulfur content in it; if it tastes sweet, it has less sulfur. So, that's what sweet Texas crude means.

And relative to Murray's last point about there really not being much in the way of royalty companies in terms of total market value available to invest in, the circumstance is even more extreme than asset allocators realize. If you take every reasonable conventional inflation beneficiary company in the S&P 500, including the ones that we don't really think are going to be very effective, because they're asset-intensive businesses—your ExxonMobils, and your Schlumbergers, and your couple of mining companies—and add them all up, even with the recent rise in prices, I don't even think they amount to five percent of the entire S&P 500. So, there just isn't enough market capitalization to go around. If people, if institutions want to buy into those sectors again, there'll be, classically, the supply of available market cap versus the demand for available market cap, and that will determine where the prices go. Very few people are there.

Would an additional shareholder vote at a special meeting or an annual meeting be required to classify director terms?

*Murray Stahl:* Well, I'll just say that basically, by Delaware law—so, this is not anything peculiar to this company—if you want to change a charter, you need a shareholder vote. That's just the law. So, I think that answers your question.

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### **Do you think that extremely high commodity prices will cause a recession? What is the outlook for commodity prices in a recession?**

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*Steven Bregman:* This cycle we're in is very different than previous cycles. There's a danger of fighting the previous war without adjusting to the changed circumstances. In prior recessions, the experience was one of lower industrial activity for a bit, less demand on the margin for certain commodities. If people aren't buying as many cars, there was a bit less demand for steel, and that affected commodity prices in a bad way. And investors worried about those companies because of reduced economic activity.

But now it's different. This is the first time that the United States that has structural shortages in a range, a panoply of basic, strategic, necessary commodities. Now it doesn't matter whether there's lower economic activity, because when you've got a structural shortage of iron ore or of copper, and you need to replace some transformers in the electricity grid, or you actually have contracts to build more wind towers and need a lot of structural steel—even if people aren't buying as many cars—but there's less steel and iron ore capacity than is necessary, you've got a supply deficit anyway. With oil, which we've been talking about, it doesn't matter if there's a recession. There's a basic shortage of necessary commodities relative to demand. That's very different.

We've been accustomed to 40 years, basically, of one cycle, the whole cycle that we covered in the last quarterly review. Declining interest rates, declining tax rates, all these trends—it's all come to an end. Not just an end, it's actually changing. But people haven't wrapped their heads around that yet. It felt normal, because there was 40 years of it. If you're 50 or even 60 years old, in terms of being conscious about economics, that's all you knew. But it's going to be different now. There's going to be a new cycle. Murray, do you want to add something else?

*Murray Stahl:* Well, to begin with, as far as the economic cycle goes, commodities have been in a recession/depression for 40 or 41 years, other than the occasional few months exceptions to that. Not a recession, but a depression. And for those decades, return on capital for commodity companies was very low, while for businesses globally the return on capital was very high. Technology is a good example, whether it's Microsoft or Apple or what have you. Accordingly, for 40 years, capital has been gravitating away from the commodities—really the extractive industries. So, that's one factor on the supply side.

Number two, there are a lot more people in the world. Demand actually increased.

Number three, you could say the world got lucky in one sense, that with the collapse of communism, for a number of decades, the only economic bright spot for Russia or what had been



the Soviet empire was commodities. Even before the empire legally collapsed, it was in the process of collapse, and to obtain hard currency, they would dump their commodities on the market, be it oil, or copper, or gold, or diamonds, or what have you. So, that held commodity prices down. And today, we're in a very, very different position than we were for the last four decades.

One other dynamic is very important. As if this depression in commodity prices, the competition from the collapsed communist states, the withdrawal of asset allocation capital from these industries, wasn't bad enough, there's been the impact of the ESG movement for the last five or six years at least. For the ESG movement, since anything extractive is going to emit some type of greenhouse gas, these companies basically all had to take the pledge to reduce greenhouse gases by three percent a year. But you can't increase production *and* decrease greenhouse gases. It doesn't work that way. So, none of them is in a rush to increase production of anything whatsoever. Moreover, in a lot of these businesses there's just no excess capacity whatsoever; it's actually very, very tight.

Then along comes the Russia-Ukraine situation. A couple of things about that, particularly about the sanctions. First, Russia, among the developed nations—if you want to look at it that way—Russia is the only country with a balanced budget. I know it's hard to believe, but they really do, they have a balanced budget. They have 81 million ounces of gold in the vault, and they can produce plenty more, because the government controls the land that has the gold in it. That's one example of why they're autarkic, in the sense that they don't really import anything they need; they just import things that they want. That could be Disney films, or it could be dolls, but if need be, they can live without it.

What they do have, for example – and this might be surprising if you don't already know it – is fertilizer. Russia accounts for about 35 percent of global nitrogen-based fertilizer production. So, when various nations declared sanctions against Russia, it was not well-noted that Russia also declared sanctions on the countries that were sanctioning them. Russia's not exporting any agricultural nitrogen-based fertilizers to those countries. That's a very big problem for agricultural commodities, because in another 30 days we're coming into the planting season and we're going to need fertilizer.

Look at fertilizer prices; they're up big, because people will be ordering it right now. You can order it, but it's expensive and is likely to get more expensive, unless this problem can be solved. So, whether we have a recession or not, I think we're going to have inflation; this is just one more inflationary factor. And we might have a recession just because of the inflationary shock. It's possible. So, commodities are in very, very good stead and that's just the way it is right now.



### ESG Movement, and effect of its implementation in Germany and Europe

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*What effect on the ESG movement do you expect from the dramatic failure of green energy policies in Germany and Europe, in general?*

*Murray Stahl:* Well, failure is too strong a word. I really don't want to use the word failure of green energy. I would say the failure is in the education process. If the world wanted to reduce its reliance on fossil fuels, it can be done, it's doable. It's obviously not doable in one day. And it's not doable the way they're going about it. So, let's start with the education around this topic, because that's really the failure, and then we'll get to the other stuff.

At this point, I usually give the example of how much in the way of hydrocarbons are needed for a solar panel. Maybe some people on this call haven't heard it, so I'm going to give that example. I just want to show you the educational process, or absence of it, in this generalized discussion. If you want to see what's inside a solar panel, you'd first take the cover off. That cover is Plexiglas, it's pretty heavy, and it's made from petroleum. Remove it, and you'll see a silicon substrate. But how do you get silicon? Basically, you've got to heat quartz. That's necessary because quartz is silicon dioxide, and the oxygen has to be removed. By heating, we mean something like 2,150 degrees Centigrade, and to get that intensity of heat, what do you use? Either coal or natural gas.

So, this is the thing about the educational process: it is a process, not just a fact or two. Someone who hears this might not have known about the natural gas or coal requirement, but then people ask—and I can't tell you how many times I've been asked this question—'Okay, I get it. They need to use coal, which is dirty, or natural gas, which is not so great, either, although it's better than coal, but they're only using it for one day to make the silicon. But, the solar panel can be on your roof for like 15 years, so you're saving more carbon overall, right?' It's true that the production process that consumes carbon takes only one day and that the solar panel might last 15 years, but the conclusion is false. How so? Because the amount of energy used to make the silicon substrate is more than the amount of energy you're going to produce with a panel that's on your roof for 15 years. Why is that true? Because that's the second law of thermodynamics: you can't create energy.

If it were possible to create energy, you'd have perpetual motion machines. In other words, you could create enough energy from solar panels to heat up more silicon, heat up more quartz to make more silicon, and, in a never-ending pattern, basically power the whole world starting with a handful of solar panels. It doesn't work that way. Energy can only be transformed. It can be transformed into a kind of work, and you're also going to lose some in the process. Say you have a machine, like a pulley, so you can lift a heavy object. There's not much friction on the pulley,

but there is some, and that creates heat, which is lost energy. Not all of the energy goes into lifting the weight.

A similar example occurs when you charge your cell phone; touch the phone or the charger, and it will be warm. That's because less than 100 percent of the electric power is going into charging the battery; you're wasting some. That's just a consequence of the laws of thermodynamics. That's why the green energy transition can never do what they want it to do. It sounds great; it's just not possible.

