The Magic Formula

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I can’t make a damn thing out of this tax problem. I listen to one side and they seem right, and—God!—I talk to the other side and they seem just as right, and here I am where I started. I know somewhere there is a book that will give me the truth, but hell! I couldn’t read the book!

President Warren Harding

We’ll never regain price stability until we restore some form of gold backing to the dollar.

President Ronald Reagan

Then you will see the rise of the men of the double standard–the men who live by force, yet count on those who live by trade to create the value of their looted money–the men who are the hitchhikers of virtue. In a moral society, these are the criminals, and the statutes are written to protect you against them. But when a society establishes criminals-by-right and looters-by-law ... Then the race goes, not to the ablest at production, but to those most ruthless at brutality. ...

Do you wish to know whether that day is coming? Watch money. Money is the barometer of a society's virtue. When you see that trading is done, not by consent, but by compulsion–when you see that in order to produce, you need to obtain permission from men who produce nothing–when you see that money is flowing to those who deal, not in goods, but in favors–when you see that men get richer by graft and by pull than by work, and your laws don't protect you against them, but protect them against you–when you see corruption being rewarded and honesty becoming a self-sacrifice–you may know that your society is doomed. ...

Whenever destroyers appear among men, they start by destroying money, for money is men's protection and the base of a moral existence. Destroyers seize gold and leave to its owners a counterfeit pile of paper. This kills all objective standards and delivers men into the arbitrary power of an arbitrary setter of values. Gold was an objective value, an equivalent of wealth produced. ...

When you have made evil the means of survival, do not expect men to remain good. Do not expect them to stay moral and lose their lives for the purpose of becoming the fodder of the immoral. Do not expect them to produce, when production is punished and looting rewarded. Do not ask, "Who is destroying the world?" You are.

Ayn Rand

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Centuries ago Spanish explorers vainly searched for the legendary Fountain of Youth, whose waters would remove all vestiges of aging. That idea was delusional nonsense. But this extraordinary, original, fundamentally important, easy-to-read, learned and convincing book demonstrates that you can accomplish the economic equivalent: an economy that expands impressively over time so that people enjoy always improving levels of prosperity.

Nathan Lewis knows too much about history and human nature to fall for the fallacy beloved by so many economists and policymakers, that an economy can grow smoothly forever without much in the way of ups and downs. But he shows, with the irrefutable proof of history, that states that pursue—and adhere to—low levels of taxation and stable currency values (best achieved with a gold standard) attain astonishing levels of long-term growth. Deviate from the magic formula, and sluggishness and stagnation set in.

Of course, circumstances, particularly wars, can force detours from the formula. But return to it as soon as possible, and the forward march resumes.

Until the First World War, Britain had for centuries been the exemplification of the astonishing potency of the principles of sensible taxation combined with a rock-solid pound. A small island transformed itself from a second-tier power into the largest empire that ever existed. It's no coincidence that it became the birthplace of the Industrial Revolution. During the 20-plus years it waged war against Napoleonic France, Britain suspended the gold standard and raised taxes. But after hostilities ceased, Britain resumed sterling's historic tie to the yellow metal and got rid of the personal income tax. Its economy rapidly rebounded. British capital flowing around the world was key to the wealth-creation of the 1800s being almost greater than that of all of the previous centuries combined. Populations expanded and migrated by the tens of millions to pursue new opportunities. Longevity increased, and individual living standards reached levels previously unimaginable.

The U.S. did the same thing following the Civil War, when Congress chucked the income tax and other wartime levies and gradually returned to the prewar gold standard. The period from the 1870s until the outbreak of WWI saw an astounding expansion of the American economy and an impressive increase in real individual incomes.

Lewis' book makes the magic formula come to life with numerous real-life examples, such as these, right up to our current time. Want to know why Japan is in a rut, why South Korea is seeming to lose its mojo, or understand the pathetic progress of most of the EU? Lewis walks you through all of this.

