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BUILDING THE 10%

MARCH • 2017

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OF THE NELSON NASH INSTITUTE

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In February, the gang was in Birmingham, AL for another IBC Think Tank. This is Lara's address to the IBC Practitioners, explaining why they're unique in the financial world.

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INTERVIEW

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ABOUT LARA & MURPHY

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In 2010 he co-authored the highly acclaimed book, *How Privatized Banking Really Works* with economist Robert P. Murphy.

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"The mass man is one who has neither the force of intellect to apprehend the principles issuing in what we know as the humane life, nor the force of character to adhere to those principles."

—Albert J. Nock

There is always an endless list of prophets, soothsayers, and gurus broadcasting to the multitudes the absolute final "Word" on what we must all do to be saved. Be it a social, economic, or political message the objective is to gain mass acceptance and mass approval to which Albert J Nock would say, *"nothing substantial can be expected from the masses, but only from the Remnant."*

Nock, known by his 20th century audience mostly as an author and social theorist, was also a theologian and an Episcopal priest. He believed that a message molded to the masses is so "heavily adulterated with trivialities that its effect is merely to harden them in their sins." The masses are fickle, he would say. They ask you to give them what they want and insist on it. Blowing hot one day and then cold the next, the masses are prone to "irrational changes of fancy." Consequently, the prophet of the masses is continually chasing after their whims in order to win their favor—a most distressing task. It's the job, not of a prophet proclaiming the truth, but one of a politician who only tells them what they want to hear in order to earn a monetary reward and notoriety.

The *Remnant,* Nock insists, want only the best you have to give them, whatever that may be. They intuitively know your message is designed to help them. Give them that and they are satisfied. You have nothing more to worry about because the Remnant will hear, understand, and appreciate your message when it is proclaimed. They realize it's the truth when they hear you speak it.

Nock was absolutely sure that the prophet of the *Remnant* never knows who the *Remnant* is. But that he or she can count on the fact that the *Remnant* does exist and that it will always find you. More important,

it will hear you. To back up this certainty Nock, in a famous 1936 article, referenced the historical figures *Isaiah, Jonah, and Elijah* who, when they feared that that no one would listen to their message, God assured them that there was always a *Remnant* who would hear. "To Elijah he said, *'I have kept for myself seven thousand men'* who will hear and believe you. Go and preach to them."

A thousand years after Elijah's encounter the Apostle Paul in an epistle wrote, "So too at the present time there is a *Remnant,* chosen by grace. And in this way all Israel will be saved, as it is written."

Our motto, featured on the front cover of every issue of this publication, is "Building the 10%." This is our crucial goal in order to reach a "tipping point" in changing public opinion in favor of sound money and privatized banking. At first, one might expect us to water down our message, throwing up a "big tent" and trying to appeal to as many people as possible.

Yet Nock has taught us that such a strategy would be foolish. No, we must build upon a solid foundation as we strive toward the 10%. The people we attract into our ranks—including financial professionals as well as the general public—must be there not because our views are fashionable, but because they are *the truth.* Once we have attracted this Remnant—those who sense that something is fundamentally wrong with our banking and monetary system, but can't quite articulate the problems—we can eventually enjoy a snowball effect.

For now, Nock's message is at once disturbing but also a relief. It is true that the masses are fickle, and cannot be persuaded no matter how cogent the arguments. But that is precisely why we can avoid the politician's tactic of polling catch phrases, and instead focus on the content of our message. At this stage, we are not seeking to persuade the masses. Instead we must blast out our views, confident that the Remnant will seek out and find us. Won't you help us spread the word?

Yours truly,
Carlos and Bob

PULSE ON THE MARKET

RyanCare Fails

REPUBLICANS PULL THEIR HEALTH BILL

Lacking the votes, the Republicans decided to yank the American Health Care Act of 2017. The entire episode is instructive on several dimensions.

First the economics. As we have explained on these pages many times, legislators wanted the impossible when it came to health care and insurance: They wanted to mandate "universal coverage," even in the case of pre-existing conditions, but they also wanted low premiums and individual choice. Well, those things don't fit together easily, which is why President Trump's campaign promises—namely, to roll back the unpopular parts of "ObamaCare" while retaining the goodies—were so reckless.

Second we have the politics. It is unclear exactly what happened, but at some point, people stopped calling it "TrumpCare" and began calling it "RyanCare" (after House speaker Paul Ryan). Did Trump realize early on that this was going to blow up in his face, and so did the best he could to make Ryan be the fall guy? Some have taken it a step further, and theorize that *from the beginning* Trump knew this would be an albatross, and designed the whole procedure in order to knock out the policy wonk Ryan with whom he was at loggerheads. The actual truth may be somewhere in the middle, but it's difficult to say. At times it looked like the Republican leadership was almost looking to alienate its rank and file; Rand Paul started tramping around with a camera crew trying to get a look at the bill.

Third we need to ask: Is this a good thing? Inasmuch as the Republican bill would not have truly dismantled ObamaCare, it's arguably better that the original Affordable Care Act remains in force. This way, the growing difficulties with health care and health insurance cannot be blamed on "reckless deregulation," the way it surely would have under an "ObamaCareLite" from Paul Ryan & Co.

No matter what, the episode is disheartening because if a major new entitlement can't be rolled back even when *Donald Trump* becomes president and has a majority in both the

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House and Senate, and actively campaigned to cheering crowds on the promise of "repeal and replace," then it shows just how difficult it is to reverse the growth of government.

Executive Order Climate Wars

PROGRESSIVES FREAK OUT OVER TRUMP EXECUTIVE ORDER ON CLIMATE REGULATIONS

Saying that he was ending "the war on coal," on March 28 President Trump signed an executive order that rolled back many of the initiatives on climate change policy carried over from the previous administration. In particular, the EO would rewrite the so-called "Clean Power Plan" rules that effectively made new coal-fired power plants impossible, and would revisit the use of the "social cost of carbon" that the Obama Administration had implemented to quantify the alleged benefits (in monetary units) of reduced carbon dioxide emissions. Interestingly, the EO did *not* pull the U.S. out of the Paris Climate Agreement. As the dust settles we will provide more detail on these matters in future issues.

Fed Hikes

FEDERAL RESERVE RAISES INTEREST RATES

As widely expected, in its mid-March meeting the Federal Reserve announced a quarter-point hike in its target interest rate. Specifically the Fed announced, *"In view of realized and expected labor market conditions and inflation, the Committee decided to raise the target range for the federal funds rate to 3/4 to 1 percent. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a sustained return to 2 percent inflation."*

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In the coming months we will devote more coverage to this crucial topic. For now, we simply note that the Fed really has no choice but to continue hiking unless and until the economy has a sharp downturn. Increases in the Consumer Price Index have been steadily rising; the 12-month increase was up to 2.8 percent at the February reading. (The Fed uses a different measure, namely the Personal Consumption Expenditure index less food and energy, when it targets "2 percent inflation.") And although we still think the measure is quite misleading, the official unemployment rate was down to 4.7 percent in February.

We are very concerned that things will start unraveling quickly for the Fed and the Treasury as interest rates continue rising. For just one example: Right now the total outstanding Treasury debt is about $20 trillion. If the average yield on Treasuries returns to 5 percent, that means taxpayers will have to fork over $1 trillion every year just to pay the interest on the federal debt—even if Uncle Sam were to run balanced budgets forever, from this point on. For another fun fact, if interest rates rise too quickly, the Fed's equity would be wiped out (because the Fed is holding bonds as assets and has issued non-interest-bearing dollars as liabilities). To be sure, the Fed wouldn't let a technical condition of insolvency stop it, but it might spook the markets.

Before the
House Committee on Energy and Commerce
Subcommittee on Energy

FEDERAL ENERGY RELATED TAX POLICY AND ITS EFFECTS ON MARKETS, PRICES, AND CONSUMERS

March 29, 2017

Testimoniy of Robert P. Murphy, PhD
Senior Economist, Institute for Energy Research

[Editors' Note: Due to a sudden invitation to testify in Washington, we have decided to run Murphy's testimony as his article for this month's LMR. In the April issue, Murphy will finish Part 2 of his series on tax reform.]

The Institute for Energy Research (IER) is a non-profit organization that conducts research and analysis on the functions, operations, and government regulation of global energy markets. IER articulates free market positions that respect private property rights and promote efficient outcomes for energy consumers and producers. IER staff and scholars educate policymakers and the general public on the economic and environmental benefits of free market energy. The organization was founded in 1989 as a public foundation under Section 501(c)(3) of the Internal Revenue Code. Funding for the institute comes from tax-deductible contributions of individuals, foundations, and corporations.

Executive Summary

Economists generally agree that decentralized markets, operating through private property and the profit-and-loss test, allocate resources better than top-down central planning. In the context of tax policy, this principle means that policymakers should try to raise the desired amount of revenue in a manner that distorts consumer and producer behavior as little as possible.

This principle is routinely violated when it comes to tax policy and energy markets. A recent study estimates that from 2016-2020, the federal tax code will provide artificial support through energy-specific provisions that cost the Treasury (in the form of forfeited revenues) $82.7 billion, with the renewables provisions of the Production Tax Credit and Investment Tax Credit holding the #1 and #2 spots, receiving 47.5% of the total subsidy between them.

According to the Energy Information Administration (EIA), in Fiscal Year 2013 direct federal financial interventions (a measure that includes, but is not limited to, tax expenditures) for electricity production directed $5.9 billion to wind and $4.4 billion to solar, yet only $901 million for coal and $690 million for natural gas and petroleum electricity production. The difference in federal support is even more striking when adjusted for the level of output: On a per-megawatt-hour basis, in FY 2013 solar received $231 of support and wind received $35, while natural gas and petroleum received 67 cents and coal received 57 cents.

As these figures amply demonstrate, federal tax policy currently provides artificial encouragement to some sectors (such as wind and solar) at the expense of other energy sources. The popular slogan "all of the above" to characterize a sensible U.S. energy policy is defensible, if it means that policymakers will foster a level playing field. Artificially promoting the development of wind and solar actually raises the true cost of electricity generation, because it is currently much

cheaper to produce electricity (all things considered) through coal and natural gas plants, rather than new wind and solar.

As these newer technologies develop, the market may gradually shift to a greater reliance upon them. However, if policymakers continue to use the tax code (as well as direct spending and regulations) to artificially promote the expansion of some energy sources, this will further distort behavior, reducing consumer welfare and in particular making the energy sector less efficient.

Introduction

Policymakers, members of the public, and even late-night comedians recognize there are problems with the current U.S. tax code. As a bipartisan presidential panel on tax reform concluded in 2005:

> If you were to start from scratch, the current tax code would provide a guide on what to avoid…[W]e have a tax code that distorts basic economic decisions, sets up incentives for unwise or unproductive investments, and induces people to work less, save less, and borrow more. By some estimates, this economic waste may be as much as $1 trillion each year.[1]

One example that economists often use to show how the tax code perversely encourages borrowing is the corporate tax treatment of debt versus equity finance. "[U]nder the U.S. tax system, corporations may deduct payments of interest from taxable income, but are not allowed to deduct dividends. The tax law therefore builds in a bias towards debt financing."[2]

However, although such commentary is common—and is very useful to get the general public as well as policymakers to see the way the tax code encourages behavior (in this case, a reliance on debt versus equity financing) that many see as undesirable—the "solution" often advanced is arguably a cure

Policymakers, members of the public, and even late-night comedians recognize there are problems with the current U.S. tax code.

worse than the disease. Specifically, many tax reform proposals would deal with this problem by eliminating a firm's ability to deduct interest payments from its taxable income. Yet this suggested fix doesn't really match the tax treatment to the accounting realities; after all, from a company's perspective, interest payments to bond holders are a business expense, just as surely as wage payments to employees.

Rather than saying, "By allowing the deductibility of interest expense, the tax code artificially favors debt finance," it would be more accurate to say, "By taxing net income, the corporate tax artificially penalizes equity finance." In any event, economists generally agree that the *high rate of U.S. corporate income taxation*—currently the highest among

advanced economies and one of the highest in the world[3]—distorts business decisions, including the method of financing. This effect is by no means trivial: A 2001 academic study by Gordon and Lee estimated that "lowering the corporate [tax] rate by 10 percentage points lowers the percentage of the firm's assets financed by debt by 4 percent."[4]

As this discussion indicates, the U.S. federal tax code has the power not simply to raise revenue for the government, but also to alter behavior by households and firms. Generally speaking, it is economically undesirable for members of the private sector to make decisions because of the tax code. Yet we have also seen that having a broad economic framework for interpreting the impacts of the tax code is also important, lest policymakers tweak the code to address a specific problem in ways that simply invite further difficulties down the road.

The distortions emanating from the tax code occur across the economy, but our topic in this analysis is the impact on energy markets in particular. Yet before we discuss this narrower field, we should first provide a general framework of the economic analysis of taxes.

When economists talk about the inefficiency of the tax code, they usually mean that it is *distorting behavior.*

General Principles in the Economic Analysis of the Tax Code

Before analyzing the specifics of U.S. federal tax policy and its effects on energy markets, we should first provide a general framework for the economic analysis of the tax code. Although economists would differ in the importance they might attribute to each of the considerations in this section, the principles we discuss here are standard in this literature.[5]

The Economic Harm of an Inefficient Tax

Although the press often reports on tax code changes in terms of dollars—e.g. a "$240 billion tax hike over ten years"—academic economists usually have something else in mind when they discuss the economic harm or damage of the tax code. It is not the mere transfer of purchasing power from the taxpayers to the government that is the issue; after all, perhaps the government in principle could spend the money on something socially useful. Rather, when economists talk about the inefficiency of the tax code, they usually mean that it is *distorting behavior* away from the optimal patterns that would exist in the absence of tax incentives.

Among economists there is a default presumption in favor of allocating resources *not* through top-down, command-and-control policies, but rather through the decentralized decisions of consumers and firms operating

in the context of a market economy with private property rights and freely floating prices. To be sure, any economics textbook could list specific areas in which the "free market outcome" might need to be augmented because of imperfections, but nonetheless there is a general presumption in favor of letting consumers and entrepreneurs "spontaneously" determine how society's scarce resources (including workers' labor hours) will be allocated among specific industries. The market's profit-and-loss test—operating on the basis of the "true" prices reflecting genuine scarcity—is the feedback mechanism by which resources are channeled into their most valuable uses.

Absent a compelling reason to doubt the market outcome in a particular case, as a general rule it will reduce the efficiency of the economic system when the tax code distorts incentives and leads consumers and producers to behave differently. To repeat, this is a different concept from the mere amount of tax revenues raised by a certain tax. For example, a $1 per box tax on Cheerios might raise the same total tax receipts as (say) a nickel tax on *all* cereal boxes, but most economists would consider the latter approach to be much more sensible, since it would raise the revenue in a way that did not distort consumer choices nearly as much.