Now I'll just give an example you haven't heard. You buy a Tesla. I have nothing against buying a Tesla, but you're not going to get rid of greenhouse gas emissions by buying one. I can absolutely guarantee you. Why? There are a lot of reasons, but I'm going to just give you one. There are 154 pounds of graphite in a Tesla. Now, most people don't even know what graphite is. It's super-dense coal. It's coal that's been under the overburden, under a mountain, for an extra half a billion years, where it becomes unusually dense. If you leave it under there for another billion years, it will become a diamond. But, instead, you take it out and you use it in a battery as the anode because, super-dense as it is, it's a great conductor of electricity. But it's a small proportion of the coal that's extracted from the mine.

As a consequence, if you didn't have a coal mine and you weren't mining coal, like they do in China, and use it for whatever purposes they use it for—mostly to generate electric power—you wouldn't have graphite. The alternative would be to actually go into a coal mine and just pick out the graphite and throw all the coal back in the hole—a pound of graphite could end up costing you \$50. It's not practical.

That's a flaw in the education system or in any learning or investigatory process—that you could have a social or political construct, such as 'I believe something is good, therefore it's possible.' Well, it might be good, I'm not disputing the goal. It's just that it's not possible the way they conceive it and are doing it. You're never going to get rid of greenhouse gas emissions that way. It's just not going to happen. It doesn't mean I personally am against getting rid of greenhouse gas emissions; it's just not the way to go about it in an engineering sense. You could be a Democrat or a Republican, you can be a conservative, you can be a liberal, it doesn't even matter. That's not the way you're going to solve the problem.

What could you do? Well, you could change your lifestyle. You don't have to download movies from Netflix every day, as so people do. It happens to use a lot of electric power. You don't have to have the cloud. What is the cloud, even? It's basically just a big disk drive, a big electromagnet and it uses a lot of electric power. It sounds great to put your photographs there, your whole life

there, but it actually uses a lot of electric power. In your home, you could opt for compact florescent lighting, and that will lower your electric bill by a lot. It's just nobody wants to do it. And you don't even need a law to that effect, because lightbulbs burn out every day. So, when you have to replace light bulbs, replace them with compact fluorescent light bulbs (CFLs) and you'll save a lot of power. You can turn off the light when you exit the room. That might help a little bit, too.

You don't need a microwave oven. It uses a lot of power. Personally, I don't have a microwave oven. I've never watched Netflix. I'm not on Facebook. I have nothing on the cloud. So, I know it can be done—it's just that people have to do it. And if people do it, it would work out. But they're not going to.

Now let me give you the last piece of the puzzle and I'll turn it over to Steve. I know for a fact they're not going to do it. How can I know such a thing?

Because we can make believe that they do. As unlikely as it is, let's say people are going to listen to yours truly. I can't imagine it, but let's say this one time they actually did it. If the population would really and significantly reduce their electric power consumption, you might clean up the environment, but you're also going to cause a major economic problem. For starters, the electric utilities face consequences. Because there's still the physical plant and equipment that has to be maintained, and there's still the transmission grid. Who's going to pay for that? In other words, we'll be contributing less revenue because we're using quite a bit less electric power, but most of the cost is not the fuel; most of the cost is the physical infrastructure. So, the regulators would have very little alternative but to raise the electric power prices anyway.

You can imagine that you individually and everybody else are all reducing your electric usage. And, yet, your electricity bills rise even higher? And the utilities might not be able to raise the prices sufficiently to make them whole. And they're very debt leveraged, as they are required to be by law, because equity is in the rate base, and debt is not. So, the utilities might not even be able to sustain themselves in a scenario like that.

I can go on and on with similar economic consequences for doing what I just recommended, to reduce electric power consumption, as reasonable as you might find it to be. You would create a lot of problems for a lot of people. Because we live in a complex technological society and world, and it's a leveraged world. It's become so complex, that if you start changing things in a major, sudden way, even for the best reasons, it's very, very difficult to comprehend all of the consequences of what you're going to do. Not all of them will be so wonderful. So, you have to

enact such changes very gradually, to allow for learning and adjustment and refinement, unless you're interested in creating big problems.

The central idea here—and the problem with the green energy transition—is that, just like in the solution and scenario I just proposed, even if people instead do the precise opposite of what I proposed, that would simply create different problems. My policy would have been a failure also, for entirely different reasons, even though it might have reduced greenhouse gas emissions. So, the real idea is that we have no alternative but to make changes very, very gradually, in stepwise fashion so we that we can comprehend what the consequences of an action really are.

*Steven Bregman:* Well, you provoke many thoughts, because there are innumerable examples of the extraordinary intensity with which we consume energy. I was thinking about this just the other day, living, as I do, in a house that's kind of drafty because it's a very old house. I think about this even when I go for a walk in the evenings, when all the lights are on. I look at all the houses, and if I look at them from an architect's point of view, in one sense, they're just great big envelopes housing a lot of air. And the bigger the house, the more air volume that has to be heated or cooled. And mine is drafty, and I don't even know what the rate of air exchange is, the wastage; I can hardly imagine. I suppose we can go through that exercise, how much energy can be saved just by revising building codes? It's complex, because then, of course, you have to make sure that that actually happens when new homes are built, and understand who inspects them and certifies them. That's a different set of issues and concerns.

Yeah, the level consumption we have. Did you ever return home on a flight at night and, as you approach the airport, look at all the streetlights and all the houselights for every single block of the entire city, and they're all on? It's extraordinary. We use a lot of energy. Enough of that, that's not helpful.

### Is our current condition stagflation?

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*Murray Stahl:* Well, no. Our current condition is that as society—it's not just an American problem; it's a worldwide problem—societies have borrowed too much money. That's the first problem.

The second problem is the way economic progress is measured, which is by GDP, which is a measure of consumption. Therefore, the more money you borrow, whatever it gets spent on, adds to the GDP. Stop spending that money, and GDP is going to contract. Be aware that your expenses, including your income tax expense, is somebody else's income. That's the thing. We've had a debt-financed economy since, probably, 1960. That's basically the problem. It's been 62 years since then and, in the long-run, it is not sustainable. We're now at a national debt number of \$30 trillion. Somehow, we've got to do something about it. There are not a lot of good options for changing it, but we're going to have to learn to live with a lot less borrowing.

But that's not the whole measure. You really have to talk about the entire debt for the nation. Add in everything from a credit card to a student loan, to a municipal bond, and that number exceeds \$89 trillion. That gives you a basis to understand that if interest rates are going to go up one percent—and I only mention one percent because it's an easy number to work with—that means there's another \$890 billion of debt service, call it \$900 billion for ease of calculation, in a \$24 trillion economy. That's a lot. If it were two percent, just to pick a number without predicting any particular scenario, that's \$1.8 trillion of extra debt service. I don't think the country can handle it.

So, it's not a sustainable system. And every day that number goes higher, so it gets worse. That's the problem we're in, not stagflation. The problem is a debt-burdened and debt-financed society. We've got to find a way out. And we'd better do it soon, otherwise we're going to be in a for lot of inflation for a very, very long period of time.

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**The current environment feels like 2000 to 2002, with rampant speculation in the growth sector, preceding appreciation of Value stocks. Do you agree?**

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*Murray Stahl:* No, I don't think I do. I don't think we're in a situation like anything we've seen in the 20<sup>th</sup> century. I think you have to go back centuries for something comparable. Maybe the 17<sup>th</sup> century offers certain parallels. Maybe there are parallels with certain aspects in the Napoleonic Wars at the beginning of the 19<sup>th</sup> century. The better analogy is the 17<sup>th</sup> century, I think, because then you really had the growth of spending. In England, what was King James and all the money spent on ships all about? It was a very high technology society for its time. When you think about the explorers' voyages around the world, it was the equivalent of taking a spaceship to another planet, except it was going to another continent. From today's perspective, they were primitive, but it was advanced technology for the time.