What makes Nathan Lewis so unique is the original research he does in a field so full of myths and misconceptions, whether it's the truth about the surprisingly divergent nature in the 16th and 17th centuries of Spain's domestic economy and that of its overseas empire, the actual way the classical gold standard operated, the causes of the Great Depression, the rarely recognized contradictions in post-World War II economic policy that led to the collapse of the gold-based Bretton Woods monetary system and the subsequent economic chaos of the 1970s and early 1980s, to the troubles we are experiencing today.

Is the magic formula too simplistic? Quite the opposite. Lewis makes the compelling point that following it brings in train other virtues that undergird a flourishing society, such as fiscal discipline, respect for property rights, an increasingly robust civil society and, most crucially, a growing respect for individual liberties.

Given the proof that history continuously provides for the prosperity-creating magic formula of trustworthy money and low taxes, why is it not universally applied? Even more mysteriously, why is it so often abandoned by those who have successfully pursued it? After all, these principles enable the kind of individual creativity that benefits us all and produces the wealth that provides sounder safety nets from the vicissitudes of life.

The answers range from ideas that—falsely—promise quicker and better results to sheer ignorance (even many conservative economists are oblivious to the fundamental importance of sound money) to taking the better times for granted and forgetting the ideas that made them possible. There is a more practical—and potent—reason as well: Academic tenure, government posts, jobs for economists in the private sector, lucrative grants for research and prestigious prizes do not go to those proclaiming a belief in sound money. As Lewis ruefully notes, the Federal Reserve is the Sugar Daddy for thousands of economists, and its attitude towards the magic formula would turn a tropical forest into an iceberg.

It would perhaps be overly dramatic to say one should hold this amazing treatise with trembling hands, as those manuscripts of great and consequential truths are worthy of being held. But it is enough to say it should be read—and acted upon—by all who know we are capable of doing so much better.

Steve Forbes
December 2018

Preface

For a long time, people have asked me for a simple, easy introduction to the economic principles that have been developed since about 1970, known as the “supply side” school of the Classical economic tradition. It has been, I think, the most important development in the study of economics in our time. But people have always known that there was never anything very new about it. The basic ideas are as old as civilization itself. The only surprising thing is that the principles of Low Taxes and Stable Money, which would have been familiar to Confucius, Caesar Augustus or Thomas Jefferson, somehow became neglected in the mid-twentieth century.

The Low Taxes message was picked up by president Ronald Reagan (and also many Democrats of that time), and has, since then, become a maxim of the Republican Party. This has been helped by consistent focus on the topic by “think tanks” such as the Heritage Foundation, American Enterprise Institute and Cato Institute. The 2016 Republican presidential primaries became a “can-you-top-this?” contest in aggressive tax reform proposals. This is a big change from the days (roughly 1960-1977) when the Republican Party served as the dour tax-gatherers for the Democrats, habitually proposing higher taxes to pay for the Democrats’ higher spending. The Low Taxes message always has broad political support, among corporations and also the 20% or so of individuals in the highest income brackets. Besides obvious self-interest, as they sit in meetings with their accountants and lawyers discussing how to avoid paying these high rates, they sense the economic drag that these policies create.

Nevertheless, the message has not spread very much beyond a small circle of think tanks and Congressional leaders. Many rank-and-file Republican Congresspeople follow along due to party consensus rather than individually-held conviction arising from personal study; this can easily crumble in the face of criticism (“how are you going to pay for these tax cuts?”). Much of the focus has been on the U.S., ignoring the many exciting developments elsewhere in the world and throughout history. Democrats used to be big supporters of these ideas—the Reagan-era tax reforms passed the Democrat-controlled Congress with big bipartisan majorities—but now they treat them as alien and bizarre. The first "Reagan tax cut," the Economic Recovery Tax Act of 1981, was introduced by Democrat Dan Rostenkowski; House Democrats voted 113:93 in favor. The Kennedy tax reform of 1964 was passed by 92% of Democrats in the House, but only 63% of Republicans voted for it.

The "supply side" tradition has been energized by the involvement of many of its leading thinkers in the asset management industry. Even Arthur Laffer, though trained as an academic, made a living for many years advising large institutional investors. This focuses the attention on real things happening in the real world; and also leads directly to public embarrassment, career setbacks and financial loss when wrong. Many of these thought leaders also put their own money where their mouth was, and often enjoyed huge wins.