When a tax causes individuals to alter their behavior in inefficient ways, the result is a *deadweight loss* to society; the private sector ends up poorer, not just because of the immediate loss of tax payments to the government, but also because tradeoffs have been artificially distorted by the tax code.

Economists quantify a particular tax's inefficiency according to its *excess burden,* which means the extra amount by which the taxpayer is made poorer, in order to transfer a particular amount of revenue to the tax collector. Economists differ widely in their estimates of the excess burden of U.S. taxation, but one 2006 analysis from an expert in the field concluded that it cost the private sector $1.75 for every $1 raised in government revenue.[6]

Examples of Economic Distortions Arising from the Tax Code

By artificially penalizing (or rewarding) certain behaviors, the tax code can distort activity and (in general) reduce economic efficiency. These distortions can take place on many fronts.

For example, because the tax code typically focuses on market exchanges, it distorts the tradeoff between labor and leisure. Consider a worker who earns $50 per hour of labor. Absent any tax considerations, the worker will supply additional labor hours until the point at which he values (on the margin) an hour of leisure more than the extra goods and services he could obtain with an additional $50. However, if there is a 10 percent sales tax, then an extra $50 in hand will really only yield approximately an extra $45 worth of goods and services to the worker. This will artificially reduce the attractiveness of selling

labor time for wages, and will (other things equal) lead workers in the aggregate to consume more leisure, i.e. to work fewer hours.

For another example, consider an income tax. Like a sales tax, it too distorts the labor/leisure decision and reduces the attractiveness of working. However, a typical income tax contains the *additional* distortion that it artificially penalizes saving. Consider a worker who earns $10,000 in gross income, when interest rates are 3%. In the absence of any taxation, the worker can consume her income today and enjoy $10,000 worth of goods and services. Or, she can save her money for a year, earn an additional $300 in interest income, and enjoy $10,300 in goods and services next year. But with a 10% income tax, the tradeoff becomes $9,000 in enjoyment today versus $9,243 in enjoyment next year. Instead of reaping the full $9,000 x 3% = $270 in interest income as a reward for her year of abstinence, the worker is now only gaining an extra $243 in consumption by waiting for a year, because the gross interest income of $270 (= $9,000 x 3%) was also taxed at 10%, meaning an extra $27 went to the government on top of the original $1,000 income tax paid on the $10,000 in wage income. Thus, this worker is less likely to work, and on top of that is less likely to save, because of the artificial distortion of the income tax.

If the goal were to raise a given amount of revenue with as little distortion as possible, one solution would be to impose an equal, lump-sum head tax on every citizen.

Minimizing the Excess Burden of Taxation

If the goal were to raise a given amount of revenue with as little distortion as possible, one solution would be to impose an equal, lump-sum head tax on every citizen. For example, if the government wanted to raise $3.3 trillion in revenue, and we assume there are 330 million identifiable people in the United States, then one possible tax system would simply assign a tax bill of $10,000 to every man, woman, and child in the country. If this were feasible, it would raise (roughly) the same amount as the current tax code but with hardly any distortion, because Americans' tax bill would have nothing to do with their behavior (except perhaps for the decision to remain within the United States).

However, most people—including economists—recognize that such an approach, although very efficient, violates the principle of tax *equity*. One obvious consideration when it comes to equity is "ability to pay"; most people think a billionaire should pay more dollars in tax than someone with no income or assets.

In this document, it is not my purpose to argue for a particular "optimal" design of

tax policy. There are competing principles at stake, such as the tradeoff between efficiency and equity, as well as the broader, more philosophical questions of the proper size of government and the proper amount of resources to be transferred to the political sector away from the private sector.

Although we will not seek to answer these difficult questions here, even so we can (in the remainder of this subsection) consider methods of reducing the excess burden of taxation, i.e. ways of making the tax code more efficient. Then in later sections we apply our discussion to the case of energy markets.

A standard goal for minimizing inefficiency is to keep tax *rates* as low as possible, by applying them to as wide a base as possible. If we are to have an income tax, this means consolidating the number of tax *brackets* and reducing *arbitrary deductions*[7] *and credits* currently available. The logical end result of this approach would be a single, flat tax applied uniformly to the properly calculated net income of the entity.[8]

The direct benefit of such a tax code is that it raises the target amount of revenue with the smallest top marginal tax rate (by using a single rate and the broadest possible base). Thus it minimizes the distortions we have discussed, on the leisure-labor and consumption-saving decisions. In other words, such a tax would reduce the current penalties on working and investment.

Beyond this direct benefit, there would also be economic gains in the form of the reduced compliance costs. Without myriad deductions and credits, households and firms would no longer need to retain as much paperwork, and would also save an extraordinary amount of time—both their own and the time outsourced to tax professionals—with a much simpler tax code.

Finally, if households and businesses knew that there was a firm commitment to simplicity in the tax code, they would reduce the amount of resources devoted to *rent seeking*. Currently, the tax code contains high (some might argue punitive) marginal rates as the default, but with many deductions and credits that favor particular groups or activities, thus shielding them from the high rates. But when the tax code implicitly "picks winners and losers," not only does this directly distort behavior, but it also makes it worthwhile for various groups to spend resources lobbying policymakers to tweak the tax code in ways favorable to them. Although these efforts are rational at the individual level, in the aggregate they are largely an "arms' race" that renders the resulting tax code even worse from an efficiency standpoint. A truly simple tax code would reduce the resources spent on such efforts. Resources would be allocated primarily through the incentives given by market prices, not the tax code.

This brief discussion has distilled some of the key principles of tax analysis from an academic economics perspective. In the real world, there are other considerations besides "textbook" efficiency (and equity). For example, a tax "reform" package might introduce

new taxes that in theory are more efficient while phasing out other taxes. On paper this would seem to be a desirable change, but if in reality policy makers reintroduced the original tax *on top* of the new additions, then the result could be worse than the status quo.

Despite these difficulties, the framework we have presented summarizes some of the key lessons from economists on tax policy. We now apply this framework specifically to the tax code and energy markets.

The U.S. Federal Tax Code And Energy Markets

The general principles we discussed above apply to energy markets. For example, it is popular to endorse an "all of the above" approach to the various sources of energy production. We agree, but note that this does not mean that the tax code (or regulatory policy) should be designed with the intention of *promoting* certain energy sources while penalizing others.

Instead, an appropriate "all of the above" approach means setting a uniform playing field, with as low a tax rate as possible applied evenly to as broad a base as possible, so that the target amount of revenue is raised while minimizing the distortion of behavior. Just as consumer choice, guided by market prices, leads to the allocation of resources among different types of restaurants, so too should consumers ultimately be the ones to determine the market's mix of energy sources.[9]

In the remainder of this document we summarize some of the key facts concerning the tax treatment of the energy sector, and how this distorts markets and reduces consumer well being.

It is popular to endorse an "all of the above" approach to the various sources of energy production.

Energy Information Administration (EIA) Assessment of Energy "Subsidies" as of FY 2013

The Energy Information Administration (EIA), an independent agency within the Department of Energy (DOE), in 2015 issued a report on the "direct federal financial interventions and subsidies that are provided by the federal government, provide a financial benefit with an identifiable federal budget impact, and are specifically targeted at energy markets," for Fiscal Year 2013.[10] The term "subsidy" here is construed broadly, and includes not only direct cash assistance but also preferential treatment in the tax code that reduces an entity's tax liability.[11] We present some of EIA's key findings below.

Table 1. Value of Energy Subsidies By Major Use, FY 2010 and FY 2013 (millions of 2013 dollars)

Subsidy and Support Category	FY 2010	FY 2013
Electricity-Related	**11,694**	**16,112**
Fuel and Technologies Used for Electricity Production	10,862	14,928
Transmission and Distribution	833	1,184
Fuels Used Outside the Electric Power Sector	**10,710**	**5,206**
Conservation, End Uses, and Low-Income Home Energy Assistance Program (LIHEAP)	**15,574**	**7,940**
Conservation	7,069	1,964
End Uses and Other Technologies	3,127	2,860
LIHEAP	5,378	3,116
Total	**37,979**	**29,258**

Source: EIA (2015), "Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2013," Table ES1.

As Table 1 indicates, as of FY 2013 EIA had cataloged some $29 billion in direct federal financial intervention in energy markets, with $16 billion going to electricity, $5 billion going to other fuels, and just under $8 billion going to conservation, end uses, and low-income energy assistance.

We now break down the totals by energy type.

Table 2. Quantified Energy-Specific Subsidies and Support By Type, FY 2013 (millions of 2013 dollars)

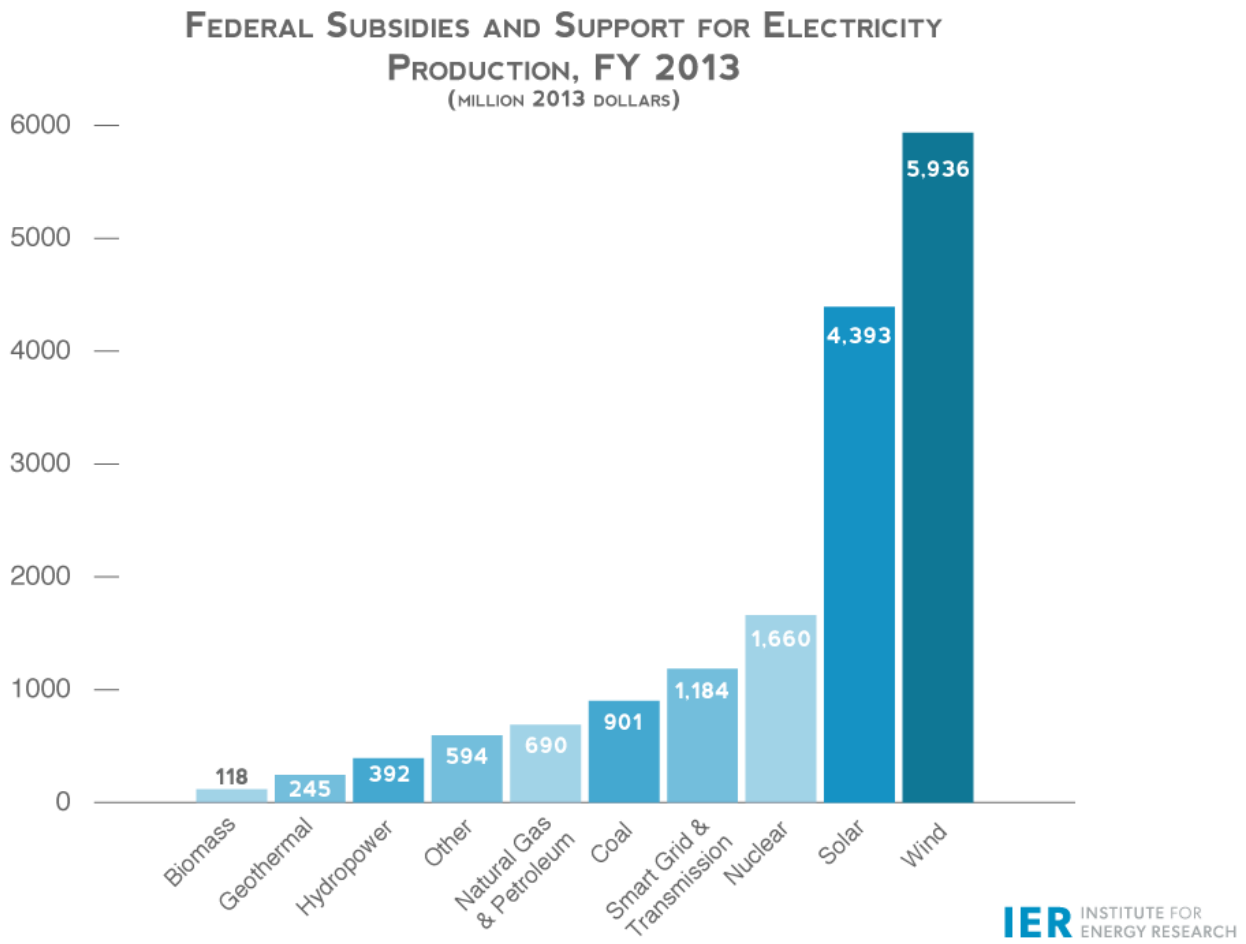
Beneficiary	Direct Expenditures	Tax Expenditures	Research and Development	DOE Loan Guarantee Program	Federal and RUS Electricity	Total	ARRA Related
2013							
Coal	74	769	202	-	30	1,075	129
Refined Coal	-	10	-	-	-	10	-
Natural Gas and Petroleum Liquids	62	2,250	34	-	-	2,346	4
Nuclear	37	1,109	406	-	109	1,660	29
Renewables	**8,363**	**5,453**	**1,051**	**-**	**176**	**15,043**	**8,603**
Biomass	332	46	251	-	-	629	369
Geothermal	312	31	2	-	-	345	312
Hydropower	197	17	10	-	171	395	216
Solar	2,969	2,076	284	-	-	5,328	3,137
Wind	4,274	1,614	49	-	-	5,936	4,334
Other	209	-	380	-	5	594	229
Subtotal Renewables Electric	**8,291**	**3,783**	**977**	**-**	**176**	**13,227**	**8,597**
Biofuels	72	1,670	74	-	-	1,816	6
Electricity - Smart Grid and Transmission	**8**	**211**	**831**	**-**	**134**	**1,184**	**780**
Conservation	**833**	**630**	**501**	**-**	**-**	**1,964**	**1,574**
End Use	**3,513**	**1,997**	**466**	**-**	**-**	**5,976**	**2,046**
LIHEAP	3,116	-	-	-	-	3,116	-
Other	397	1,997	466	-	-	2,860	2,046
Total	**12,891**	**12,428**	**3,491**	**-**	**449**	**29,258**	**13,166**

Source: EIA, Table ES2

As Table 2 indicates, in the realm of specific energy types, renewables—in particular, solar and wind—received the lion's share of federal support. Specifically, of the $29.3 billion in total federal financial intervention, $15.0 billion went to renewables (with $5.9 billion to wind and $5.3 billion to solar), while only $2.3 billion went to natural gas and petroleum liquids, $1.7 billion went to nuclear, and $1.1 billion went to coal.

In Figure 1 we present this same information in graphical form.

Figure 1.