But the government spent tremendous amounts of money, to the degree that they couldn't sustain themselves. And it ended up being a big problem. And that's really where we are, now. As a mathematical proposition, we can't afford to keep doing what we're doing, it just can't be sustained. And they'd better figure it out. I don't think there's a good parallel in the 20<sup>th</sup> century. For comparison, the 19<sup>th</sup> century was the century of really small government. But the 20<sup>th</sup> century was the century of big wars. You can't fight a big war without big government and a lot of money. And that's why we developed the power of central banking, to fund large war expenditures. Someone wrote a book in 1913, I think called *The Future of War*, saying that governments could never raise enough money to fight the kind of modern war that they were planning to fight. In a way, the author was right. But what he missed was that they would just print up the money. And that's where we are now.

Look at any central bank in the world, with the exception of Russia's, and at the scale of money creation. So, we can't sustain that. In one sense you can say it's like a lot of periods in the 20<sup>th</sup> century, except that the base of debt is much higher. It's unprecedented. It's one thing in 1914 to start that sort of thing, to borrow when no country owed a lot of money. Today, the typical nation owes more than 100 percent of the GDP in debt. So, how much more are they going to be able to borrow? It becomes problematic. If there's a recession, the government can't get the tax revenue to pay the interest; then it's got to print up yet more money. It's a big, big problem.

Anyway, I reference a period when people basically rejected the administrative state, such as it was, way back when. Not because the state was doing bad things, because it had a lot of good characteristics, but it just wasn't managed in a sustainable way.

### Indexation and Active Management

Do you expect a regime change from the index to the less index-centric stocks? Could the index just trade sideways for many years?

*Steven Bregman:* I'll start that. Some initial thoughts. One has to do with valuation. Even Jack Bogle, the inventor of the modern index fund—there was no index fund before Jack Bogle—was concerned about this era's valuations. He died only a few years ago. That was one of the last things he talked about in the year or two before his death. And he was the original proponent of broad-based diversified investing in the whole of the market, to just participate in what it could produce, don't try to second guess, no need to take extra risk, and just the very simple math of it. He would tell people over and over again, at conferences, in interviews—I don't know if he was 90 by then—that you can look forward over the next 10-odd years to something like a five percent annualized return or six percent at best.

And the very simple math was: here you have a certain P/E ratio, and it's way, way up here, a very high multiple of earnings; but that you should look at what the P/E ratio ought to be, what a normal one is; and then you can look at what the earnings growth rate for publicly traded corporate America ought to be and what those earnings, P/E ratio and derived share prices would be in 10 years. You add your dividend yield, which was all of 1.5 percent instead of historical three percent or four percent or more, and that's the return you're going to get.

And that was then, two years ago or so. The market's a lot higher now. And so even if we didn't raise any of the topics we've been talking about today, and just use very, very simple assessments like that, you shouldn't expect a lot from the index, which means the market.

Now, the challenge for people is that we're pattern-spotters, and we experience everyone in the financial news networks whose job it is not to do analysis but to do something else, getting us excited about spotting patterns. The market's up today, the market was up this month or it's down a little bit, it's resting, resurging, all the anthropomorphic references, sports metaphors applied to the market. But the outcome is that as Jack Bogle's basic valuation model unfolds over time, investors will think, oh, the market's up slightly; oh, we had a flat year, we had a down year, oh, we'll come back. And it might take them ten years to realize, ultimately, that they haven't gotten a return.

If we add in what we're talking about today, the risks are a lot greater than that. And the real challenge, the real risk, is not whether the market's up or down in a given year, or week, or month; the real challenge is not just erosion, but destruction of purchasing power by a persistent, chronic,



high level of inflation, where everything's getting more expensive. Whether you have \$100,000 in the bank or a million dollars in the bank, and you can do this on the calculator if you can't do it in your head, but even six percent or seven percent inflation for 10 years, which is what we had in the 1970s, will halve your purchasing power.

That's if you personally don't suffer a higher degree of inflation. Maybe you happen to have higher rental costs, because you don't own your home, or you're living in an area where the costs go up higher. Or you have more medical expenses. Or, alternatively, maybe you're in a favorable position, where you actually own property that you can rent out and you do better. But it's going to be a major change. And that will have an impact on the indexes as well. Because there are companies that will, in essence, face their corporate versions of the kind of risks an individual will suffer. Their particular costs might rise a lot more than average.

One of the things that concerns me when I think about what clients read and the conclusions they reach, is when they might read about inflation-protected strategies. And the classic, which is the typical viewpoint on Wall Street, as I understand it, is that there are certain sectors that are the right ones to be in. Even with inflation funds now being marketed, I haven't seen any that meet our criteria. They contain the few typical categories of business sector the promoters consider to be inflation beneficiaries, which really aren't. One category is physical resource companies like miners and drillers, which are very asset-intensive. Those balance sheets and input costs also become victim to higher prices, and that doesn't work out well over time.

Another category of presumed inflation beneficiaries are the consumer products businesses, for which there is stable demand, because they're perceived to be able to raise their prices. But two challenges they faced historically, like in the 1970s, is that you can have cut-rate, no-name brands arising in supermarkets, for instance, for all sorts of high-margin staples like cereal, and peanut butter, and jams, and frozen dinners. At the same time, their input costs go up, too, so their margins contract. That happened to the big consumer products companies. And of course, if that happens, their P/Es contract.

And, there is the added potential impact on the indexes, particularly for – we reviewed why in last quarter's review—the high-margin, so-called high growth or expected high-growth businesses, of higher interest rates, even if they remain high growth. That's another major risk to valuations, since so much of the value perceived in such stocks is because of future, not observable earnings, and there's a discount rate attached to that.

The social media and IT companies also have very, very high employee compensation expenses. If they experience inflation there, they can get margin contraction. If their stocks move slightly



down or even just sideways long enough, as the question asks, maybe the stock options that are a very, very large part of those highly compensated employees' compensation become worthless to those employees, who then have to demand a resetting of the stock or options grants, so that they get their compensation. That is dilutive to earnings, in which case the employer would need to offer more cash compensation, which is dilutive to earnings, or maybe the employees vote with their feet and go somewhere else.

So, there are all sorts of risks, specific risks to the stock market and the companies that are now the leading representatives. The stock market's vulnerable that way, and it doesn't have the resilience or the optionality through inflation beneficiaries, because those have been the crowded out, sectors like energy, even securities exchanges. If you add up any businesses that would actually be really helpful during a sustained inflationary period, you'll find they're just a tiny, tiny weighting, are a rounding error, within the index. I expect there'll be lots of variability in the market but, at best, that over time it's not really going anywhere. Murray?

*Murray Stahl:* I'll just take the part of the index—valuations can be high without indexes. For most of history we didn't have indexes. The index is a new phenomenon, yet we had high valuations. They come and go for a million different reasons. My complaint with the index is that it's stenotic. It's a system that can't adapt—it's frozen in place—and that's big trouble. So, let me explain what I mean by stenotic and that it can't adapt.

Let's just say, for the sake of argument, that we do have a serious inflation, and people decide that they want to overweight energy. The majority of the investors in the world can't buy Texas Pacific Land Corp. There's just not enough stock to go around. They're going to have to buy Exxon, Chevron, ConocoPhillips, what have you, the types that are in the S&P energy sector. They're limited to the 10 or 11 stocks that have the trading liquidity. That's it. The trouble is that the bulk of those stocks are owned by the index. It's no trouble if you want to buy 10 shares of Exxon. But if we collectively on this call, if we represented big institutions and we all came to the conclusion that we need to overweight energy and buy those stocks directly, collectively we could never buy enough, because they won't be for sale. They'll only be for sale if the index sells them. But the index is not an elective seller, because as long as the index is getting new money, it can't sell. It might even buy more. The energy sector is not going to an overweight position in the index; it's simply going to be whatever its proportional market cap weight in the index is.

Therefore, the only way for institutions to overweight, is that money has to leave the index, which would force the index to sell shares, provide supply. Now, maybe those institutions that wish to overweight energy are the same ones that own the index. In that case, maybe the index owners would say, 'I have to reconstruct my portfolio and portfolio reconstruction requires that I pull

money out of the index.’ If, indeed, a group of institutions, if they had enough money and there were enough of them and they came to the same conclusion simultaneously, that they wanted to pull money out of the indexes with a view to reconfiguring their portfolios at some higher energy weighting, now you’ve got big trouble. Because you’re going to see a collapse of valuations in one part of the index and a simultaneous rise in valuations, perhaps to excess, in another part of the index. That’s going to be a very disruptive period.