Deep in the training of every asset manager is the repeated process of figuring out what is really going on, developing an independent opinion, and defining where conventional wisdom (expressed by current market prices) has gone wrong. Along with this must come the conviction that a relative newcomer can have an insight that the experts miss. The general stockpicker, for example, is never much of an expert on anything. And yet, they must develop a conviction that, based on their research, they have an insight about the prospects and valuation of General Electric that the analysts who devote their careers to the company, and company management itself, may be missing. This is a very different process than the typical academic, in economics or any other subject, whose career is based largely on conformity to the received dogma of the prior generation upon whom they depend for position and promotions. Whether this dogma has any relation to the real world is not very relevant. You don't get tenure by being right.

Unfortunately, involvement in Wall Street does not lend itself to leisure and quiet contemplation, or the eventual writing of books. Wall Street pays well; sometimes, very, very well. To do it properly requires commitment and attention to daily developments. The whirl of meetings, travel, free lunches and sexy secretaries easily absorbs all attention. Public policy involvement tends to focus on short items that can be fit in a busy schedule: television appearances, op-eds, and personal meetings with policymakers. These too tend to be egotistically gratifying. But, they are also transient. Only the most committed students will ever read the op-eds, blog posts and think tank position papers of ten or twenty years ago. Even for those that do, the result is a jumble of puzzle pieces, many related to the specific developments of that time. An additional effort is required to assemble these puzzle pieces into a coherent whole; to see the basic principles involved, and how these principles are reflected in real-world examples. Even the willing student (we are now talking about perhaps less than ten in a generation) may not be able to do this successfully, and many errors can arise. All of these incremental advances need to be assembled into a unified package for the long-term, in the form of books, by the few that are capable of doing this.

Despite this, the "supply side bookshelf" listed in the back of this book contains many works of insight and genius. Some have been gathering dust in libraries; it is time for a younger generation to read them, and also the older generation that didn't read them when they were young. It also has many huge gaps: there is nothing, for example, between 1993 and 2005. Also, little substantive was available on "the other half of the supply-side revolution" until *Gold: The Once and Future Money* in 2007, even though this was always part of the original vision from the 1970s. Even now, the basic principle of "Stable Money" is somewhat foreign, even to the few remaining gold standard advocates themselves, who rarely express it in coherent terms.

These patterns contrast with the "Austrian School," which was always academic in character. People like Ludwig von Mises, Henry Hazlitt, Friedrich Hayek and Murray Rothbard churned out dozens of excellent works. Their ideas were disseminated widely—self-identified "Austrians" probably outnumber self-identified "supply siders" by 10:1 or more—and formed a basis of popular support for the Ludwig von Mises Institute, Foundation for Economic Education and other such organizations. One problem with the Austrians, however, is that their academic isolation tended to result in brilliantly conceived theory combined with a conspicuous failure in interpreting real-world events. This tendency, common among all academic economists, was exacerbated by Austrians' dismissal of historical and statistical methods going back to the rejection of Gustav von Schmoller's "Historical School" of economics in the 1870s. The abundant use of graphs in all of my books is related to Wall Street norms, where a picture is often better than a thousand words, and a raw data set (even a flawed one) provides a direct connection to reality. A person can stand behind a podium and say any fool thing, but you need something real to make a chart.

I've joked that this book is a sneaky way to get tax-cutters (most of whom do not have any particular monetary convictions) to sit still for a talk about Stable Money; and for gold standard fans (mostly with an Austrian flavor that tends toward deficit-hawkishness) to sit still for a talk about Low Taxes. But mostly it is for people who have no experience with these things at all, and are discovering for the first time the secrets of economic creation and destruction. I remember how immensely thrilling it was, and would like other people to also enjoy that experience.

Nathan Lewis
December 2018

Chapter 1: The Magic Formula

The Magic Formula is:

Low Taxes,
Stable Money

Countries and governments that follow this Formula tend to prosper and flourish, over years and decades. Those that act contrary to the Formula struggle and decline.