Source: EIA, Table ES2

Table 3. Electricity Production Subsidies and Support, FY 2013 (millions of 2013 dollars)

Beneficiary	Direct Expenditures	Tax Expenditures	Research and Development	DOE Loan Guarantee Program	Federal and RUS Electricity[a]	Total	Share of Total Subsidies and Support
Coal	61	642	167	-	30	901	6%
Natural Gas and Petroleum Liquids	18	662	10	-	-	690	4%
Nuclear	37	1,109	406	-	109	1,660	10%
Renewables	**7,408**	**3,373**	**722**	**-**	**176**	**11,678**	**72%**
Biomass	62	9	47	-	-	118	1%
Geothermal	221	22	2	-	-	245	2%
Hydropower	194	17	10	-	171	392	2%
Solar	2,448	1,712	234	-	-	4,393	27%
Wind	4,274	1,614	49	-	-	5,936	37%
Other	209	-	380	-	5	594	4%
Subtotal Renewables Electric	**7,408**	**3,373**	**722**	**-**	**176**	**11,678**	**72%**
Biofuels	-	-	-	-	-	-	-
Electricity - Smart Grid and Transmission	**8**	**211**	**831**	**-**	**134**	**1,184**	**7%**
Total	**7,532**	**5,996**	**2,136**	**-**	**449**	**16,112**	**100%**

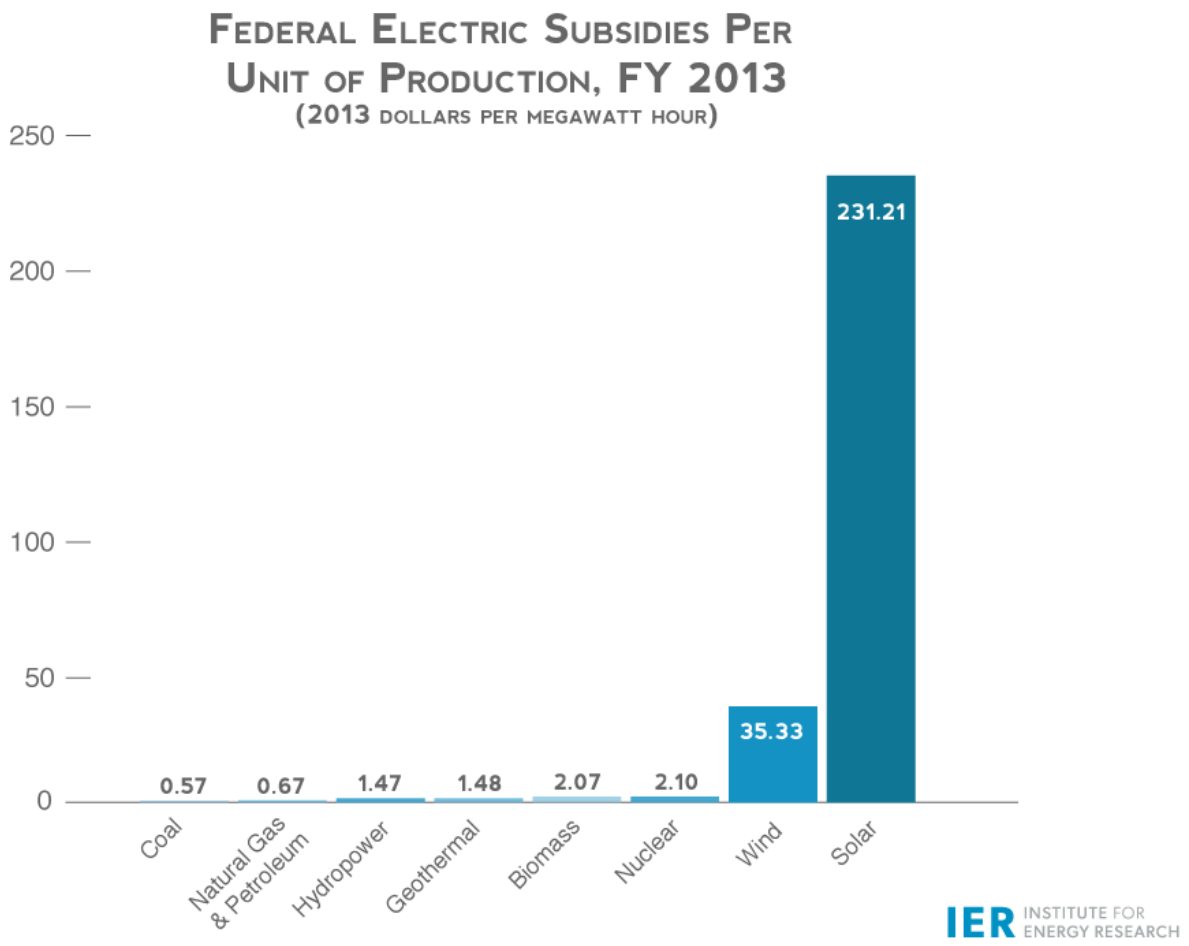
Source: EIA, Table ES4

We can further refine EIA's analysis by looking just at electricity production subsidies.

As Table 3 shows, when we restrict our attention to electricity production, federal financial intervention totaled $16.1 billion. Of that amount, 37 percent went to wind, 27 percent went to solar, 10 percent went to nuclear, 6 percent went to coal, and 4 percent went to natural gas and petroleum liquids.

Finally, although the EIA report does not directly provide these figures, we can use the information from the report to calculate federal support for electricity production *per unit of electricity produced.*[12] We present these findings in Figure 2.

Figure 2.



Source: IER calculations based on data from EIA (2015), "Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2013."

As Figure 2 illustrates, once we adjust for the level of electricity output (in MWh), the disparity in federal support becomes even more lopsided, because wind and solar constitute such a small share of the total market. At $231 per MWh, the support for solar is some 400 *times* the support for coal.

Congressional Research Service (CRS) Assessment of Energy Tax Provisions, 2016-2020

Although the data from the EIA report were illuminating, the report's definition of "federal financial interventions and subsidies" included direct grants (which are not part of the tax code). To gain a tighter focus on energy tax provisions, we can rely on the latest Congressional Research Service (CRS) report that specifically tallies them.[13] Table 4 summarizes the latest CRS findings.

As Table 4 indicates, of the measures analyzed by the CRS study, by far those with the largest cost (in the sense of tax expenditures) were the Production Tax Credit (PTC) at $25.7 billion and the Investment Tax Credit (ITC) at $13.6 billion, both targeted to renewable energy. The two costliest measures catering to oil and natural gas, namely the expensing of intangible drilling costs (IDCs) at $8.0 billion and percentage vs. cost depletion at $5.2 billion, constituted a much smaller budgetary impact.

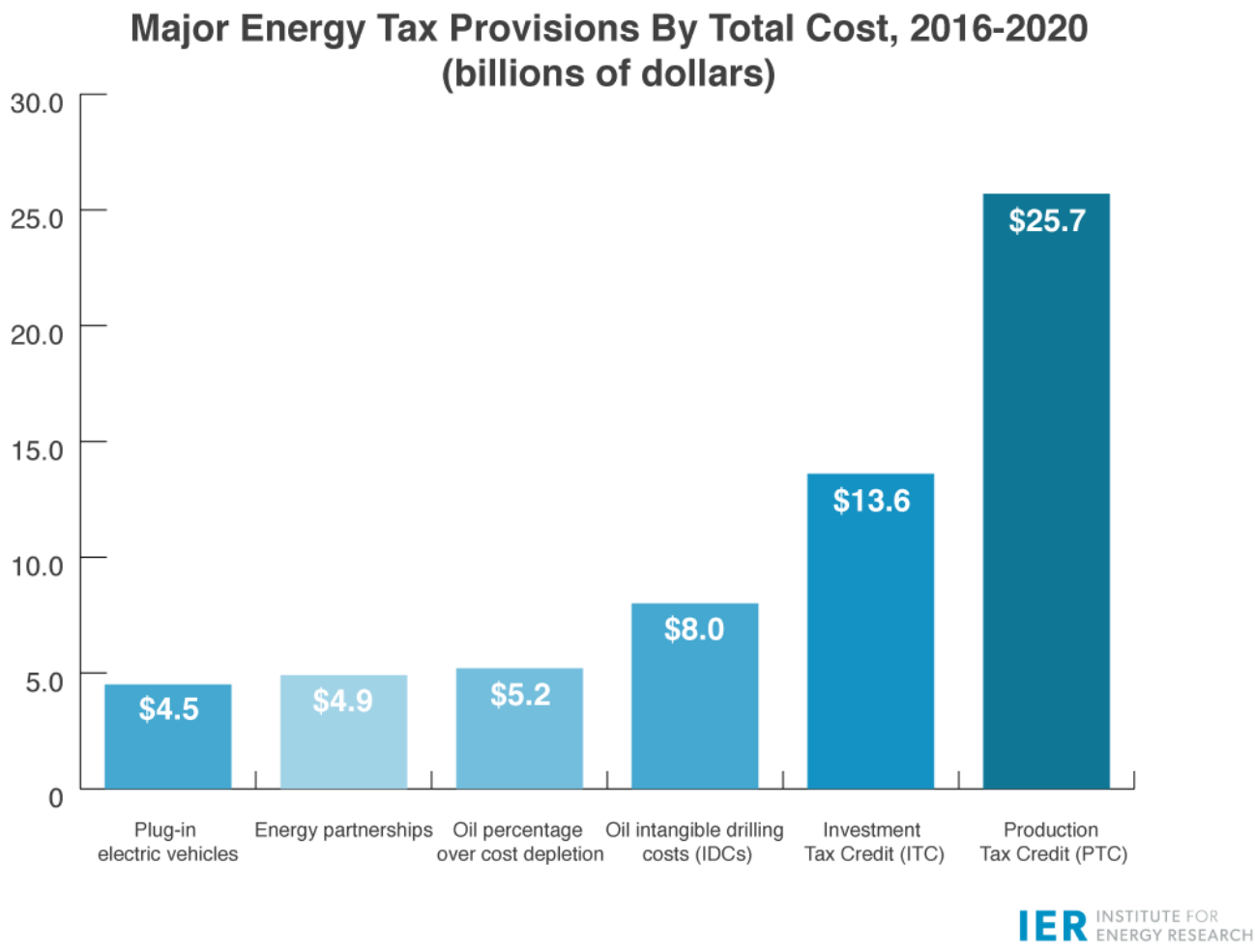
Table 4. Federal Energy Tax Provisions and Their Budgetary Impact, 2016 Actual Cost and Projected 2016-2020 Cost

Tax Provision Item or Category	2016 Cost	2016-2020 Cost	% of 2016-2020 Cost
FOSSIL FUEL TAX PROVISIONS			
Expensing of percentage over cost depletion	$0.9	$5.2	6.3%
Expensing of intangible drilling costs (IDCs) and dvmpt expenditures for hard minerals	$1.8	$8.0	9.7%
Amortization of G&G expenditures for oil and gas exploration	$0.1	$0.6	0.7%
Coal production credits		$0.2	0.2%
Credits for investing in clean coal facilities	$0.2	$1.0	1.2%
Amortization of air and pollution control facilities	$0.5	$4.2	5.1%
Exceptions for energy-related publicly traded partnerships	$0.9	$4.9	5.9%
Credit for alternative fuels and alternative fuels mixtures	$0.8	$0.9	1.1%
RENEWABLES TAX PROVISIONS			
Production Tax Credit (PTC)	$3.4	$25.7	31.1%
Investment Tax Credit (ITC)	$2.6	$13.6	16.4%
Section 1603 grants in lieu of tax credits	$1.2	$1.9	2.3%
Residential energy-efficient property credit	$1.1	$3.2	3.9%
Five-year cost recovery of certain energy property	$0.3	$2.0	2.4%
Credits for holders of clean renewable energy bonds		$0.6	0.7%
Credit for biodiesel, renewable diesel, and second-generation (cellulosic) biofuels	$2.2	$2.6	3.1%
Advanced energy manufacturing tax credit	$0.3	$0.8	1.0%
ENERGY EFFICIENCY TAX PROVISIONS			
Credit for nonbusiness energy property	$0.5	$0.9	1.1%
Exclusion of energy conservation subsidies provided by public utilities		$0.1	0.1%
Qualified energy conservation bonds		$0.3	0.4%
Plug-in electric and other alternative fuel vehicles	$0.3	$4.5	5.4%
OTHER ENERGY TAX PROVISIONS			
Exclusion of interest on state and local government private activity bonds for energy production facilities		$0.7	0.8%
Depreciation recovery periods for energy specific items	$0.4	$1.8	2.2%
Deferral of gains from the sale of electric transmission property	-$0.2	-$1.0	-1.2%
TOTAL FOR ALL TAX PROVISIONS	$17.3	$82.7	100.0%

Source: Adapted from Congressional Research Service,[14] Table 1.

In Figure 3 we chart the six costliest items in the CRS study.

Figure 3.



SOURCE: Adapted from Congressional Research Service, Table 1.

Federal Revenues By Energy Source

In previous sections we have provided statistics on the amount of federal tax support (in the sense of targeted deductions and credits) for participants in energy markets. To place these numbers in context, it may help to see the revenues actually *collected* by the federal government through various channels from the energy sector.

Unlike many other industries, those in the energy sector do not simply pay corporate income tax to the federal government, but often may make very large *non-tax* payments because the federal government legally owns resource-rich lands and waters. "When companies extract natural resources on federal

lands and waters, they pay royalties, rents, bonuses, and other fees, much like they would to any landowner. This non-tax revenue is collected and reported by the Office of Natural Resources Revenue (ONRR)."[15]

In Table 5 we summarize the results posted at the Department of Interior's website, concerning the 2015 payments of non-tax extraction revenues:

As Table 5 illustrates, extraction revenues in 2015 from oil, natural gas, and coal dwarfed those of geothermal and wind; the totals are $7.3 billion versus $17 million. (We can't present the data graphically, because the small values for geothermal and wind wouldn't even show up in the chart.)

To reiterate, the data in Table 5 only show the *non-tax* revenues associated with extraction activities. We might also wonder about standard corporate income tax revenues associated with various energy sources. Unfortunately, such data do not seem to be available from government sources in this format.

However, we can get some idea of the respective contributions to federal tax receipts by looking at the latest IRS report on corporate tax returns broken down by "minor industry." We present the relevant information in Table 6.

Table 5.