You might have some serious damage to an index over a brief period of time, and it may end up trading at a lower valuation than it does now for the simple reason that no one will give the same valuation to Exxon that they would give to Facebook. The index would end up with a lower valuation, because the weightings of its constituent members require a lower valuation for the entirety of the index. As a consequence, a lot of investors would experience very negative performance. That’s what I see happening one day. One day, a sufficient plurality of investors can come to the conclusion, if they ever do, that what we’re experiencing is not a momentary inflationary phenomenon that you could live through for couple months, but that this is the way it is going to be.

And why? We have structural shortages of commodities that have no possibility of being alleviated because, number one, nobody’s going to invest the capital to alleviate them. Number two, those companies, the commodity producers, can’t even obtain the capital. And, number three, even they were to, they will likely suffer an enormous amount of litigation, because a lot of people and organizations who are environmentally conscious don’t want expanded production in the extractive industries. And, number four, almost all such resource development requires licenses and permits, and these companies not going to get them from the government. So, that’s what I mean about a stenotic system. It’s not able to alter itself in its current structure. It’s just frozen in place. And that usually is a precursor of big trouble, in my humble opinion.

*Steven Bregman:* To remind everybody of the concentration risk that Murray was just referring to, the top 10 companies in the S&P 500—we know which ones they are, almost exclusively the major tech companies—have the same aggregate stock market value as the bottom 400. In that scenario of pension funds rethinking their allocation policies, where they feel the need for more energy exposure to protect their beneficiaries, get the real returns up, they’re going to start from an energy weighting of only three percent, which is the current market weight. Maybe they have none anymore. If they just want to go to eight percent, well, that’s a five percent increase. That has to be funded or reallocated from the rest of the index, which effectively means selling those top 10 companies, even though we’re talking about the whole S&P 500. That’s what a modest five percent rebalancing entails, that’s a lot of liquidation on the margin.

And, secondarily, there isn't enough market cap for them—the institutions, the index—to buy. If they were to try, the valuations of those stocks could go—well, it'd be insane. They'd become their own bubble. That's a structural kind of problem, in that the index can't be rebalanced. The rebalancing is tantamount to selling Apple, and Microsoft, and Amazon, and Google, and Tesla, and Facebook and Nvidia. Those are the top holdings. That's what the market is now.

Do you expect a greater or less degree of volatility from your general investment philosophy/strategies compared to the S&P 500 Index?

*Murray Stahl:* Okay, I'll give it a shot. In general, the equity strategies we manage are expected to be more volatile than the S&P, because they are quite concentrated. And the industries in which we're concentrated, which are the commodities, are inherently more volatile than the index. Why? Because, like it or not, good or bad, the revenues for the royalty companies, you're either get more of them or you get less of them. And those revenues go right to the bottom line. If the revenues decline, maybe the energy prices are declining, but there aren't very many offsetting costs that you can take out from a royalty company's operations.

By the same token, if the revenues rise, you don't really need to add expenses, so small changes in revenues can have big earnings impact, which is not necessarily true of most of the other companies in the S&P. Most of the other companies in the S&P, because they have much greater expense structures, just don't have the operational leverage that that our big holdings have. If their revenue goes down for whatever reason, they have the opportunity to balance it out with expense reductions. The stock will drop anyway, but nothing like what would happen in our case. But, given the circumstances, we came to the conclusion that the volatility, such as it is, is warranted, and it's warranted because how else are you going to get protection against what's obviously happening? Of course, that's the manner we generally follow, but each individual investor must consider what is appropriate for them based on their own objectives and risk tolerances. Clearly, a highly concentrated strategy is not appropriate for all investors.

No one likes volatility but the alternative in this particular instance is debasement. And speaking for myself, I would rather have volatility than have debasement. But you can take a shot at it, Steve.

*Steven Bregman:* I'll simply add to what you said. You can have the momentary short-term discomfort, if you can bear it, of price volatility. If you truly understand what you own, this discomfort tends to go away. That's why I provided numbers earlier, so you can make your own assessments. But price volatility adds uncertainty, and people do feel uncomfortable when something goes down, just as they feel better when it comes back up. However, with an

inflationary environment, there's an absolute *certainty* that your purchasing power, the stuff you pay your rent with, your purchasing power is getting debased. In the course of five or ten years, there can be a far, far larger magnitude of effective loss than whatever your stock performance has been—15 percent, 20 percent, or even 30 percent—over a given quarter or whatnot.

On any kind of comparison basis with a typical blue-chip company, the companies we own are head and shoulders above the rest, if you want to look at the balance sheets and percentage of debt, if any; if you want to look at the after-tax profit margins and cash flow; even if you look at growth rates, in many cases—they're truly high-quality businesses, and they're prepositioned for the kind of environment we're facing.

I'll tell you a short anecdote. I've got a client who's well into his 90s, his late 90s now, and I speak with him regularly. And when I first met him 35 years ago, when I worked at a private bank in New York City, I was assigned to him as his new young portfolio manager. Now, he was very experienced with new young portfolio managers, because he got a new one every few years. And even as a boy, his father would bring him to the bank to meet the new ones. And I didn't realize it was a test, but he asked me before we first met to take a look at his portfolio, make recommendations, if any, and with particular attention to his very largest holding, which was a very, very large holding with a very, very low tax cost that he'd owned for decades.

And I looked at it carefully and I studied it and I thought about selling some of it, but selling would entail gains taxes, and the gains taxes were higher then. You'd lose the dividend yield, which was really quite substantial relative to what I would buy in its place. And what period of time would it take for the 70 cents or so on the dollar that remained from selling any part of it to buy something else that would have to appreciate by 40 percent just to get back to the value we started with? How many years would that take? And after that, when would I catch up enough in terms of continued presumed outperformance to make it worthwhile, what with all the uncertainties? Because every time you make a decision, you're taking a risk.

So, I sat down and I tentatively told him something like, 'You know, I've looked at this and despite the fact that all my training actually tells me that what to do here is to diversify your risk, that you have way too much in this stock, I'm going to suggest you really shouldn't,' and I told him why. And he said, 'Well, thank you for that.' And he said, 'You know, my father told me the best way to make money is sitting on your hands.' Not all this fancy trading and thinking you know better. Now, of course, this particular holding happened to be a superlative business model. It had its risks, like all businesses do, but what he was really talking about was, in a paradoxical way, the same concept John Bogle would talk about all the time. That John Bogle wanted to buy a diversified index and hold it for a long time and not trade it, whereas this gentleman had a large

single holding and understood that to avoid diversifying it was actually act in accordance with the understanding of the power of compounding.

If you trade every year or two, or even three, or even four or five, you're not getting any benefit of compounding. If you'd ever seen a mortgage principal payoff table, it takes many, many years to see the benefit. You think you're being patient by sitting on your hands by holding a stock for two years that hasn't moved and then you sell it. It depends on the kind of company you own, I suppose, and what the business model is, what you understand about it, what your expectations are. But two years is not sitting on your hands. You're not getting compounding. That's just a price move. Because if a stock goes up 40 percent in two or three years, that's most probably a valuation change, because very likely the earnings aren't compounding at that rate. So, you're just buying low and selling high on a price change, and that's an entirely different construct. You're doing something very, very different. That's not compounding. We have securities that are compounding, and we have reasons for believing they're compounding.

### Concentration in the S&P 500 Index

*Murray Stahl:* Well, to me—this might sound a little bizarre, but I will defend the proposition—I think the S&P 500 is non-diversified and it's concentrated. It just depends on how you define concentration. I'll make mine mathematical. In round numbers, good enough for us here, the United States of America has \$24 trillion in GDP, and over \$10 trillion is government spending. That's federal, state, and local. So, to start off, you can see that a little over 40 percent of the whole GDP is government spending. That 40 percent is just for openers, because that government spending doesn't count the government agencies, which includes everything from Fannie Mae and Freddie Mac to the Tennessee Valley Authority, to the Bonneville Power Authority, to the Triboro Bridge & Tunnel Authority, MTA, and so on. And when you add in all that additional spending, you're probably at 45 percent.