* * *

With the abandonment of centrally-planned communism, in the Soviet Union and China, today there is no meaningful alternative to the capitalist or free-market economic model. This might be combined with a large government and many government services, as is common in Europe. Or, it might be combined with a much smaller government, as in Singapore or Taiwan. But, in either case, the economic health of the society as a whole is dependent upon the health of the free-market private economy.

However, just having a "free-market economic model" is not, in itself, a reliable solution. This private free market can be an amazing dynamo of bounty, or a black pit of disaster, or a cold grey plain of stagnation and disappointment. We have no alternative to the free market economy. We can only make it work well, or work poorly.

It would seem that anyone could agree that high taxes and unstable money would be bad for a capitalist free-market economy.

There is no evidence that capitalism is somehow unable to function without high taxes. All the evidence is the other way—that, exactly as one would expect, lower taxes are better for business. The United States' first 124 years (1789-1913) without an income tax were wildly successful. One can argue that the tax revenues are spent to produce a benefit that outweighs the harm of taxes; but this simply confirms that taxes are harmful. Some taxes might bring benefits by discouraging undesirable activities. A tax on alcohol or tobacco, if it is effective in this regard, is effective because it depresses trade in alcohol and tobacco. High taxes are often justified as a "necessary tradeoff" to finance socialistic programs—but the socialistic programs seem necessary because of the anemic economy caused by high taxes.

Every central banker is a public advocate of some form of "stability." "Monetary chaos" is still a hard sell. What exactly this "stability" is, they themselves are perhaps not quite sure. It is obvious to anyone that the values of the currencies they manage are quite unstable, and not only that, unstable in a chaotic, disorganized, unpredictable, unplanned fashion. This currency instability in turn causes broader economic instability. How could it be any other way? Nobody suggests that the U.S. economy would be better off if each State had its own floating currency. (This was, in fact, a common state of affairs for much of the Colonial period, and caused such havoc that it was first banned by Britain in 1764, and then again banned by the Constitution of 1789.) Mostly, the central bankers avoid the topic altogether. It has become a principle of decorum among economic bureaucrats that fluctuations in currency value are never mentioned in public. They have no good answers.

Nevertheless, the four-plus decades since floating currencies emerged in 1971 have given everyone a wealth of experience in the topic of currency instability—experience that was somewhat uncommon in the centuries of gold-based money that preceded that break. No country has managed to make itself rich with some kind of mastery of currency instability. Again, the evidence is all the other way: The successful countries have all had a business-friendly environment, often high rates of savings and investment, and as much currency stability as they could achieve. The successful trade-oriented Asian countries, such as China, Hong Kong, South Korea, Malaysia, Taiwan and Thailand, all shared a policy of maintaining stable currency value—in practice, a loose or tight link with the U.S. dollar. A decade of collapsing currency value and hyperinflation in Latin America, during the 1980s, did not produce any advantages for Latin Americans, except for a few oligarchs and foreign opportunists. The European governments had so little success with any form of independently-floating currencies that they abandoned them altogether, opting for currency union.

Countries with low or falling taxes, and stable money, tend to thrive and prosper. Countries with high or rising taxes, and unstable money, tend to stagnate and decline. This makes sense from a theoretical basis; and, not surprisingly, is reflected in our real-world experience.

But the Magic Formula is not just a good idea, among many good ideas one could name. It is a necessary—and even a sufficient—condition for economic success. Countries can have a wealth of other advantages, geographic, cultural or institutional, but if they don't have the Magic Formula, they suffer. Other countries which don't seem to have any of these advantages, but which have the Magic Formula, go from one success to another. Greece has every necessary cultural, geographic and institutional advantage one could ask for, but without the Magic Formula, it is a basket case. Even Britain—which largely invented the institutions of the modern world in the eighteenth and nineteenth centuries—itself struggled, when it lost the Magic Formula. Countries like China or Thailand once lacked a reliable system of commercial law, broad and efficient capital markets, a modern educational system, or a democratic political system, but with the Magic Formula, they have made impressive progress nevertheless, gradually adding many of these other things along the way.