	Federal Extraction Revenue (2015)				
Commodity	Total	Securing Rights	Before Production	During Production	Other
Oil and Gas	$6,159,534,275	$682,107,972	$237,555,805	$ 5,281,260,458	-$41,389,960
Coal	$1,131,925,660	$453,264,014	$1,347,056	$671,453,229	$5,861,362
Geothermal	$14,014,431	$0	$1,737,839	$11,986,017	$290,575
Offshore Wind	$3,245,090	$431,482	$2,804,843	$0	$8,765

Source: Department of the Interior, https://useiti.doi.gov/explore/#revenue

Table 6. Select Data on Corporate Tax Returns by Energy-Related "Minor Industry," Tax Year 2013 (money amounts in thousands of dollars)

Minor industry	Number of returns		Income subject to tax	Total income tax after credits
	Total	With net income		
	(1)	(2)	(9)	(14)
Total returns of active corporations	**5,887,804**	**3,580,938**	**1,258,482,675**	**293,357,284**
Agriculture, forestry, fishing and hunting	**136,493**	**81,466**	**3,454,923**	**1,000,266**
Agricultural production	101,274	61,019	3,077,600	885,826
Forestry and logging	8,745	5,667	116,791	37,993
Support activities and fishing, hunting, and trapping	26,473	14,779	260,532	76,448
Mining	**35,603**	**23,070**	**25,807,535**	**4,896,248**
Oil and gas extraction	18,877	12,872	11,911,704	1,943,270
Coal mining	996	420	*84,706	32,220
Support activities for mining	10,522	7,508	6,656,688	1,943,516
Utilities	**7,845**	**4,637**	**4,871,477**	**1,450,017**
Electric power generation, transmission, and distribution	1,427	370	1,604,178	299,671
Natural gas distribution	646	363	765,062	396,785
Water, sewage, and other systems	5,272	3,486	140,729	49,872
Combination gas and electric	501	417	2,361,508	703,689
Manufacturing	**242,755**	**155,960**	**472,449,903**	**88,191,133**
Petroleum and coal products manufacturing	1,039	739	123,428,735	6,908,479
Petroleum refineries (including integrated)	207	67	122,576,521	6,630,850
Asphalt paving, roofing, other petroleum and coal products	831	672	852,214	277,629
Wholesale and retail trade	**960,845**	**586,154**	**204,075,889**	**60,990,498**
Petroleum and petroleum products	7,083	4,455	2,468,771	407,787
Gasoline stations	45,376	28,538	1,398,024	453,186
Transportation and warehousing	**219,600**	**141,699**	**27,680,388**	**8,824,125**
Pipeline transportation	519	435	939,546	334,057
Other transportation and support activities	43,975	29,979	11,263,282	3,492,250

Source: Adapted from IRS, Statistics of Income (SOI), Returns of Active Corporations, Table 1, available at: https://www.irs.gov/uac/soi-tax-stats-returns-of-active-corporations-table-1

As Table 6 shows, in Tax Year 2013 oil and gas extraction alone contributed far more in total income tax (after credits) than the entire electric power generation, transmission, and distribution industry—$1.9 billion versus $300 million. And note that this latter figure is the *entire* listing for electric power, meaning it includes electricity generated by natural gas and coal, which account for the overwhelming bulk of total U.S. electric generation.

In summary, although we cannot find reports from official sources that expressly tabulate the total federal receipts broken down by energy type, it is safe to say that oil, natural gas, and coal generate vastly more in net payments to the U.S. government than renewable energy sources. These facts should be considered along with the earlier statistics concerning the disparity in tax expenditures ("subsidies") by energy type.

The History of the PTC and Its Impact on the Wind Sector

As discussed earlier, the Production Tax Credit (PTC) is the single most expensive (from the perspective of forfeited revenue) energy-targeted tax provision; the latest

CRS report projected that the PTC would account for a tax expenditure of $25.7 billion from 2016-2020. Because of its relative significance, and also because of its perverse effect of *negative* wholesale wind prices, we discuss the PTC in detail in this section.[16]

Brief History of the PTC

The PTC was first enacted in 1992 and, as of this writing, has since been extended ten times. The PTC provides owners of wind facilities a tax subsidy[17] tied to the general price level that currently works out to $23 per megawatt-hour (MWh) of electricity generated for the facility's first 10 years of operation. To put the size of the subsidy in perspective, prices in wholesale electricity markets averaged $30 per MWh in 2016.[18] Furthermore, because the PTC is a tax credit, its official current value of $23 per MWh actually corresponds to a pre-tax wind price of $23 / (0.65) = $35 per MWh, with the current corporate tax rate of 35 percent. (As we will see, this explains why wind producers are willing to accept negative wholesale prices even below minus $20 per MWh.)

The PTC was extended in January 2013 and expired at the end of that year. In the extension bill, however, Congress expanded the qualification criteria to include facilities that had commenced construction by the end of 2013 instead of requiring that facilities be complete.[19] The change in language enabled the Internal Revenue Service (IRS) to expand eligibility to projects that had not initiated physical construction but had merely secured financing, including many facilities that began or will begin operation between January 1, 2014 and January 1, 2016.[20] (As a result, the government would have been providing PTC support through the year 2025.)

As of this writing, the latest legislation[21] concerning the PTC is the Consolidated Appropriations Act, 2016 (H.R. 2029, Sec. 301), passed in December 2015. This legislation enacted a gradual "phase out" of the PTC. Specifically, for wind facilities commencing construction in 2017, the PTC is reduced by 20 percent; for those starting in 2018, the PTC is reduced by 40 percent; and for those starting in 2019, the PTC amount is reduced by 60 percent.

The case of the PTC is an excellent illustration of how generous tax code "support" for a particular energy type—in this case, wind—can lead to results that clearly make no economic sense.

A Perversion of the Market: The PTC and Negative Wholesale Wind Prices

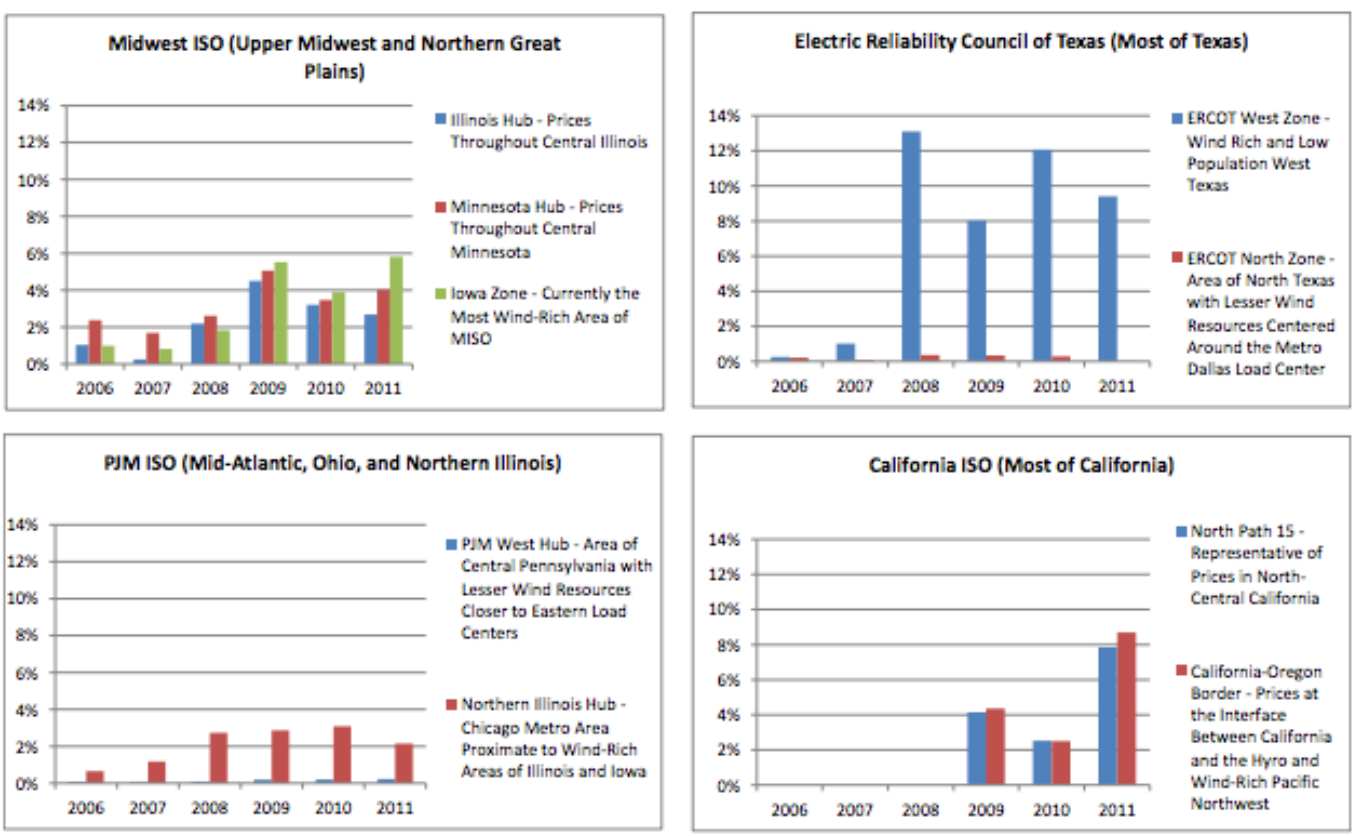
The case of the PTC is an excellent illustration of how generous tax code "support" for a particular energy type—in this case, wind—can lead to results that clearly make no economic sense. Specifically, at times of low demand wind operators can end up driving wholesale electricity prices into very nega-

tive territory—even below minus $20 per MWh. Because the PTC is only applicable for actual production, the owners of a wind facility can reduce their overall tax liability by the PTC credit even if they are "losing money" on the wind generation itself.

Although it might make sense for certain producers to offer negative prices for brief periods to the grid in order to avoid a disruptive shutdown of generation, this does *not* make sense for wind operators. "Unlike nuclear and fossil-fueled generation[,] wind generation is physically flexible, as it can be shut down or turned back on reasonably quickly by altering the pitch of the turbine blades or by disconnecting or reconnecting the turbines to the electric grid."[22] Clearly, the unusual practice of prolonged selling at negative prices is driven by the tax code, not the underlying economic realities.

Furthermore, with the expansion of wind capacity over time, this phenomenon of negative wholesale electricity prices became more pronounced, as we illustrate in Figure 4.

Figure 4. Percentage of Hours with Negative Real-Time Electric Energy Prices in Select Markets, 2006 – 2011



NOTE: California ISO data not available prior to 2009.
Source: Huntowski et al. 2012,[23] Figure 6.

As Figure 4 indicates, the phenomenon of negative wholesale electricity prices became much more common in certain markets especially after 2007. It is natural to attribute this increase in large part to the growing proliferation of wind capacity.

Wind Advocates Connect PTC With Wind Capacity Growth: That's Not a Good Thing

We should note that even the supporters of wind energy fully agreed that the PTC has been and continues to be vital to the expansion of wind capacity. For example, the current page devoted to the PTC at the website of the American Wind Energy Association (AWEA) says:

> Thanks to this policy certainty, 18 gigawatts of wind power capacity are now under construction or in advanced development. With the PTC phasedown, wind energy can [continue] growing to supply 10 percent of U.S. electricity by 2020 and support tens of thousands additional well-paying jobs.
>
> With the help of the PTC and ITC, U.S. wind farms now provide enough power for 24 million American homes and attract billions in private investment to the U.S. economy each year…
>
> The PTC and ITC has driven more wind development…[24]

The AWEA analysis is undoubtedly correct that a generous tax credit—so generous that it justifies paying customers to take the product—will encourage the expansion of a particular sector. But by itself, this is evidence that the outcome is a *distortion,* because of the artificial advantage given to wind. Or, from the other side, we could say that the tax code (with the PTC) has placed an artificial disadvantage on electrical generation sources that do not qualify for the credit.

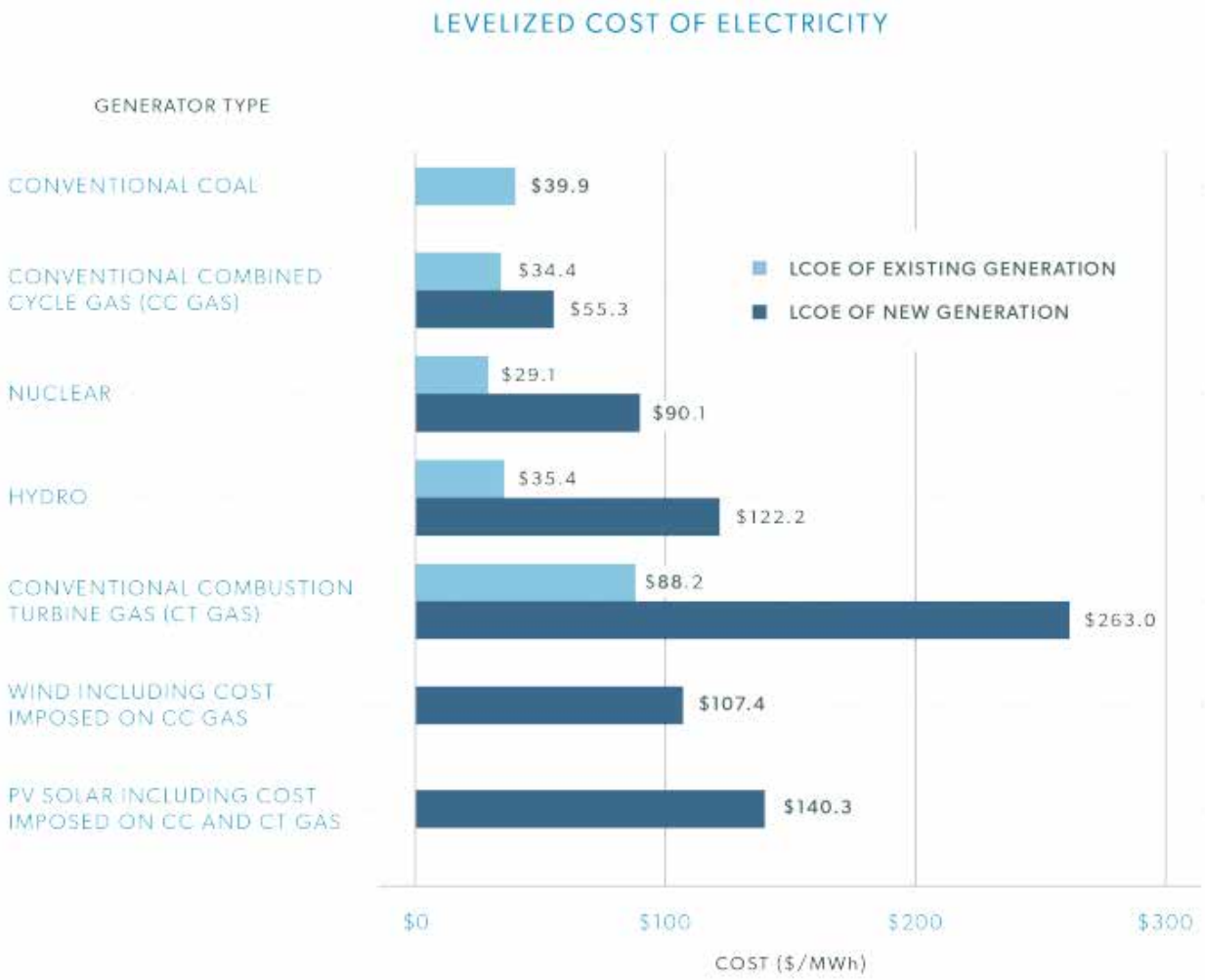
The AWEA analysis is undoubtedly correct that a generous tax credit—so generous that it justifies paying customers to take the product—will encourage the expansion of a particular sector.