And you're still not done, because there are 23 million people, or roughly a little bit less than a sixth of all the salaried workers in this country. That's important, because consumer spending is a big part of the economy. Take a sixth of that and put it in the government spending category, because their salaries derive from the government. I would dare say we're probably now at 60-plus percent of the GDP is government spending. What happens, then, if the government spending patterns are not sustainable? Then you've got a real problem.

Why go through that exercise? Because, some people will tell me, 'Well, you have a 20-some-odd percent position, you're not diversified.' And I tell them, 'You have a 64 percent position, and you think you are diversified, and I just don't see how the two reconcile.' The difference is

between diversification made or measured on the basis of its legalistic definition as opposed to its qualitative definition. I think it should be based on the qualitative definition, but that's a debate for another day, I suppose.

### **Can you comment on the recent incident on the London Metals Exchange (LME) involving Nickel?**

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*Nickel just experienced a sharp rise in price. This resulted in an entity with a large short position being unable to meet the margin call. The LME decided to halt trading and cancel trade. This is presumably to allow the entity time to find financing and also may allow the price of nickel to cool off, thus, reducing the amount of the margin call. The entity receiving the margin call is reported to be a large Chinese nickel producer that was hedging future production. The LME, which is now owned by the Hong Kong Exchange & Clearing Corp, may have a large conflict of interest in this matter due to the influence of the CCP. (This is speculation.) What is your view of the nickel-related situation that occurred at the LME, and what impact or similar scenarios could you see with other commodity exchanges?*

*Murray Stahl:* Okay. Well, in a really well-regulated exchange system, like American and British systems, they have regulations called position limits. In the case of the United States, the CFTC gets data daily from the various clearing houses, information about position sizes relative to open interest outstanding. The clearing houses would never let anybody get a short position that's bigger than X percent. I don't actually remember what that is, specifically, but I could look it up. There are rules about it. And from time to time, the CFTC has hearings about it and they change rules periodically. For instance, if you're a genuine hedger, you might be allowed to have a bigger position because you have the offsetting position, as opposed to if you're just a speculator. They police that.

The LME should have policed that, so, it should've never happened in the first place. The fact that they didn't police it is the real question – why did it happen in the first place? Something like that hasn't happened in a very long time. It has occurred in different places around the world, as when somebody was trying to avoid the regulations—meaning, somebody was supposed to report trades or data to the authorities and either didn't report it, meaning they didn't do their job, or maybe they reported deliberately inaccurate data, in which case some action has to be taken.

But, you do understand, of course, that the Hong Kong Exchanges & Clearing, because of the position China now has in Hong Kong, is not really a free agent. The presumption is that everyone would rely on the fact that the Hong Kong Exchange is a self-regulatory organization. This is why regulators are reluctant to allow a foreign exchange to buy a domestic exchange. In this case, a foreign exchange acquired a British exchange, and now how much influence do the British regulators have, as opposed to how much influence the Chinese government has? That's really the question.

We don't know the answer to that question, because we don't have the facts yet. Essentially, the answer is you really shouldn't allow this sort of relationship. The solution would have to be that the LME has to be subject to British regulation, as it stands, without any interference from its financial owner, without any interference from some foreign government. If this is objectively investigated, one might learn if it was a matter of somebody not doing their job, or a matter of a government putting pressure on someone. It should never have happened. It's a major crisis in that exchange group, which is one of the reasons that I haven't bought shares of the Hong Kong Exchange in years. I think most of the shares that I owned historically are gone.

Because the shares we bought have such a low basis, I personally still own a couple of shares, and I think even Horizon still owns a couple shares. I don't know what they're going to do about this but it certainly makes one rethink that aspect of exchanges. The regulatory function has to operate without any interference, or you're in for big trouble.



**Zoltan Pozsar (Credit Suisse) and Jim Rickards have written that a new world monetary order is forming, where gold will rise to \$20,000 or \$30,000, allowing highly indebted nations like the US to pay down their debt. What are your thoughts?**

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*Murray Stahl:* Before I answer it, let me just give you a number so you can put the discussion in context. The United States has roughly 286 million ounces of gold. That would be the U.S. government, not the Federal Reserve, that owns the gold. What would it mean if, as the authors suggest, gold were \$20,000 an ounce? Well, 286 million ounces of gold times \$20,000 an ounce, would be \$5.7 trillion.

So, the theory is that gold goes to \$20,000 an ounce, such that the United States, if it still owned 286 million ounces of gold, would have \$5.7 trillion and that would enable it to pay off \$5.7 trillion of debt. So, that part of it I can see. The math is a little more complicated than that, though, because today the United States of America by itself, not even counting the states, has over \$30.3 trillion of debt right now, and it's likely that within 12 months it's going to be \$33 trillion. So, even if gold rises to \$20,000, one question is when, because who knows what the debt is going to be by the time it gets to that price.

Let's even accept one year, in which case, out of \$33 trillion of debt 12 months from now, with gold at \$20,000 an ounce, the U.S. government determines to sell the whole gold position, and then assuming that it's even possible for the market to absorb 286 million ounces, and also assuming it's also willing to, then you paid off \$5.7 trillion out of \$33 trillion. So where are you? \$33 trillion minus \$5.7 trillion, puts you at \$27.3 trillion of debt, a place we were at about, oh, let's say 16 months ago. So, even if this could happen, you're not getting out that way. Now, what if it the gold price only went to \$19,000 an ounce or \$18,000 an ounce? Then you're not even there. And what if it took five years to get there. So, it's not going to help the government to efface its debt.

Another problem with the whole analysis is that if gold ever were to be \$20,000 an ounce without commensurate inflation to offset its real price, then goldmining would be unbelievably profitable. And all sorts of gold supply is going to come out of the ground, and that would reduce the price – you wouldn't get to \$20,000. On the other hand, if gold were to \$20,000 an ounce and was accompanied by a tenfold inflation, then the national debt wouldn't be \$33 trillion one year from now – it would be some astronomically higher number. How so? This is why I talk about how severe the problem is. Because, historically, the expenses historically of a government that's trying

to inflate were relatively discretionary such as for the military. But today the major expenditures are totally nondiscretionary.

For example, Medicare and Medicaid, in round numbers, is almost \$1.3 trillion. What are you going to do about that? People are relying on it. They get sick and they need medication, or treatment; whatever they need, it costs what it costs. You've got to pay it. Social Security – people depend on that; you have to pay it. Interest on debt— it's actually very low right now, compared with what it could be, yet we're paying \$428 billion of interest. Raise the rates just one percentage point and wait a year until we have a little more debt, and that number's going to be a trillion dollars.

The money creation problem is such that if you really have the kind of inflation that would drive gold to \$20,000 an ounce, then it's frightening to calculate what the national debt would be and what the budget would be. I had never tried to calculate it, but I'm just doing it right now on the back of an envelope. It'd be horrendous if it happened. So, \$20 000 gold is not going to solve the problem. To be clear, it's not just an American problem; it's a British problem, it's a Canadian problem, it's a Chinese problem. Brazil has the problem, Argentina has the problem, Colombia has the problem. Every country in the world has the problem except for Russia. Russia, has its own problems, but this is not one of them. They happen to have a balanced budget. In fact, that scenario would actually make Russia an incredibly powerful nation again.

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## Russia, sanctions, and cryptocurrency

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### Russia and Sanctions

The sanctions imposed on Russia are not as significant problem for Russia as intended, because it is an autarkic nation. It doesn't really import anything it needs. It imports some things it *wants* but it doesn't import anything it *needs*. It grows its own food, it has enough natural resources to satisfy its industry. There are certain consumer goods that they might not be able to get easily. However, several countries are not sanctioning Russia. The following is a non-exclusive list of such nations: China, India, Brazil, Mexico, Hungary (a member of the European Union and NATO), and, if you can believe it Saudi Arabia. Russia has bilateral relations with all those nations. So, for example, and I don't want to make this flippant because it's a very serious issue, but to use a non-essential example, let's say certain Italian and French cheeses. Perhaps Russia will not be able to easily import Romano cheese, or Camembert, or Brie. But China buys Brie and China buys Camembert, and so does Hungary, and those countries can sell it to Russia.