What one finds is that, if a country has the Magic Formula, *it eventually gets all the other things as well*. If a country does not have the Magic Formula, then *all the other advantages won't matter* and, eventually, if things get bad enough, *the country will lose all of them*.[A]

[A] In 2018, Venezuela provided a good example of "losing everything." "Inflation" was running around 25,000% per year. The government was in default, the economy was expected to contract by about 15%, persistent shortages of food and necessities hampered the most basic tasks, and Venezuelans were flooding out to find a better life in another country.

A country that is growing rich with commercial success, in the framework of Low Taxes and Stable Money, will find that it is relatively easy to also establish an advantageous body of commercial law that protects private property. A country with growing businesses and great entrepreneurial opportunities soon has a need for capital markets, and these eventually become deep and efficient. Growing businesses have greater need for highly educated employees, in technical or managerial roles, which leads to demand for educational institutions to fill these needs, and also provides the wealth to finance extended educations. When it is easier for the ambitious to gain wealth and status from productive enterprise in the private economy, than through various forms of predation and plunder of others commonly involving government coercion and corruption, then government corruption and predation become uncommon, and relatively easier to isolate and punish when they do occur. A moral tone pervades society. High investment creates a high demand for labor, lower unemployment, less dependency on welfare programs, stronger families, rising wages, better workplace conditions, and in general prevents the spread of communistic and socialistic ideologies of all sorts. Governments are popular, and thus stable; abundant tax revenues fund a powerful military; defense of the successful state becomes a moral imperative. The country becomes unconquerable.

When a country doesn't have the Magic Formula, all these processes work in reverse. High taxes, in themselves, are a form of confiscation of private property. Inevitably, everyone acts to avoid these taxes one way or another. Those with influence manage to exempt themselves from high taxation, typically by purchasing favors. Politicians and bureaucrats effectively take bribes and hand out these favors, a pattern of corruption that soon replicates itself in other fields. Illegal tax evasion becomes commonplace, and morally acceptable since nobody could pay the high taxes and survive. Everyone becomes a criminal, and the law loses all legitimacy. Many are unable to find work, fall into destitution, and demand that the government do something to fix the problem. Governments attempt to placate the urban poor with welfare programs, but this costs money, which must then be confiscated from the remaining productive classes.

Unstable money can eventually undermine and destroy capital markets, especially bond markets and banks. Long-term commitments, such as employment contracts, pensions or savings, are rendered meaningless by monetary chaos. When it is hard to find success in the productive private economy, the ambitious naturally look for better opportunities, and find them in the government. The focus of the ambitious moves from production of wealth, in a growing economy, to the acquisition of others' wealth, in a shrinking economy.

Government headcount swells, nepotism is rampant, and politicians boast about "job creation." Education becomes meaningless as highly-trained graduates find no demand for their skills. Families break apart under the strain of destitution, accompanied by drug and alcohol abuse, and welfare dependency. Soon, it becomes obvious to all that "capitalism doesn't work." Socialist and communist solutions rise to the forefront. Revolt, revolution, secession and foreign invasion can soon follow.

The common reaction to the Magic Formula is twofold:

Some dismiss it as so obvious, so self-evident, that it is hardly worth discussing. You might as well say that plants need sunlight and water. Yes, we know that. Let's move on.

Others dismiss it as laughably simplistic. What about technological advances? What about a "culture of entrepreneurialism"? What about the Protestant work ethic? What about education? Property rights? The "rule of law"? Institutions? Regulatory burdens? Free trade? Corruption in government? Liquid capital markets? Strong family values? A reliable social safety net? Public infrastructure investment? Or dozens of other things you could list? Certainly, it can't be *that simple*.

Either way, people don't think about it very much. Their minds are elsewhere.

If you look around the world today, taxes are not very low, and money is not very stable—exactly the outcome one would expect when nobody is thinking very much about the Magic Formula. This has consequences; but people drift along in a state of complacency and ignorance, their minds occupied with many other things that are not very important.

The question of why some states become wealthy and prosperous, and some wither and decline, has engaged economic thinkers throughout history. The early economist Adam Smith said in 1755:

> Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and a tolerable administration of justice; all the rest being brought about by the natural course of things. All governments which thwart this natural course, which force things into another channel, or which endeavour to arrest the progress of society at a particular point, are unnatural, and to support themselves are obliged to be oppressive and tyrannical.