Although artificial tax advantages can make outcomes "rational" at the individual level, from the perspective of the overall economy they are inefficient. It would distort producer and consumer behavior less if the target amount of tax revenues were raised on a more uniform basis, with resources flowing into various energy types based on their actual profitability and reliability.

Artificial Federal Support for Certain Energy Sources Leads to Inefficiency

To understand the inefficiencies resulting from an artificial advantage given to wind and solar, consider the levelized cost of electricity generation from various sources.

Figure 5.



SOURCE: Stacy and Taylor (2016),[25] p. 5.

There are two important takeaways from Figure 5. First, note that with these estimates, electricity from new wind and solar generation is more expensive than electricity from new gas or nuclear generation. Second and perhaps more important, the relevant comparison on the margin is the levelized cost of *existing* generation, if the issue is whether policymakers want to actively reduce generation from some sources (such as coal) and replace it with growth in other sources (such as wind and solar). On this margin, the increases in costs of generation are even more pronounced.

The Economic Impact of Certain Tax Provisions Related to the Oil Sector

Although the PTC is explicitly designed to foster growth in electricity generation from renewables, there are other aspects of the current tax code that provide benefits to the oil sector. For example, the provision for percentage depletion (rather than cost depletion, which is more analogous to standard depreciation of business expenses) gives an artificial advantage to oil production under certain conditions.[26] However, we note that the percentage depletion is *not* available to integrated oil companies and is limited to output below 1,000 barrels per day;[27] this is not a "tax break for Big Oil" as many critics allege.

Regarding federal support for renewables, the infant industry argument is particularly weak since these arguments have been made for decades. These are not infant industries, these are grown adults.

Two other provisions—namely, the Domestic Manufacturer's Section 199 deduction and the allowance of Last-In, First-Out (LIFO) inventory accounting—are beneficial to oil and natural gas companies. However, it is incorrect to classify these as "tax breaks for oil and gas companies" as critics often allege. These are standard tax code provisions available to all sectors. (In fact, the Section 199 deduction has been made artificially *lower* for oil and gas companies than for others, with the former only able to claim a 6 percent deduction versus the standard 9 percent deduction for other manufacturers.[28])

Two Challenges to the General Principle of Allowing the Price System to Guide Energy Market

Before closing, we should address two common challenges made to the general presumption of letting free consumer and producer decisions guide energy markets, without outside "steering" from the political process. These challenges are the "infant industry" argument and the concern over anthropogenic climate change.

The infant industry argument claims that a new domestic industry needs a helping hand from policymakers (such as in the form of protective tariffs or other preferential tax treatment) to get up and running. In general this is a dubious proposition. Private investors are just as capable of forecasting the long-term benefits of today's investments, and indeed have more incentive to get their forecasts right because their own money is on the line.

Regarding federal support for renewables, the infant industry argument is particularly weak since these arguments have been made for decades. These are not infant industries, these are grown adults. If they can't compete (except in niche markets) on a level playing

field with other sources of electrical generation, this reflects economic realities, not birthing pains.

A completely separate argument claims that the "negative externality" from carbon dioxide emissions is not reflected in market prices, and therefore the tax code (so it is alleged) implicitly gives a "subsidy" to carbon-intensive energy sources. In this view, providing federal support for alternative energy sources is merely mitigating this long-standing bias.

The present document concerns tax policy, not climate science. However, we refer to IER's work on the dubious use of the "social cost of carbon" as a policymaking tool.[29] It is important for policymakers to realize that *even if* we stipulate the physical science of climate change as codified in, for example, the Intergovernmental Panel on Climate Change (IPCC) reports, that *it does not follow* that the U.S. government should therefore adopt measures to penalize carbon dioxide emissions. The "social cost of carbon" is *not* an objective fact of the world, analogous to the charge on an electron or the mass of the moon. Rather, it is an arbitrary concept dependent on subjective parameters such as the discount rate applied to estimates of damages that will not occur for centuries. Once we consider these and other complications—such as the interaction of penalties on carbon dioxide emissions with existing inefficiencies in the tax code—the case for promoting alternative energy sources becomes much weaker.

Conclusion

Although they differ on the emphasis to be given to certain priorities, economists generally agree that if we were to design a tax code from scratch, the desired revenue would be raised by applying the tax to as broad a base as possible, with as low a rate as possible. Adding in artificial privileges to particular groups is a self-defeating and inefficient process, because it distorts consumer and producer behavior and invites "rent seeking" from groups trying to shield themselves from unfavorable tax treatment. When policymakers try to steer markets through the tax code, it makes Americans poorer because resources are no longer being channeled into their most important uses. This includes the resources being spent in complying with the (unnecessarily complex) tax code itself.

In the context of energy, there are several provisions of the tax code that give advantages to particular producers or consumers. A recent Congressional Research Service (CRS) study estimated that from 2016-2020, the total cost of these energy tax provisions would be $82.7 billion. Of the provisions analyzed, the two most expensive were the Production Tax Credit (PTC) and the Investment Tax Credit (ITC), both tailored to renewable energy.

It is clear that these tax provisions distort energy markets. For example, the generous PTC has made it commonplace for wholesale electricity prices to be negative, because wind producers can benefit financially once the tax credit is taken into account. Yet it

is inefficient to artificially encourage wind (and solar) in this manner, because their correctly-calculated levelized cost of generation—particularly when we look at *existing* facilities which some wish to retire through policy—is so much higher than that of coal and natural gas.

A popular slogan says that the U.S. should embrace an "all of the above" approach to energy sources. This is a sensible stance, if understood to mean that policymakers do not try to *foster* those energy sources that are currently providing only a small share of total output. Both theory and history have shown that private property and market prices lead to superior outcomes than top-down planning. This result holds for energy markets just as it does for restaurants.

◆◆◆

References

1. President's Advisory Panel on Federal Tax Reform, 2005, p. 1, quoted in Harvey S. Rosen and Ted Gayer, Public Finance (New York: McGraw-Hill/Irwin), 9th edition, 2010, p. 477.
2. Rosen and Gayer, Public Finance, p. 450.
3. Kyle Pomerleau, "Corporate Income Tax Rates around the World, 2016," Tax Foundation, August 18, 2016, available at: https://taxfoundation.org/corporate-income-tax-rates-around-world-2016.
4. The quotation is from Rosen and Gayer, Public Finance, p. 451. They are referring to Roger H. Gordon and Young Lee, "Do Taxes Affect Corporate Debt Policy? Evidence from U.S. Corporate Tax Return Data" (2001), Journal of Public Economics 8: 195-224.
5. For a textbook reference on the general discussion in this section, see Harvey S. Rosen and Ted Gayer, Public Finance (New York: McGraw-Hill/Irwin), 9th edition, 2010, especially chapters 15-17, 19, and 21.
6. The 75 percent estimate comes from Martin Feldstein, "The effects of taxes on efficiency and growth" (2006), NBER Working Paper No. 12201. Feldstein's result and a broader discussion can be found in James R. Hines Jr., "Excess Burden of Taxation" (2007), Office of Tax Policy Research, University of Michigan Ross School of Business, May 31, 2007, available at: http://www.bus.umich.edu/otpr/WP2007-1.pdf
7. It is important to note the word "arbitrary" in our statement. If a business is being taxed on its net income, it is perfectly sensible to allow the business to deduct its legitimate business expenses and thus reduce its taxable income. Part of the difficulty in tax reform is the treatment of household expenditures. When a household buys a new car, is that an investment or consumption?
8. A classic case for a single rate flat tax is Robert E. Hall and Alvin Rabushka, The Flat Tax (Hoover Institution), 2nd edition, 2007, available at: http://www.hoover.org/research/flat-tax. Note, however, that by allowing for the full deductibility of investment expenditures, the Hall/Rabushka flat tax is essentially a consumption tax, not an income tax.
9. We deal with possible objections to such a strategy—such as the "market failure" argument in the context of carbon dioxide emissions and climate change—below.
10. Energy Information Administration, "Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2013," March 12, 2015, available at: https://www.eia.gov/analysis/requests/subsidy/.
11. The EIA report notes (p. xi) that because it focuses on measures that are specifically targeted to the energy sector, its analysis does not include all federal provisions that might benefit the energy sector. For example, "Section 199 of the American Jobs Creation Act of 2004, referred to as the domestic manufacturing deduction, provides reductions in taxable income for American manufacturers, including domestic oil and gas producers and refiners." In later sections we address some of the popular complaints about the "tax breaks" given to the oil industry.
12. For more information on these calculations, and on EIA's rationale for not directly providing the data, see Mary Hutzler, "EIA Report: Subsidies Continue to Roll In For Wind and Solar," Institute for Energy Research blog post, March 18, 2015, available at: http://instituteforenergyresearch.org/analysis/eia-subsidy-report-solar-subsidies-increase-389-percent/.
13. The CRS data is included as an Appendix to the memo to committee members from the U.S. House of Representatives Committee on Energy and Commerce, March 27, 2017, available at: http://docs.house.gov/meetings/IF/IF03/20170329/105798/HHRG-115-IF03-20170329-SD002.pdf.
14. See the appendix to the committee members memo at: http://docs.house.gov/meetings/IF/IF03/20170329/105798/HHRG-115-IF03-20170329-SD002.pdf.
15. Quotation from: https://useiti.doi.gov/explore/#revenue.
16. This material draws heavily on the IER study, "The Case Against the Wind Production Tax Credit," November 2014, available at: http://

instituteforenergyresearch.org/wp-content/uploads/2014/11/The-Case-Against-the-PTC-Nov-2014.pdf.

17. Some analysts make a distinction between a tax credit (which reduces tax liability) and an explicit payment issued by the federal government, reserving the term "subsidy" for the latter. However, with the wind PTC the distinction is not crisp in practice, because the tax credit is so large that many wind operations cannot take full advantage of it. That is why they bring in Wall Street firms to effectively auction off the tax credit to outside financiers, and it also explains why so many renewable groups clamor to make the PTC a refundable tax credit.
18. Electricity wholesale prices for 2016 available at: https://www.eia.gov/electricity/wholesale/#history
19. Nick Juliano, IRS guidance clarifying PTC eligibility seen as boon for developers, E&E News Greenwire, August 11, 2014, http://www.eenews.net/greenwire/stories/1060004314/.
20. Although the PTC has expired, developers can qualify for the tax credit without starting physical construction on a wind facility. The IRS released a guidance document stating that a project would be eligible for the PTC if it had either: (1) started "physical work of a significant nature" or (2) satisfied "the Safe Harbor with respect to a facility," as long as the developer made "continuous progress towards completion" once the construction phase had begun.
    Many facilities that are placed in service before January 1, 2016 will satisfy the continuous progress standards. http://www.irs.gov/pub/irs-drop/n-14-46.pdf
21. The current status of the PTC is taken from: https://energy.gov/savings/renewable-electricity-production-tax-credit-ptc. (Accessed March 25, 2017.)
22. Frank Huntowski, Aaron Patterson, and Michael Schnitzer, "Negative Electricity Prices and the Production Tax Credit," The NorthBridge Group, September 10, 2012, available at: http://acore.org/wp-content/uploads/2012/09/Negative-Electricity-Prices-and-the-PTC-Sept-2012.pdf, p. 7.
23. Frank Huntowski, Aaron Patterson, and Michael Schnitzer, "Negative Electricity Prices and the Production Tax Credit."
24. American Wind Energy Association (AWEA), "Production Tax Credit," available at: http://www.awea.org/production-tax-credit. Accessed March 25, 2017.
25. Thomas F. Stacy and George S. Taylor, "The Levelized Cost of Electricity From Existing Generation Resources," Institute for Energy Research (IER), July 2016, available at: http://instituteforenergyresearch.org/wp-content/uploads/2016/07/IER_LCOE_2016-2.pdf. (Note that the IER study's figures do not directly correspond to those reported by EIA, because the study authors believe certain realistic adjustments are needed to produce more accurate estimates. See the study for more details.)
26. See Timothy Fitzgerald and John Horowitz, "Economics of the Tax Treatment of Depletable Costs," November 11, 2014, Working Paper.
27. There are other limitations on percentage depletion; see: http://www.ipaa.org/wp-content/uploads/downloads/2012/01/2009-04-PercentageDepletion.pdf.
28. See: http://www.thetaxadviser.com/issues/2010/may/sec199.html.
29. For example, see Robert P. Murphy's testimony on "The 'Social Cost of Carbon': Some Surprising Facts," before the Senate Committee on Environment and Public Works, July 18, 2013, available at: http://www.instituteforenergyresearch.org/wp-content/uploads/2013/07/2013.07.18-Murphy-EPW-Testimony-on-Social-Cost-of-Carbon-FINAL.pdf.

THE DEFINITIVE DIFFERENCE

OF THE NELSON NASH INSTITUTE

BY L. CARLOS LARA

Editors' note: The following article is based on the remarks Carlos Lara made at the February 2017 Infinite Banking Concept (IBC) "Think Tank" in Birmingham, Alabama. Lara's remarks concerned the vision of The Nelson Nash Institute, its definitive difference, and overarching goals.

INTRODUCTION AND WELCOME

Good morning! I don't know what could possibly make this day more exciting than it already is except to see our entire membership—all of us— here present, at one time. That would really be spectacular. I am sure we could fill three rooms this size. In fact we should probably set that as our number one goal for next year!

But for all of you that are here and have come all the way from Canada, the west coast, Florida, Texas, from the middle states of our country, and from the Northeast, thank you so much for being here and welcome to the 2107 IBC Think Tank!

One of the most positive experiences for me each year is attending this great event and it has a lot to do with the fact that I get to see everybody. It's one thing to have an email exchange with you and perhaps even a text or phone conversation once in a while, but it is so much better to actually see you live and in person, to share a meal or two with you, and have the opportunity for a one on one conversation. It makes all the difference in the world. It is so good to see everyone and my hope is that your IBC Think Tank experience this week will be absolutely outstanding!

WHAT IS THE NELSON NASH INSTITUTE?

Speaking of differences, it was actually David Stearns who came up with the title to my talk for this morning—*The Definitive Difference of The Nelson Nash Institute*—and I

really like it. I think it is very appropriate.