#### Russian Budget Relative to GNP

2018	2.92%
2019	1.94%
2020 (disruption caused by COVID)	(4.02)%
2021 (estimated)	(0.56)%

*Source: IMF,org via Statista*

Russia holds incalculable wealth in commodities. It has a population of only 144.1 million people. It has achieved an essentially balanced budget, unlike other industrialized nations. According to IMF, Russia ran some recent budget surpluses.

In 2018 and 2019, the surpluses were 2.92% of GDP and 1.94%. In 2020, the disruption caused by Covid-19 led to a Russian government deficit equal to 4.15% of the GDP, which is not bad relative to many other countries. Statista estimates a slight deficit of 0.56% in 2021.

In their article dated September 21, 2021, "Russia to Spend \$34 Billion on Rainy Day Fund," Reuters journalists Darya Korsunskaya and Katya Golubkova report a different estimate: Russia will have a 2021 budget surplus that should continue into the 2022 to 2023 year. The surpluses will be supported by high prices for coal, natural gas, oil, and metals. The Russian government gets a lot of tax revenue when hard commodity prices are high.

One other point: the Russian Central Bank owns 82,469,000 ounces of gold worth \$147 billion at the current price. That is almost 83% of the size of the gold reserves of the International Monetary Fund. Russia continues to purchase gold. Oddly enough, Russia is developing as (1) an extremely wealth nation, and (2) a nation with finances in much better order than almost any other country in the world, at least insofar as their last reckoning is concerned.

A minor point on sanctions, but a very interesting one: While the European Union and the United States have sanctioned Russia, the European Union has also applied economic sanctions to both Hungary and Poland (which is participating in the Russia sanctions regime) for a different reason.

There is a dispute going on between Hungary and Poland and the European Union, because those two nations don't recognize, in certain matters, the authority of the European courts, the legal system, to overturn decisions by, respectively, the Hungarian and the Polish court systems. So, Poland is participating in sanctions against Russia, and taking in refugees from Ukraine, and at the same time, is being sanctioned. It is bizarre, but when the economy and a system gets too complex and too compartmentalized, you see what happens.

### Russia, Cryptocurrency & Gold

As noted above, there are several countries that are not sanctioning Russia. So, avoiding the sanctions is not a problem. Russia does not need to be included in the SWIFT system because they can do ruble versus those currency exchanges. Russia does not need to use bitcoin to get around sanctions for a number of reasons.

Furthermore, it is impossible to stop anybody from using bitcoin because you there is no need to trade bitcoin. For example, suppose I was Russia, and I was sanctioned. Now, I'm not a country, I'm just a human being, and as part of the sanctions, I am not allowed to trade any bitcoin anymore. Nevertheless, I want to transfer one bitcoin to some other human being. I don't have to trade it. All I have to do is give that human being the private key from an address on the blockchain that has one bitcoin in it. They can give me cash, they can give me diamonds, they can give me gold, they can give me rare art, they can give me a rare book, they can give me whatever I want. I never traded a bitcoin, didn't move from that address, no one ever knew anything was happening. So, there is no way of stopping Russia from using bitcoin if they feel like using bitcoin.

In the short term, the Russian invasion of Ukraine is a negative development for bitcoin. Any time you have a military conflict, the danger exists that it's going to escalate. If it were to escalate into cyberwarfare, the internet might not operate the way it's supposed to operate. Maybe we get a blackout of the internet. Maybe we get a communication shutdown. Or maybe it really does escalate to a shooting war and the internet doesn't even operate. So, how are you going to update the blockchain?

That is why, if you are interested in crypto, you have to also be interested in gold. If you're interested in gold, you have to also be interested in crypto. The two go hand in hand. If there is a kinetic war, which means a shooting war, or it doesn't get to the level of shooting but it's very,

very tense, you do not want to have a lot of bitcoin, because you don't know if the system's going to work. You *do* want gold. Why? Because you really can't do anything to it. It's just a lump of metal and that's its virtue.

On the other hand, if it went the other way, you could have inflation and you could have a peaceful environment. Well, gold is the thing you want to have in political turmoil. Inflation and peace, then in my opinion, you want bitcoin. Why not gold? Because then the world is your oyster. You can go anywhere in the world and if the price of gold goes up, you can explore for gold. You get more gold. It's easy to get a license, it's not disruptive, you can ship it in a vessel to where it needs to go. So, peace and gold price do not move together; war or intense political tension and crypto do not go well together. So, that's why you want to consider having both in your portfolio. They actually belong in the same portfolio, in my opinion.

### Russia and Oil

The country that imports the most Russian oil is China, with 3.6 million barrels per day. Germany imports 840,000 barrels, and it is going to have to replace that because of the sanctions. Netherlands imports 700,000 barrels per day, while the United States of America imports 630,000. Of the top-ten countries that import the most Russian oil, Turkey and China will not participate in Russian sanctions. Thus, assuming all other countries participate, 3.41 million barrels a day would be lost, so the countries that are participating are going to have to find a way to substitute this from other sources. However, as discussed earlier the fact that not all oil is interchangeable.

Heavy oil, as an example, is more viscous than light oil, and it requires different refinery configurations. Russian oil is heavy oil, so when 3.41 million barrels daily of Russian oil need to be substituted, most of the 100 million barrels per day of global production cannot be chosen for that purpose. Only heavy oil can replace the Russian oil. This is the reason why the loss of even a small amount of daily oil production can have enormous price inflationary consequences. Oil is not, in and of itself, a homogenous interchangeable product.

At the risk of repeating what was discussed earlier in the call, generally, the measure of heaviness in the oil industry is the American Petroleum Institute (API)'s specific gravity. According to the API specific gravity formula, lighter oil produces a higher value while heavy oil produces a lower value. There are more than 150 types of crude oil. Heavy oils are less expensive to purchase because they are more expensive to refine, because they are composed of longer hydrocarbon chains. Heavy oil has an API gravity of less than 20. West Texas Intermediate (WTI), which is light oil, has an API gravity of 40. Refineries are configured to process a certain type of oil and do not operate well using different oil inputs. Iranian crude, by contrast, is considered to be medium, between heavy and light. The API gravity values range from 27 to 34. Iranian oil is considered to

be sour oil, as it has a very high sulfur content. It is for that reason that Iranian oil is typically purchased by China since it is cheaper, and China has less environmental concerns.

Virtually all the oil produced in the United States is light crude oil. Yet, many of the refineries in the United States process heavy oil, as opposed to light oil. The reason for this is that heavy oil is preferable for products such as asphalt, fuel oil, and petrochemical feedstocks. Thus, a shortage of one type of oil cannot be replaced by a different type of oil. In other words, increased U.S. production cannot replace Russian production. Russian production must be replaced with something comparable to Canadian heavy oil. However, to supply refineries located in the United States, pipelines must be built. Apart from Canada, in the Americas, the two biggest sources of heavy oil are California and Venezuela. California will probably not permit meaningful increases in heavy oil production. Actually, it may not permit any increases in any type of oil production. Therefore, Venezuela becomes the next choice. That's the reason why the government is turning to Venezuela for oil. It's not merely to replace a given quantity of oil. It's that the type of oil produced in Venezuela is the type of oil needed for the refineries that currently use Russian oil, because of the way in which they're configured. The Venezuelan oil is extracted from Lake Maracaibo and the Orinoco River Basin. It is more environmentally hazardous to take oil out of Lake Maracaibo, so taking a certain amount of oil, whatever its character is, out of Venezuela, is just not the same thing as taking oil out of the Delaware Basin in west Texas. Furthermore, the Venezuelan oil contains 4.5% sulfur, as well as nickel and vanadium. When this oil is refined, emissions and greenhouse gases are at least three times, and arguably more than three times, more dangerous than the emissions that come from refining light oil. Also, because heavy oil is more viscous, and thus requires more energy input to move the oil through the refinery process, it is considerably more expensive to refine, in addition to being less environmentally friendly.