Notice what Smith didn't say. The University of Glasgow professor, and author of *The Theory of Moral Sentiments* (1759), might have mentioned education and morality. But, he did not. "All the rest," Smith said, was "brought about by the natural course of things."

Unfortunately, Smith did not have much to say about Stable Money. Smith was always a hard-money man, in favor of keeping the value of the currency stable and unchanging. The last chapter of his most famous book, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776), entreated governments not to change the value of their coinage. But, in 1776, the British pound's value in terms of silver had been largely unchanged for over two hundred years, so it probably didn't seem that pressing.

Smith's basic principles, and also Stable Money, were formalized in the U.S. Constitution. The Preamble states that the Constitution would "establish Justice, insure domestic tranquility, [and] provide for the common defense." Direct taxation was effectively made unconstitutional until the Sixteenth Amendment of 1913 allowed an income tax. Article I Section 10 says that "No State shall ... make any thing but gold and silver coin a tender in payment of debts ..."

A major role of higher education in the U.S. was to inculcate these principles into the upcoming leadership class, so they would be sustained for another generation. Also, they read Homer in the original Greek. In 1900, only 6.4% of Americans had graduated from high school. That year, colleges issued 27,410 bachelor's degrees; about 1.8% of roughly 1.5 million people turning 21 that year, out of a total population of 76 million. It was enough formal education to make the United States the most successful country of the nineteenth century, and the innovation and technology leader of that time.

The early Chinese philosophers, especially in the Confucian and Daoist traditions, were keenly aware of the dangers of overtaxation. And yet, some government was necessary. Was there an optimal rate of taxation, neither too high nor too low? There was: it was 10%.

> A tax rate of more than ten percent is the hallmark of tyrants like Chieh. A tax rate of less than ten percent is the hallmark of weak states like Mo. When the tax rate is ten percent, the sound of singing is heard all around.
>
> *Gongyang Commentary*, fifth century B.C.

The Chinese philosopher Mencius (372-289 B.C.), an advisor to many princes, recommended the "well-field" system of taxation, which amounted to a one-ninth (11%) tax rate on agricultural production. Merchants and craftsmen paid 10%. It was similar to the tithe, a 10% tax on income, which dates from ancient Babylon, continued through the Hebrew law, and later became the Christian tithe, extending to the nineteenth century. A tax policy with a four-thousand-year history of success, in both the East and West, deserves more attention.

> If Your Majesty will indeed dispense a benevolent government to the people, being sparing in the use of punishments and fines, and making the taxes and levies light, so causing that the fields shall be ploughed deep, and the weeding of them be carefully attended to, and that the strong-bodied, during their days of leisure, shall cultivate their filial piety, fraternal respectfulness, sincerity, and truthfulness, serving thereby, at home, their fathers and elder brothers, and, abroad, their elders and superiors—you will then have a people who can be employed, with sticks which they have prepared, to oppose the strong mail and sharp weapons of the troops of Ch'in and Ch'û.
>
> *Mencius*, fourth century B.C.

Mencius was not only talking about economic prosperity. Low taxes and benevolent government lead to moral behavior in all aspects of life, he argued, creating a society of such vigor that simple peasants armed with sharp sticks can oppose the trained and equipped militaries of foreign tyrants. (This description is not too far from what really happened in the American Revolutionary War.)

The fourteenth-century Arab genius Ibn Khaldun held high office in several North African states, including the post of prime minister. He led armies into battle, was imprisoned for two years for his unpopular views, and finished his extraordinary career as Egypt's Minister of Justice, where, as a dedicated reformer, he made many enemies. Later in life, he withdrew to write a sweeping masterpiece of history, the *Kitāb al-'Ibar* or *Book of Lessons*, which included four volumes of world history up to that time, two volumes of the history of the Arab peoples, and the *Muquaddimah*, or *Prolegomena*, in which he laid out his theories of history and government.