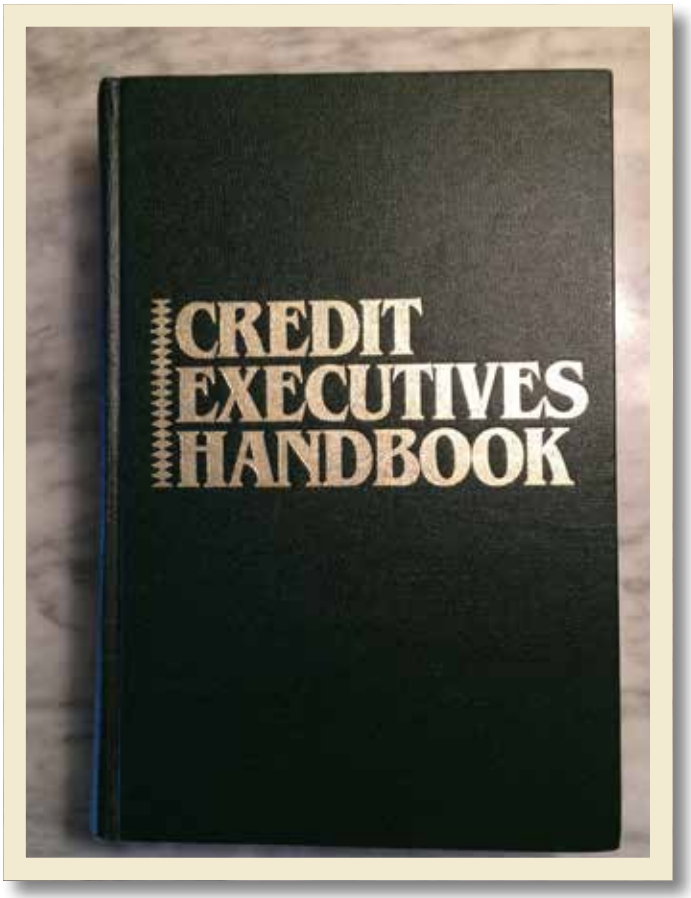
It's a great theme because so often people group the Nelson Nash Institute (NNI) in the same category with other organizations that have similarities with us. For example, we, like them, are also involved in the financial services industry. We speak about financial matters such as markets, taxes, inflation, etc., just like they do. And, some of these groups are even very supportive of Whole Life insurance like we are.

So definitely there are similarities, but I want us to be absolutely clear about this—we are distinctly different. To begin with, we have different goals and different means for achieving these goals. In essence, we do what we do in order to make a difference for good in the financial lives of people. We are seeking always to be a beacon of hope in this often confusing and corrupt world of ours. But we're specifically different in three very important areas. These three areas, which I am going to discuss now, mark the *"definitive difference"* of the Nelson Nash Institute.

We are seeking always to be a beacon of hope in this often confusing and corrupt world of ours. But we're specifically different in three very important areas.

As a backdrop and as a way to highlight these three important differences I would like to begin with a discussion on the concept of "credit." The reason I want to begin here is because the term *credit,* like inflation, is very often misunderstood. Over the years this concept has been stripped of its true meaning to the point we no longer recognize it for what it is. This particular misconception sheds light on a very important argument I wish to make.

Credit, you see, has a very interesting definition. It is derived from the Latin word *"credere,"* which means, *"to believe."* Isn't that amazing! Of all things it could possi-



bly mean, credit actually means *to believe—to trust—to have faith*. These are strong metaphors you will agree. This is because when credit is granted there is an exchange that takes place in economic value, in return for an expected payment of economic value in the future.

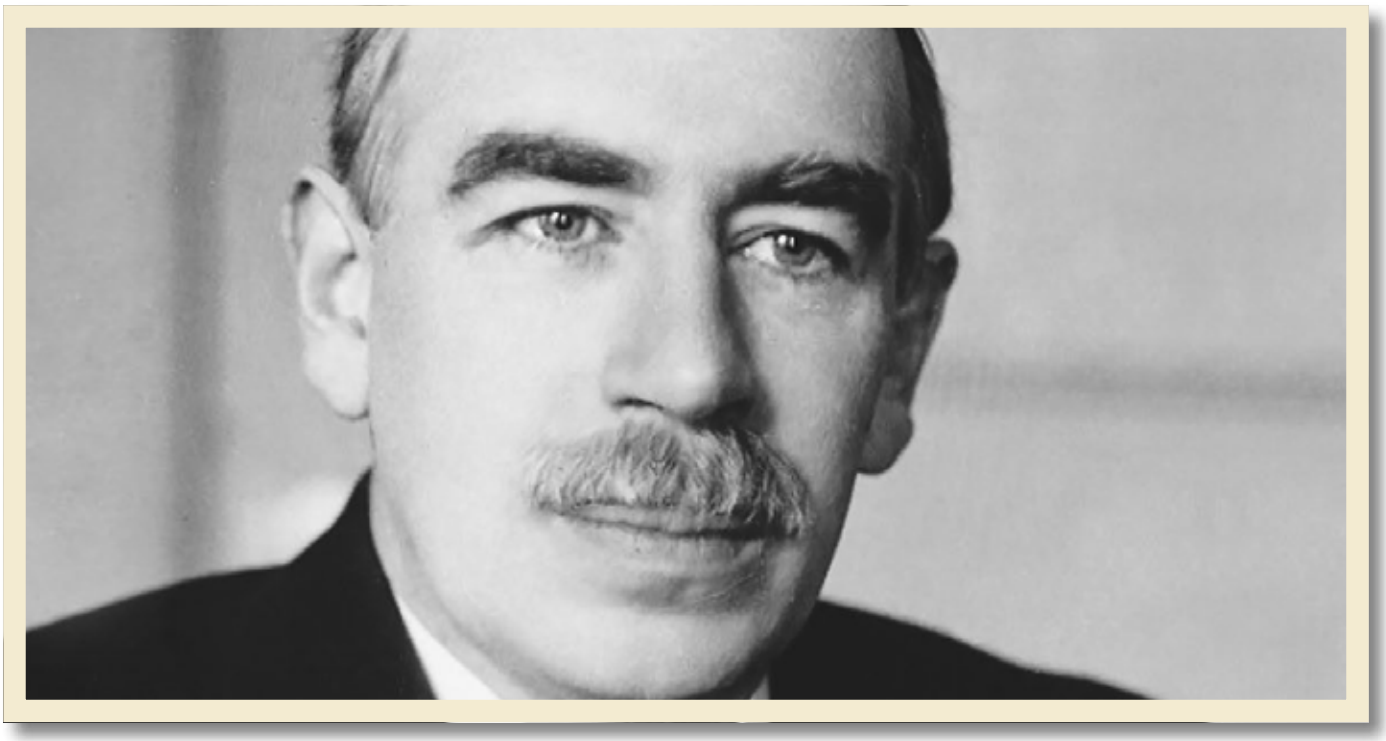
To envision what this may look like think for a moment of our national debt sitting right now at approximately $20 trillion. Now think of the individuals, the corporations, and the foreign governments that have extended credit to the United States for this enormous amount of money, and that they have done so *believing* the U.S. government will pay them back as *promised*. Can you imagine what would happen if that trust and confidence was suddenly lost? Of course you can comprehend it. It would be disastrous! So Credit, you see, is a powerful force that literally holds economies together by what many believe are nothing more than feelings.

In fact, 27 years ago I use to teach credit at a local college in Nashville, but not for college credit. I did this on behalf of the *National Association of Credit Management* so that its qualified members could sit for what they use to call the "ABCE" examination.

After 40 years of working with businesses that get into serious financial trouble (these would be companies that have lost their credit or more accurately their credit worthiness), I have become somewhat experienced in how credit works.

In fact, 27 years ago I use to teach credit at a local college in Nashville, but not for college credit. I did this on behalf of the *National Association of Credit Management* so that its qualified members could sit for what they use to call the "ABCE" examination. A passing score on that particular exam gave credit executives the highest designation the NACM offered—the *"Certified Credit Analyst"* designation.

Once again, I say all this only to let you know that I do know a little something



about credit. Yet I am convinced as sure as I am of standing here in front you that financial professionals of this generation, as well as the financial professionals of every generation before this one, have no real understanding of what credit really is. Nor are financial professionals aware of credit's powerful influence in the world. Now, you may be asking, how I can be so sure of this?

Well, as a personal testimony, what I hold in my hand is the actual textbook I was given to teach that particular course for the taking of that exam. Mind you, it's a very thorough book on credit. It is 700 pages in length! It has 37 chapters covering the gamut, from high-level collection procedures to the U.S. Bankruptcy Code. You name it and it's in here. The contributors to this book—many of whom are PhDs—reads like a who's who of finance. This text is probably one of the main reasons I was able to read and understand the very difficult Dodd-Frank Act.

But here's my point. Only one half of a page, I repeat, only one half of a page in this entire volume is devoted to the greatest generator of credit in our economy. Here I mean specifically the commercial banking system, and as this book puts it, *"a system backed by the resources of the strong Federal Reserve."* And that's it! No other explanations on this subject are to be found anywhere else in this entire 700-page manuscript.

Only one half of a page in this entire volume is devoted to the greatest generator of credit in our economy.

So these high level executives left my classroom not knowing the true essence of credit, and the very source of credit problems in the U.S. Of course this even included me, the instructor of the class! The truth about credit is simply not in this book. In fact, if it weren't for the Austrian School of Economics, one would be hard pressed to find it in any financial book.

The NNI specializes in teaching and training its membership of financial professionals, as well as members of the general public, in the fundamentals of banking.

This is the insight of John Adams back in 1829. ***"All the perplexities, confusion and distress in America arise from the downright ignorance of the nature of money, credit and its circulation."*** There it is in plain sight— it's ignorance.

And what about John Maynard Keynes who bragged that ***"only one man in a million"*** could understand its workings. Much as I hate to admit it, he was right and that's exactly the situation we have today. We see this especially in the financial services industry.

THE SOVEREIGNTY OF BANKING

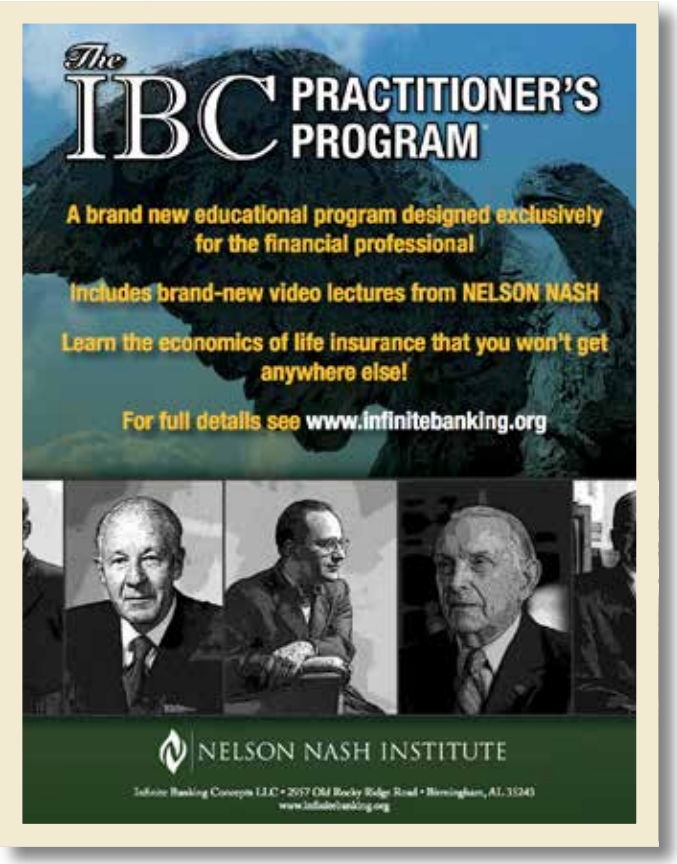
Now I tell you all of this because history shows that going all the way back to the Assyrians and Babylonians, around 2500 BC, credit is synonymous with *banking*. In fact, credit is banking and it can be executed with goods, or services, or it can be done with money. Hence credit, which is banking, is sovereign in the economic realm. As Nelson likes to say it, *"Banking Is."*

So the most definitive difference between them (these other organizations) and us (The Nelson Nash Institute [NNI]) is that the NNI specializes in teaching and training its membership of financial professionals, as well as members of the general public, in the fundamentals of banking. This of course encompasses the entire realm of *finance,* which is the management of money and credit. This includes finding the right location to warehouse them and where and how to best de-

ploy them.

The NNI also teaches that the commercial banking system, which operates using "demand deposits," is not the right headquarters for our money because it is flawed and thereby destructive to the economy. This is on account of *"Fractional Reserve Banking,"* which is enabled by the Federal Reserve. As Nelson says, *"It's in the hands of the wrong people!"* So the NNI helps people choose the proper *"alternate system"* found in the insurance sector that not only does not practice fractional reserve banking, it simply cannot do it.

Now stop and take notice that this is an entirely unique stance within the financial services industry unlike any other. The NNI is clearly and totally different in its position in the marketplace. No one in the industry is thinking about it in this way or teaching it in this way. And more importantly, it is *Austrian* thinking in its perspective—NOT Keynesian.



The IBC Practitioner Program for financial professionals has gone a long way since its inception in 2013 to help remedy this.

Upon reading, *Becoming Your Own Banker,* I said to myself *"only an Austrian could have possibly written this book."* Nelson and Austrian economics are inseparable! Nelson Nash is a 60-year veteran of Austrian economics and so now we too, as members of the NNI, are students of the same school of thinking. And of course this too sets us (the IBC practitioners), apart from anyone else in the industry.

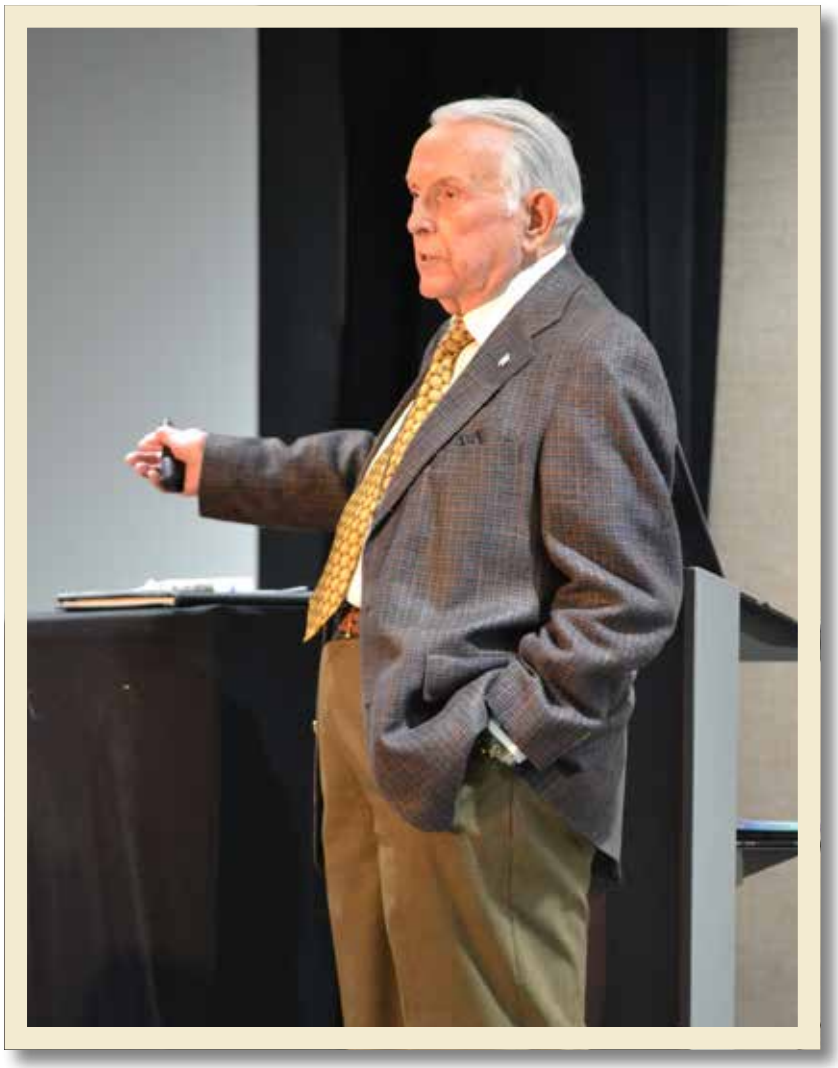
Following in Nelson's footsteps, I implore you to continue in your study of Austrian economics beyond the basic tenets that you learned in the IBC Practitioner's course manual. Strive to grow and become proficient in it because it will help you in your daily life and work. Tomorrow afternoon I hope to show you exactly what I mean by that in my presentation of a real life case study to drive this point home.