Even sanctioning Russian oil is easier said than done. What can be done if Russia sells oil to a nation like China? It's really selling it to companies, like Petro China, or Sino Petrochemical, or China National Offshore Oil, or other companies in China who own refineries all over the world. So, Russia delivers oil to those refineries, wherever they're located in the world, they refine it into diesel, and the diesel ends up in American ports. And you bought it from a Chinese company; you didn't buy it from an American company or a Russian company. This is not all that unusual, as the next example will demonstrate.

In the Second World War, Spain was a neutral nation. They needed oil. Maybe not the oil it needs today but it needed oil. Where did it get oil? From Texaco. Texaco owned oil wells in the nation of Colombia and that oil made its way to Spain. And it was carefully regulated so that Spain could not ship that oil to Germany. What Spain *could* do, however, is they could ship the now refined oil, the diesel fuel, to one of its possessions in the Atlantic Ocean, the Canary Islands, and the

German U-boats would stop at the Canary Islands and refuel. And, ironically, they were refueling with American oil. And they never actually figured out how to stop it. In the current situation, Russian oil could go through a refinery in Turkey, for example, which shares a border with Russia and is not participating in the sanctions, and then proceed along the Trans Adriatic Pipeline. So the sanctions are much more difficult to effect than it seems at first glance.

### Sanctions and Investment in Russia and Energy

For many, many years, Russia has really not been part of the global financial system in the way that Germany, or Switzerland, or France, or the U.K. is. The ruble is not a desirable currency to have. Not because it lacks value, but because everybody who thought about the question realized that one day something like the current situation was bound to happen. So you wouldn't have a tremendous ruble balance; nobody would carry a tremendous ruble balance, and it is not used frequently in international commerce. And the central bank doesn't operate the way our central bank operates, because their central bank is not doing open-market operations, their central bank is not financing a deficit in Russia. As noted above, Russia doesn't have a significant deficit.

Another interesting point: part of the sanctions is that the western oil companies have to divest from Russian oil. Who will buy their Russian oil investments? The only people who are going to buy it are the Russian oil companies. So, you take Rosneft. British Petroleum owns a little bit less than 20 percent of Rosneft. So, British Petroleum is required by its government to divest Rosneft. There are some also some smaller joint ventures it has to divest as well, but let's focus on Rosneft.

Although the price above \$100 per barrel of oil has raised the market capitalization of energy companies, in some ways, the investable energy universe is actually shrinking. An example is the trading halt of iShares MSCI Russia ETF (ERUS). The fund's NAV is now \$0.06, and its assets under management a mere \$834,000.

This decline does not mean that energy holdings, including Gazprom, Lukoil, Surgutneftegas, and Rosneft, are insolvent. These firms are more profitable than at any other time in their history. It is simply that it is politically impossible to hold these shares, either in individual form or even in ETF form.

Not only has ERUS—an ETF diversified according to all reasonable standards—lost 99.73% of its value in less than one month, but also, from February 5, 2022 to March 4, 2022, the fund attracted \$20 million in net inflows.<sup>1</sup> During the same period, the VanEck Russia ETF (RSX)

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<sup>1</sup> Source: etf.com



attracted \$575.98 million in new assets, yet the fund AUM on March 4, 2022, was only \$87.9 million.

Although many Russian stocks trade in the U.S. or U.K. in ADR, GDR, or EDR form, it is not clear at the time of this writing that these will be tradeable. The most recently available market capitalizations for the primary Russia energy stocks total of \$119.66 billion.

Yet, even following the severe price declines in the past four weeks, \$119 billion is still a significant amount of capital. Nevertheless, at that combined current valuation, if these companies were to be made a holding in the S&P 500, they would be a mere 32-basis point position.

## The Primary Russian Stocks

<u>Ticker</u>	<u>Company</u>	<u>Market Capitalization</u> (\$ in billions)
OGZPY	Gazprom PAO	\$46.55
LUKOY	NK Lukoil PAO	29.50
OJSCY	NK Rosneft PAO	26.97
SGTPY	Surgutneftegas JSC ADR Pfd.	9.49
OAOFY	Tatneft PAO	<u>7.15</u>
Total:		\$119.66

Source: Bloomberg

Russia now has zero exposure in both the MSCI ACWI Index and the iShares Core MSCI Emerging Markets Index, and it has zero weight in the MSCI Frontier Markets Index. From an investment perspective, the Russian energy sector no longer exists.

Global energy companies, including Shell, BP, and Equinor ASA, are divesting from Russia. Exxon will divest from its Sakhalin joint venture with Rosneft'. Effectively, even the major oil companies are reducing their energy exposure. The Moscow Stock Exchange was closed since February 24<sup>th</sup> and resumed limited trading on March 21<sup>st</sup>. Rosneft traded in the United States as well, but they suspended trading. So, what's the last trading price of Rosneft? Since everybody knew that Rosneft was going to stop trading, it ended up trading at around a tenth of book value, or some extremely low number. So, British Petroleum is required to sell its Rosneft stake back to Rosneft at a ridiculously low valuation.

British Petroleum (BP) will divest its 19.75% stake in Rosneft by selling it to Rosneft, the only possible buyer. This transaction requires BP to book an approximately \$25 billion charge or write-off for the loss it will suffer in a distressed sale. Separately, BP will use 60% of its surplus cash flow for share repurchases, which will further shrink investment opportunities for institutions needing to invest in energy securities. There are other smaller joint ventures with Rosneft from which BP will also withdraw. The loss of joint venture capital contributions can only be expected to have a negative impact upon Russian and, therefore, global energy production.

Putin's close friend, Igor Sechin, runs Rosneft. He is effectively buying a \$25 billion asset for around \$2 billion. British Petroleum is going to take a \$25 billion write-down. And now instead



of the dividend of Rosneft going to British Petroleum, a portion of that is going to go to the Russian government (because the Russian government controls the big oil companies). The point is not to argue against sanctioning Russia for their actions, but the sanctions do not seem likely to result in the economic pain intended. In fact, in this instance, the sanctions likely added to the Russian government's wealth.

## Russia and Fertilizer Markets

Although one cannot know with certainty, it seems probable that even prior to the actual Ukraine invasion, Russia had already planned to cease fertilizer exports. This speculation is a reasonable one, because the Russian Ministry of Agriculture announced a cessation of ammonium nitrate exports on February 1, 2022, before the invasion.

Russia represents approximately two-thirds of world ammonium nitrate production,<sup>2</sup> which equals 20 million metric tons. Ammonium nitrate is not the only fertilizer available, but it is the preferred choice, because about half of the nitrogen releases quickly and half releases slowly, producing a balance in plant nutrition. In any case, Russia has banned all fertilizer export, which is creating a significant disruption in the global agricultural market. This action is a highly inflationary disruption.

In the contemporary era, in a non-kinetic economic or cyber war, there might well be shortages of various commodities that could dramatically exacerbate inflation. The most significant are the base inputs, the upstream materials that can create compounding bullwhip effects in downstream value chains.

An example is fertilizer, a key input into most agricultural products, which in turn impact food, clothing and many industrial products. Just as the U.S. and the European Union imposed sanctions on Russia, so Russia has imposed sanctions on the European Union and the U.S. As part of that sanctions regime, Russia recently halted fertilizer exports from its domestic producers. On the day that this action was announced,

North American fertilizer prices increased by 10%. Russia and its ally Belarus are among the foremost global producers of fertilizer. According to the U.S. Geological Survey, the annual

### Top Three Global Fertilizer Producers

	<u>Million Metric Tons Annually</u>
Canada	14.0
Russia	9.0
Belarus	8.0

*Source: U.S. Geological Survey*

### The Next Largest Global Fertilizer Producers

<u>Country</u>	<u>Million Metric Tons Annually</u>
China	6.0
Germany	2.3
Israel	2.3
Jordan	1.6

*Source: U.S. Geological Survey*

<sup>2</sup> Source: The United Nations Food and Agriculture Organization

fertilizer production (in metric tons) of the top three global producers are: Canada, 14.0 million; Russia, 9.0 million; and Belarus, 8.0 million.