> In the early stages of the state, taxes are light in their incidence, but fetch in a large revenue; in the later stages the incidence of taxation increases while the aggregate revenue falls off.
>
> This is because the state, if it rests on a religious basis, will exact only dues provided for by Islamic Law, such as the Benevolence Contributions, Land Tax, and Poll Taxes whose rates are low ... and fixed. ... Now where taxes and imposts are light, private individuals are encouraged to engage actively in business; enterprise develops, because business men feel it worth their while, in view of the small share of their profits which they have to give up in the form of taxation. And as business prospers ... the total yield of taxation grows.
>
> As time passes and kings succeed each other ... they impose fresh taxes on their subjects—farmers, peasants, and others subject to taxation; sharply raise the rate of old taxes to increase their yield; and impose sales taxes ... until taxation burdens the subjects and deprives them of their gains. People get accustomed to this high level of taxation, because the increases have come about gradually, without anyone's being aware of who exactly it was who raised the rates of the old taxes or imposed the new ones.
>
> But the effects on business of this rise in taxation make themselves felt. For business men are soon discouraged by the comparison of their profits with the burden of their taxes, and between their output and their net profits. Consequently production falls off, and with it the yield of taxation.
>
> The rulers may, mistakenly, try to remedy this decrease in the yield of taxation by raising the rate of taxes. ... This process of higher tax rates and lower yields (caused by the government's belief that

> higher rates result in higher returns) may go on until production begins to decline owing to the despair of business men, and to affect population. The main injury of this process is felt by the state, just as the main benefit of better business conditions is enjoyed by it.
>
> From this you must understand that the most important factor making for business prosperity is to lighten as much as possible the burden of taxation ...

The enemies of the free-market economy have always known how best to destroy it. Karl Marx described:

> There is only one way to kill capitalism—by taxes, taxes and more taxes.

> A heavy or progressive or graduated income tax is necessary for the proper development of Communism.

The floating currencies that erupted with World War I again brought monetary issues front and center. Vladimir Lenin updated Marx to include the revolutionary potential of currency chaos:[1]

> Experience has taught us it is impossible to root out the evils of capitalism merely by confiscation and expropriation ... The simplest way to exterminate the very spirit of capitalism is therefore to flood the country with notes of a high face-value without financial guarantees of any sort.
>
> This is the real reason why our presses are printing rouble bills day and night, without rest. ...
>
> This simple process must, like all the measures of Bolshevism, be applied all over the world in order to render it effective. ... Capitalism carries on a more effective propaganda for us among the masses than we ourselves could ever hope to achieve by our own efforts.
>
> The international profiteer is our best propagandist.

John Maynard Keynes said in 1919:

> Lenin was certainly right. There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency. The process engages all the hidden forces of economic law

> on the side of destruction, and does it in a manner which not one man in a million can diagnose.

A witness to the coinage debasement common in sixteenth-century Prussia, Nicholas Copernicus said:

> Nations are not ruined by one act of violence, but gradually and in an almost imperceptible manner by the depreciation of their circulating currency, through its excessive quantity.

The early economist David Ricardo is remembered today for insights on trade; but Ricardo, a retired bond trader, was mostly concerned with returning the British pound to gold. When he was writing in 1816, the pound had been a floating currency for nineteen years, and many thought it should continue to float indefinitely. Ricardo disagreed:

> A currency, to be perfect, should be absolutely invariable in value.[2]

Henry Hazlitt wrote in 1971:

> The way to get a maximum rate of "economic growth"—assuming this to be our aim—is to give maximum encouragement to production, employment, saving, and investment. And the way to do this is to maintain a free market and a sound currency.

The economist Robert Mundell has been called "the father of the euro" because of his support for stable money values (fixed exchange rates) instead of independent floating fiat currencies. In 2011, he quipped that the optimum number of currencies in the world is: "an odd number, preferably less than three."