Nevertheless, this unique stance does cause us some difficulty within the industry. By

this I mean that we are easily misunderstood and consequently our stance is not generally embraced openly. But the good news is that this is all changing. The IBC Practitioner Program for financial professionals has gone a long way since its inception in 2013 to help remedy this.

In fact, 5 different Life Insurance companies reviewed your training manual to help us (the NNI Board) make sure it was industry compliant. Since it is industry compliant, it has made insurance companies be much more supportive of us than they once were, and that's great news. But we do have a responsibility to the industry and the public that we serve.

We now interview and hand pick our membership. Just so everybody is perfectly clear on this, this procedure was actually Nelson Nash's idea and it has turned out to be a great one.



OUR INTEGRITY

This is exactly where our integrity comes in. We must strive to become known in the industry for our outstanding integrity. Specifically this means we must not exaggerate our claims about IBC, especially in our marketing to the public. The bottom line is that the world must know and be fully confident that IBC is not a gimmick. Let's allow the numbers to speak for themselves in every presentation that we make and give proper credit where credit is due.

This means that how we communicate

Nelson's core message is critically important and this will always come down to the integrity of the individual practitioner. This is one of the primary reasons why we now interview and hand pick our membership. Just so everybody is perfectly clear on this, this procedure was actually Nelson Nash's idea and it has turned out to be a great one.

Anyone desiring to become an *Authorized IBC Practitioner* today must first go through an interview process with the Board before they are offered the opportunity to even take the course and apply for membership. It's not so much about credentials, knowledge, and test scores. If interviewing candidates are not found to be like-minded as we are they will not be admitted into the program. This is easily detectable.

As an example, we have interviewed approximately 75 financial professionals within the last 12 months, but not all were accepted. Many that were accepted are still in the academic phase of the program. Others, when the Board felt that our mentorship program was a mandatory requirement for the acceptance of a particular individual, were placed in the competent hands of our IBC Mentors. In these special cases, IBC Mentors have the final say as to whether these individuals will be able to apply for membership or not at the end of their mentorship. So, as you can see, this type of quality control is also very unique within industry, which again, makes the NNI very different from all other similar organizations.

Our third definitive difference is our Movement. By this I mean of course the *Building of the 10%*.

OUR MOVEMENT

Finally, our third definitive difference is

our Movement. By this I mean of course the *Building of the 10%*. My objective this morning is not to get into describing the 10% because I am assuming you know very well what it is. We've have spoken about it for years, we've written numerous *LMR* articles on the subject, and Bob and I have published several podcasts regarding it. Plus it is referenced in one of the textbooks, *How Privatized Banking Really Works*.

So it should be very obvious to everyone that we are a membership inspired and motivated by not only our founder, Nelson Nash, but by a movement with a powerful mission. This movement in its simple form aims and is determined to change the thinking of this nation (and Canada too!). This is an enormous goal that by itself makes us definitively different in the industry.

In four hours, Nelson, Bob, David and I cover the entire spectrum of IBC and bring it all together at the very end with the 10% movement that we represent.

The absolute best news is that our movement is captivating the public as well as many financial professionals that are not yet part of our membership. They write to

us about it. In the interviews many of the financial professionals start talking about it all on their own. In other words, the 10% movement is drawing people to us.

If you have never attended the *IBC Seminar for the General Public* you should witness it for yourself so you can gauge the receptiveness of the audience toward all of this. In four hours, Nelson, Bob, David and I cover the entire spectrum of IBC and bring it all together at the very end with the 10% movement that we represent. In that story, we tell what it does for them as individuals, what it does for them as business owners, and what it does for the benefit of our economy. When they come to us at the end of the Seminar wanting to know how they can get one of these IBC policies and get involved in the movement we point them to the Practitioner Finder and our Graduates. We point them to you.

The Nelson Nash Institute is the men and women (you and me) who will continue into the future carrying Nelson Nash's legacy and core message to the world.

One of the most important things you should leave with this weekend is understanding that the 10% movement is calibrated to make you wealthy. But please don't misunderstand this statement. Your client also benefits and so do your client's family and friends. This is the beauty of it. So do the insurance companies. And, so does the greater economy. Even we as an Institute benefit and God only knows how much we need the resources to keep growing. But you—you especially are made wealthy and are the catalysts in this building process. We know the general public will be safe in your hands. That's why the Nelson Nash Institute sends the general public to you.

The thing to remember is that the 10% movement is *monetized*. That is what makes it grow. We all benefit financially from this movement as it spreads. Realizing this fact motivates us all the more to build it because of all the good that it does for everyone including our economy.

CONCLUSION

Most important of all and I will let this be my final remarks. The Nelson Nash Institute is the men and women (you and me) who will continue into the future carrying Nelson Nash's legacy and core message to the world.

And what is Nelson Nash's core message? It can be best summed up in Nelson's own words: *"Controlling the Banking function is the primary Goal. Dividend Paying Whole Life is the primary Means."*

This is the Nelson Nash Institute.

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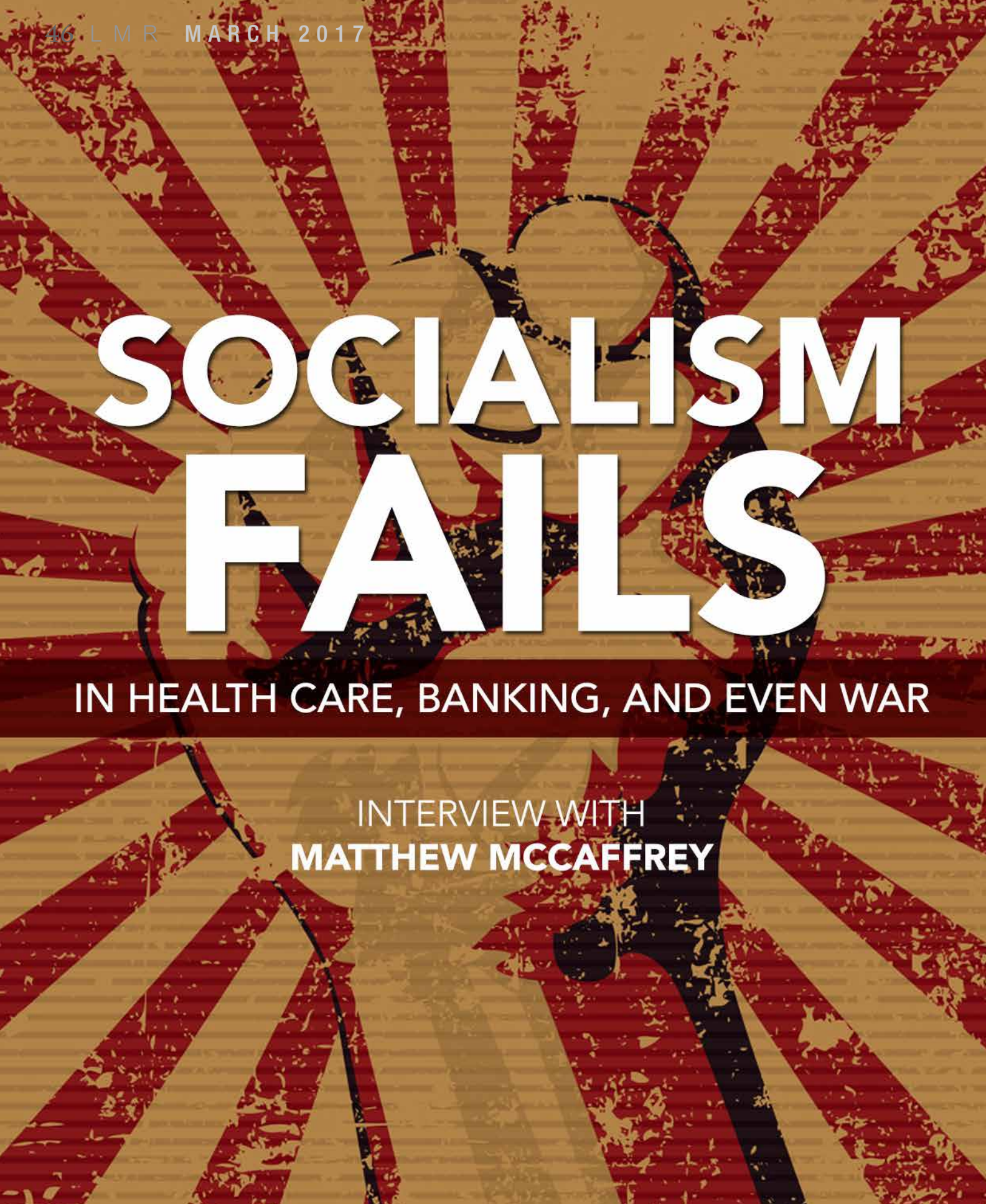


SOCIALISM FAILS

IN HEALTH CARE, BANKING, AND EVEN WAR

INTERVIEW WITH
MATTHEW MCCAFFREY

MATTHEW MCCAFFREY is Lecturer in Enterprise in the Alliance Manchester Business School. He previously taught at the University of Illinois and Auburn University. He holds a PhD in economics from the University of Angers, an MS in economics from Auburn University, and a BA in literature from Colorado State University. He is also the recipient of the 2012 Richard E. Fox Foundation Research Prize, and of the 2010 Lawrence W. Fertig Prize in Austrian Economics. His research focuses on the social and economic role of entrepreneurship, and the influence of institutions on entrepreneurial behavior. He is primarily interested in topics like entrepreneurial decision making, judgement, strategy, and the history of entrepreneurial ideas.

LARA-MURPHY REPORT: How did you become interested in Austrian economics?

MATTHEW MCCAFFREY: I was very fortunate to be exposed to Austrian economics from an early age. My grandfather, Neil McCaffrey, was in the publishing business, focusing mainly on books for conservative audiences. He was also good friends with Murray Rothbard and a number of other people in the libertarian movement. Most important, my grandfather was responsible for republishing several of Mises's books that had gone out of print, books that had a major influence on one of his younger employees at the time, Lew Rockwell. And because my parents are also libertarians, I grew up knowing the names of several major figures in Austrian economics and reading some of their popular writings. Then, in high school, I was privileged to have an excellent economics teacher with libertarian leanings. His classes gave me the opportunity to ground my political ideas in sound economics, which I was able to do with the help of

"My grandfather was responsible for republishing several of Mises's books that had gone out of print, books that had a major influence on one of his younger employees at the time, Lew Rockwell."

a good friend, whose radical lead I often followed (and who later went on to become a student of Bob Murphy!). Through these classes I became more familiar with Smith, Bastiat, Schumpeter, Hayek, and other economists. I eventually found Mises, whose works I started reading with a passion. That in turn led me to the Mises Institute, from which I bought many other books to further my studies. After attending Mises University and meeting some of the senior scholars—people like Joseph Salerno, Guido Hülsmann (who later became my PhD adviser), and the late Ralph Raico—I decided I wanted to pursue a career in economics.

"The term "moral hazard" was invented by the 19th-century insurance industry."

LMR: One of your research specialties is "moral hazard." Can you explain what that term means, and how it is relevant in today's policy debates? For example we hear it a lot in the context of health insurance, but it's also very relevant in financial regulation.

MM: The term "moral hazard" was invented by the 19th-century insurance industry. Originally, it referred to the way that people's actions or character changes when they are protected by insurance, but now the idea is recognized as applying to many different settings. The basic idea is that people behave differently when they don't bear the full cost of their own actions. In other words, if you know you aren't responsible for the consequences of a risky or dangerous decision, that decision becomes more attractive. In the insurance example, if you know that all your health care costs are fully covered, you're less likely to take care to avoid dangerous situations or stay healthy. Now, some mainstream economists think of moral hazard as a broad problem that arises whenever we shift the costs of our action onto other people. But Austrians take a narrower approach; we tend to think that moral hazard truly becomes a problem when we can shift costs to other people *without their consent.* To take the insurance case again, consumers and entrepreneurs can negotiate contracts that both sides are happy with, and then adjust them over time to make sure that the insurance company isn't overcharging or that the policy holder isn't taking too many risks. So moral hazard isn't very important in this

> "In a semi-socialized health care system where health care is "free" at the point of consumption, people tend to demand much more of it."

case, because markets can account for it. But in the case of public health care, this market mechanism disappears. For instance, in a semi-socialized health care system where health care is "free" at the point of consumption, people tend to demand much more of it. This is one reason why in places like the United Kingdom, the demand for health care services of all sorts tends to far outstrip the available supply. If people were obliged to pay for health services, they'd be more likely to take more care, and to seek help only when they truly needed it.

Financial regulation is another great example of moral hazard at work. In this case, it's banks and similar institutions that decide how much risk they want to take on. For instance, if they make home loans, they can choose whether to lend to people with poor credit scores. If the bank bears the consequences of that choice—that is, loses its money if the homeowner defaults—it's much more likely to be careful who it lends to. But if legislators declare that some businesses are "too big to fail," and that businesses will be bailed out at taxpayer expense if they get into trouble, the incentive to be cautious evaporates, because the bank is safe either way. Likewise, if a regulatory agency declares that it will oversee all home loans to ensure safe and fair lending practices, making only good loans again becomes less attractive. As a result banks are more likely to focus only on the regulator's standards rather than sensible, safe business practices. After all, why regulate yourself if the government performs the same service for you? Ultimately, by allowing government to oversee or take responsibility for entrepreneurs' decisions, we make it more likely that they will fail and create lasting social damage.