The next largest producer is China, at 6.0 million metric tons annually. China, though, requires all of its fertilizer internally and even imports additional quantities, so that none of its production is likely available for export. The annual production (in metric tons) of the next three top global producers is, at roughly 2 million metric tons each, far lower:

The U.S. produces 480,000 metric tons of fertilizer annually. No large fertilizer producer exists that could replace embargoed supply from Russia and Belarus. During the 12-month period ended March 4, 2022, the Green Markets North American Fertilizer Index increased by 72.44%. This change perhaps explains why, during the same period, wheat prices advanced by 75.08%; also, oats, by 85.13%; and corn, by 34.07%.

As an aside, for the year ended March 4, 2022, the Solar Energy Index is down (19.21)% and the Wind Energy Index is down (7.52)%.<sup>3</sup> If preparing for cyberwarfare is necessary, stockpiling more-than-adequate supplies of non-intermittent fossil fuel generated power is essential. The intermittent sources of power, such as wind and solar, are simply inadequate to power key cyber resources in wartime, even non-kinetic wartime.

Hence, political stress, war tensions, non-kinetic warfare, and conventional warfare inherently accelerate inflation. The world did not experience rising inflation during the 40-year period from 1981 to 2021—a sufficiently long period that a highly competent investment professional might never have experienced it. This absence is perhaps one reason why indexes were extensively drained of inflation beneficiaries. If the current environment continues, the investment posture of tens of trillions of dollars of assets, and the risk budget for those assets, must be completely reconsidered.

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<sup>3</sup> Source: [tradingeconomics.com](https://tradingeconomics.com)

**You previously cited a thesis that equates the bitcoin demand to, ultimately, all liquid money. What is the principle behind that thesis and how do you determine bitcoin demand?**

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*Murray Stahl:* First, the bitcoin inflation rate is much lower than the nominal money or fiat money inflation rate. Much lower. So, why would a rational human being, prefer fiat money that is being rapidly debased over an alternative that is not being debased? That's the basic principle. Similar principle to the question, which people don't have difficulty reconciling: would you rather have gold or fiat currency in an inflationary environment? Of course, you'd rather have gold.

But that doesn't mean a portfolio can be 100 percent gold. It could be very unwieldy. Nevertheless, the gold logically should be worth the nominal value of all the fiat money out there. Historically, that's what it was until governments decided they wanted to get into the gold business and, in many cases, even prevented people from even owning gold. It didn't end gold, and didn't even stop you from owning gold, but it changed all the principles.

In crypto, I don't think the government would ever be in a position to do that. And the reason is because the government can always seize your gold, unless you only have very small quantities. If you have a handful of gold coins or a thousand Canadian maple leaves, or even as much as 100 ounces of gold, you can bury it somewhere, or find a safe that's well-hidden and it would probably be secure. If you have a billion dollars of gold, though, where are you going to put it? You'd have to put it in some central repository, because it's too dangerous to have. But that's exactly the place it could always be seized.

With bitcoin, there's nothing to seize, because there's no central repository. You can seize people's computers that have a copy of the blockchain on it, but there are millions of copies of the blockchain. How could the authorities possibly get all the copies? And even if, in some unrealistically impossible scenario, they destroyed those copies, everybody knows, as of the last day of trading what the blockchain's supposed to look like, so the record to that point exists. And as I said before, you could actually trade bitcoin without ever having to update the blockchain. All you have to do is transfer private keys. And you don't even have to use a piece of paper.

For example, my private key could be a certain line in John Milton's poem "Paradise Lost." I could just be talking to someone, even standing right in front of a government regulator, and I could be discussing John Milton's "Paradise Lost" and tell that person I really like a particular line. And what I'm really doing at that moment is I'm transferring a bitcoin to them. And that's it. They could be doing work for me and I just paid them. If you want to make the transfer a little more

permanent or physical, it could be a line in the book itself; I could give someone a copy of the book as a gift and no one can stop me. I can walk across the border with it and hand it to someone, and no one's even going to look twice at it.

So, you're never stopping crypto, at least not like the gold system, and that's why in that sense it's superior to gold. Maybe even more important is that bitcoin is a fixed issuance currency. Gold is not fixed issuance, because the supply of gold can increase to a degree that it actually causes inflation. I know that might sound bizarre, but it happens. The example I like most to cite is of the 16<sup>th</sup> century and the Spanish possessions in the Americas. They found a lot of—I shouldn't say they found—they stole an enormous amount of gold from the Incas, and the Aztecs, and the other indigenous peoples, and silver too, for that matter. They brought it back to Spain, and that quantity of gold and silver, which was money, created very serious inflation. There are historians who would argue that, despite the wealth that the Spaniards got from the so-called New World, it was a mixed blessing, to say the least, because the inflation it caused was so severe that it destroyed the Spanish economy. Spanish historians say that the country still hasn't recovered from that. That's how bad it was. The surplus gold basically destroyed the whole entrepreneurial principle, because you can never make more money from work and entrepreneurship than just getting gold, it was so valuable. So, why would you bother to start a business? Why would you invent something?

Oddly, the Netherlands, which at the time was Spanish Netherlands, fought a war of independence to be free from Spain. And they became, for a century, the leading entrepreneurial nation. But they didn't have gold from the colonies. The absence of gold actually was the incentive to be entrepreneurial. The presence of gold was the incentive to be inflationary. So, gold going up a lot is not necessarily such a great thing for a society. It can actually be inflationary. That's why I'm always reluctant to say that gold is a hedge against inflation. It's not a hedge against inflation; it's a hedge against political turmoil.

### **Do you have any Business Autobiography Book Recommendations?**

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*Murray Stahl:* Business autobiography? Yes, I'm actually reading one right now about the crash of 1929. And the authors were investigative journalists, Gordon Thomas and Max Morgan Witt. They wrote the book many years ago, which is what makes it interesting to read. It has a very different character than if you wrote a book today, because the authors talked directly with a lot of the people who lived through it.

I always feel it's better to get the impressions of the people who lived through it, even though people sometimes have very bizarre impressions of those experiences. You get a different sense of the time and the events than if you're just reading a scholarly treatment that came long after and is very non-emotional focusing on the statistics of the circumstance. But a certain era in history is not just statistics; people had to live through it. And what makes it interesting, because they didn't know they were about to live through this era of history, and their reactions are the reactions at the moment. They're perceiving it very, very differently than the way you would perceive it studying it 90 years later.

By the way, the book is more popular history than it is anything else; it's not scholarly history, although it's very well-documented. I read three other books by that Gordon Thomas, and I actually enjoyed them greatly.

*Agustin Krisnawahjuesa:* Is the title *The Day the Bubble Burst*?

*Murray Stahl:* *The Day the Bubble Burst*, that's the title, yes. There's some debate, now, on whether it even was really a bubble? There are some scholars—we're getting off the book now—who say that had the Federal Reserve not dramatically tightened monetary policy, it never would've been a problem. There are other scholars who say it got to bubble-like because the Federal Reserve had a very loose monetary policy and that if one of the governors of the Federal Reserve, named Benjamin Strong, had not died before the crash, the situation might never have reached the crisis level. He died of tuberculosis, before the crash, I believe. All the other governors looked to him for leadership, and many are of the opinion that he was the only person capable of really providing leadership in a crisis like that, because he was head-and-shoulders better, in terms of his knowledge of finance, than the others. There might have been a very different outcome. But, you know, that's one of the oddities of history.

When you read history, there are all these little things you come across, like about Benjamin Strong, and you wonder if only somebody had or hadn't done this one thing, maybe the entire

outcome would've been different. It's very speculative, but interesting to think about. I don't know if it leads you anywhere but it's always interesting when authors focus on these small details. It really makes you think about the history and how it evolved.

### Closing Remarks

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*Murray Stahl:* It just remains for me to say thank you so much for the support. I thought they were great questions. And, of course, we're going to reprise this very shortly. If a question occurs to you that you just didn't pose, please submit it and we'll get you an answer or information, if that's what you require. So, thanks so much for listening and look forward to doing it again.

*Steven Bregman:* Good afternoon, all.



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