LMR: Austrian economics is known for its focus on entrepreneurship, which is treated in a very sterile fashion by the mathematical mainstream approach. Yet Israel Kirzner (among others) has said that entrepreneurship cannot be taught, the way some business schools are purporting to do. What's your take?

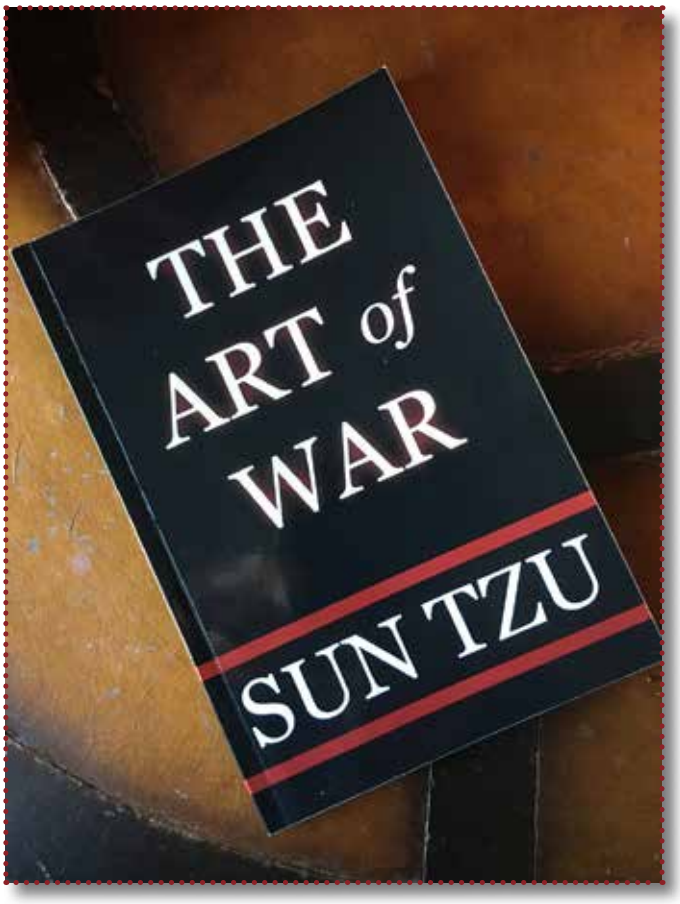
> "By allowing government to oversee or take responsibility for entrepreneurs' decisions, we make it more likely that they will fail and create lasting social damage."

MM: I agree with Kirzner that entrepreneurship cannot be taught, but probably not for the same reasons. For Kirzner, entrepreneurship is a kind of spontaneous alertness to profit opportunities. Because it's spontaneous (and maybe even a matter of pure luck), it can't be taught. My view, however, is that entrepreneurship is better described as a kind of decision-making in the face of uncertainty. This also cannot be taught, as there is no textbook formula for accurately peering into the future. However, this is not what many business schools are trying to teach in their entrepreneurship programs. Instead, most entrepreneurship education is about learning to cope with the practical problems of starting a new business. This does involve developing problem-solving skills and learning to anticipate common problems in the startup process, of course. But it's not accurate to claim that entrepreneurship programs are simply making empty promises to make students successful, as some critics suggest. Entrepreneurship education is more about preparing students to become entrepreneurs by providing constructive advice in the early stages. This advice might work or it might not, but it doesn't usually masquerade as a guarantee of success. Furthermore, entrepreneurship programs can also be an important way to educate students about the benefits of entrepreneurship and the market economy, and help them to appreciate the importance of commercial society.

LMR: In the "here's something novel" department, we see that you've also done research on the economics of Chinese military strategies. Can you share some nuggets?

MM: In the late 1980s and early 1990s, primarily as a result of the increasing prosperity of China and Japan, it became a cliché of the business world to try to mine ancient works of military strategy like Sun Tzu's *Art of War* for insights into how to succeed as an entrepreneur. I believe these texts can be valuable to social scientists, but not for the reasons people might think. Let me give you two examples.

First, the Chinese military classics tell us a lot about how institutions shape economic culture. Ancient China was awash with in-



> "It became a cliché of the business world to try to mine ancient works of military strategy like Sun Tzu's *Art of War* for insights into how to succeed as an entrepreneur. I believe these texts can be valuable to social scientists, but not for the reasons people might think."

novative thinkers, but relatively few of them ever tried to become successful through market entrepreneurship. Instead, the most talented individuals sought success through service to the state rather than service to consumers. The reason is that political institutions imposed harsh penalties on successful merchants, while at the same time establishing vast rewards for scholars who excelled in military strategy and statecraft. This emphasis on bureaucracy and service to the ruler is one reason why China never experienced an industrial revolution on par with the one that occurred in Western Europe.

Second, the Chinese military classics provide a glimpse as to how Austrian methods can be applied outside economics. Mises always stressed that economics was only one branch of the study of human action. Strategy and war making is another. The classics provide a general framework with which to discuss warfare as a kind of social science. And it turns out that many of the important themes are similar to the ones we talk about in economics. For example, scarcity, incomplete and dispersed knowledge, acting on a perceived opportunity, and creating well-defined incentives within organizations are all vital ideas for understanding how war making happens. And you can take this kind of analysis a step further, too, by thinking about how war making and commercial activity are fundamentally different. The most important example is the absence of economic calculation in military organizations. This fact helps to explain some of the core problems that the military classics tried to solve, such as how to efficiently conduct a military campaign. Classical strategists encourage the kind of unconventional thinking and good judgment that entrepreneurs are known for. But what Mises's work implies is that this is a lost cause. You can't "play military" just as you can't "play market."

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EVENTS & ENGAGEMENTS

NOTE: MANY OF THESE EVENTS ARE OPEN TO THE PUBLIC. CONTACT US FOR FURTHER DETAILS.

MARCH 17, 2017
HOUSTON, TX

Murphy talks about local solutions to the Houston Property Rights Association.

APRIL 7, 2017
SAN FRANCISCO, CA

Murphy discusses Misesian economics for Independent Institute.

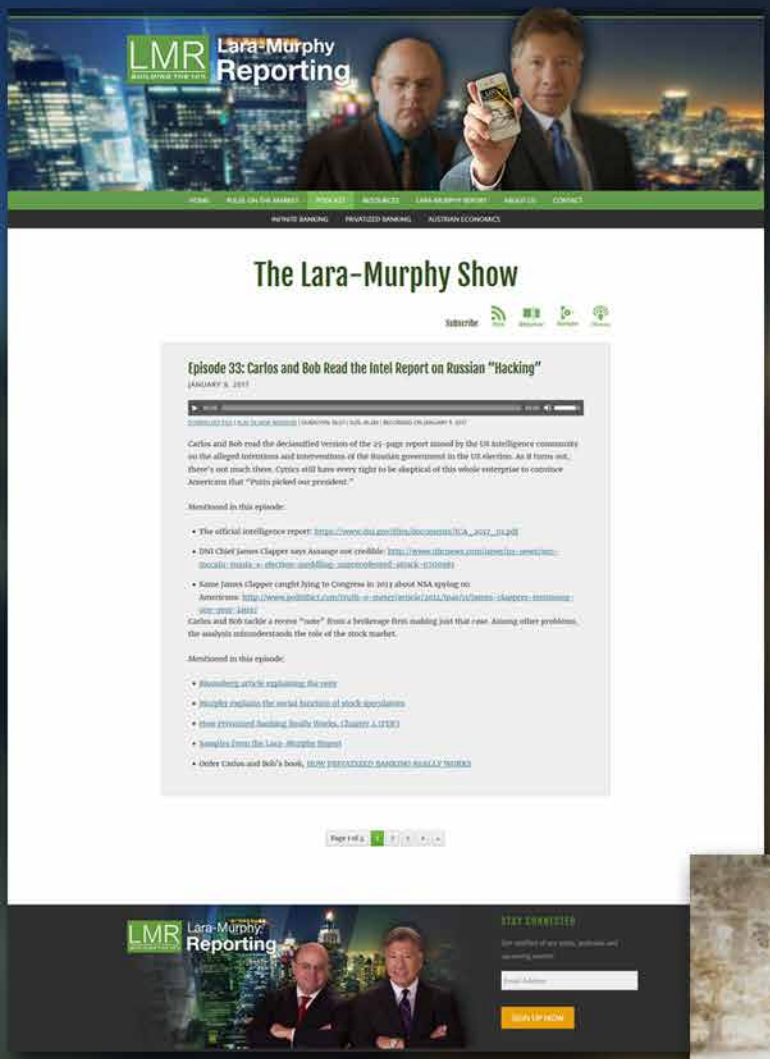
MAY 18, 2017
CHICAGO, IL

Murphy speaks on the economy for the Mises Institute.

MAY 20, 2017
SEATTLE, WA

Murphy speaks at Mises Circle.

SOME EVENTS MAY BE CLOSED TO GENERAL PUBLIC.
FOR MORE INFORMATION: LMREVENTS@USATRUSTONLINE.COM



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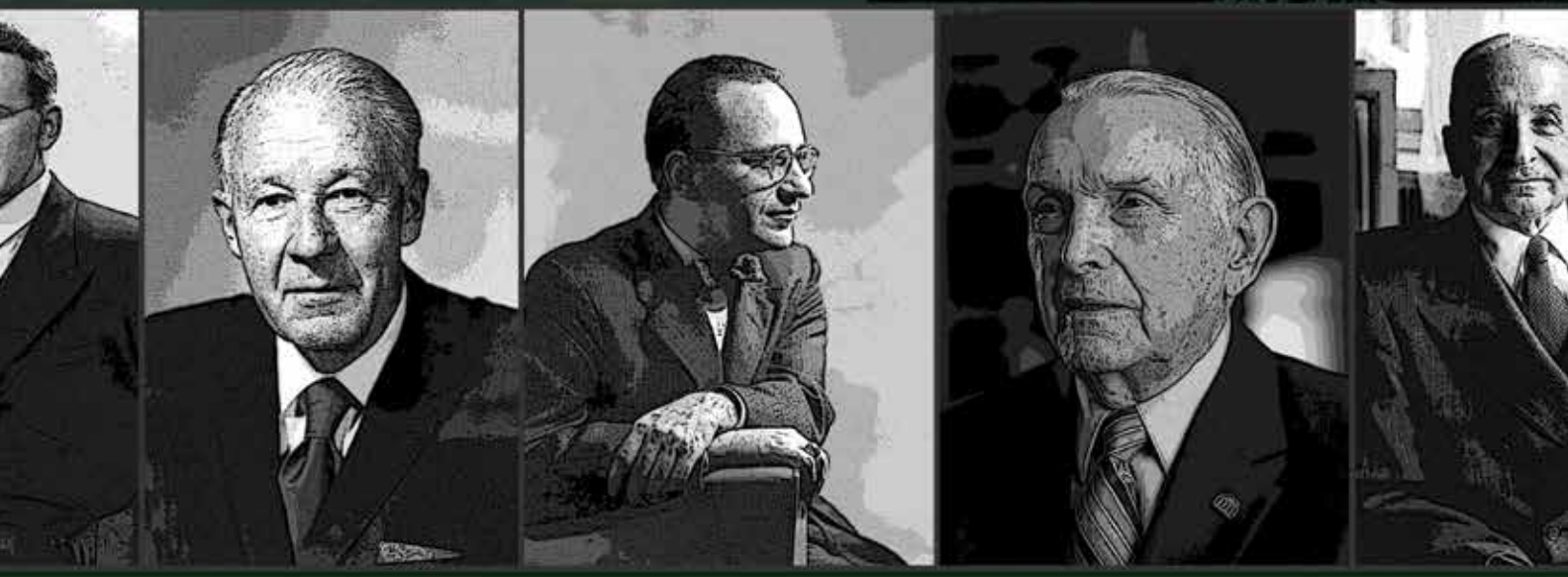

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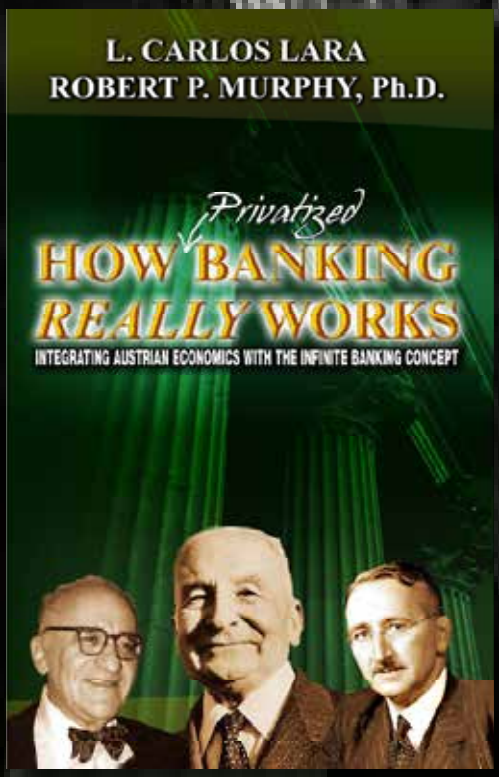

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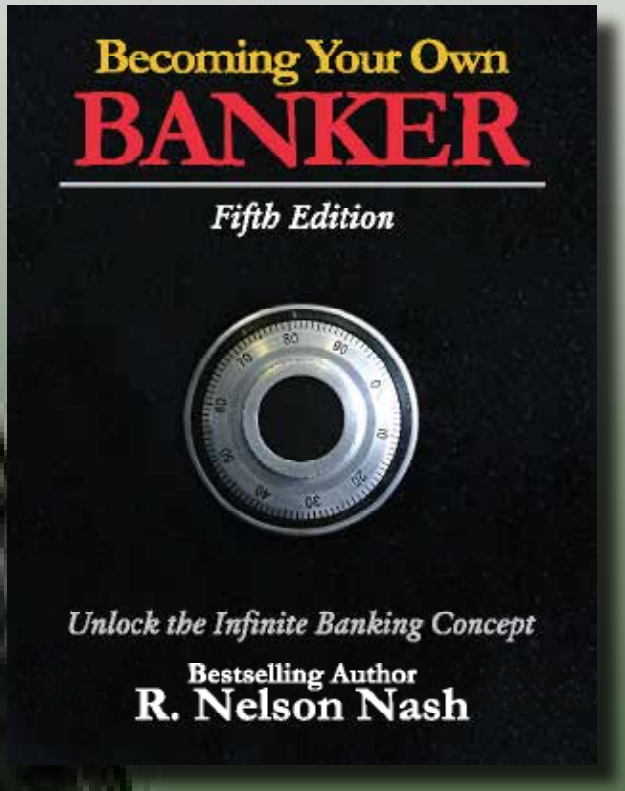

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