The economist Arthur Laffer, long known for his low-tax advocacy, has also favored Stable Money:

> Monetary policy's specific purpose should be to provide a stable valued currency both now and far into the future.[3]

Congressman Jack Kemp has been called "the most important politician of the twentieth century who was not president."[4] Why? Here's Representative Paul Ryan:

> My mentor Jack Kemp was not just another political leader or public official. His impact on the nation's prosperity and well-being was out of all proportion to the positions he held in government and all the more astonishing for his never having attained the Presidency to which he aspired.
>
> There are two ideas in particular about which Jack was an impassioned advocate: pro-growth tax cuts, and sound and honest money.[5]

The Magic Formula has been part of economic thought from the earliest times. It remains a core principle among some of the U.S.'s leadership elite. But how much attention does it get in today's intellectual arena?

Principles of Economics, by Harvard University professor Greg Mankiw, is a popular textbook in colleges today. Mankiw served on the Council of Economic Advisors under President George W. Bush. In the textbook, Mankiw listed "ten principles of economics"—supposedly the distilled wisdom of the academic intelligentsia. Here they are:

1. People face trade-offs.
2. The cost of something is what you give up to get it.
3. Rational people think at the margin.
4. People respond to incentives.
5. Trade can make everyone better off.
6. Markets are usually a good way to organize economic activity.
7. Governments can sometimes improve market outcomes.
8. A country's standard of living depends on its ability to produce goods and services.
9. Prices rise when the government prints too much money.
10. Society faces a short-run tradeoff between inflation and unemployment.

Low Taxes and Stable Money are nowhere to be found. (One might expect a discussion of taxes buried in principle #4: "people respond to incentives," but this is not the case.) Could any ambitious statesman take these principles, as described, and use them to make his people wealthy and prosperous? Based on these principles, what changes should be made to U.S. economic policy today? What advice would you give to a country that is struggling badly? How would you use these principles to identify why China has gone from one success to another in the last twenty years, but Italy has barely kept itself afloat?

Yoram Bauman, a professor of economics at the University of Washington, translated Mankiw's Ten Principles for laymen:

1. Choices are bad.
2. Choices are *really* bad.
3. People are stupid.
4. People aren't *that* stupid.
5. Trade can make everyone worse off.
6. Governments are stupid.
7. Governments aren't *that* stupid.
8. Blah blah blah.
9. Blah blah blah.
10. Blah blah blah.

Academic mainstream economics is decidedly Left-leaning, like other academic departments, and shares the Left's agenda of high taxes, big government, and macroeconomic manipulation by monopoly central banks, staffed by legions of PhD-bearing experts. [B] The Federal Reserve, with a staff of 19,000, is the largest employer of economics PhDs in the country. In addition, it supports a variety of outside consultants. Among a total population of 1,000 to 1,500 economists with a monetary focus in the U.S., the Federal Reserve spent $433 million on economic research in 2009. Among the seven top economic journals, 84 of 190 editorial board members were affiliated with the Federal Reserve.[6]

We should not expect much enthusiasm for the Magic Formula among the academic Left. This situation has prompted a Right-leaning alternative movement. One of its better representatives is the Mercatus Center, an institute attached to George Mason University, which itself has an economics department that openly embraces the libertarian tradition in economics exemplified by Ludwig von Mises,

[B] A 2018 study by Mitchell Langbert of Brooklyn College found that, of 8,688 tenure-track professors at 51 elite liberal arts colleges, 39% of colleges had no Republican professors, and 78.2% of all academic departments had no Republicans. Excluding military colleges, the ratio of Democrat professors to Republicans was 12.7:1. In departments of Economics, the ratio was 5.5:1.

Friedrich Hayek and James Buchanan. *Applied Mainline Economics* (2017), by Matthew Mitchell and Peter Boettke of the Mercatus Center, summarized the contemporary state of this alternative, small-government, non-interventionist branch of economic thought, and what it could offer to the practical demands of policymaking. But, this book too, despite many other insights, had no meaningful discussion of either Low Taxes or Stable Money. Boettke's *Living Economics* (2012) was a more in-depth book of over 400 pages. It contained a single index entry regarding taxation, which itself referred to a single sentence.

The Foundation for Economic Education, a libertarian-themed organization, summarized its own twelve key concepts:[7]

1. Gains from trade
2. Subjective value
3. Opportunity cost
4. Spontaneous order
5. Incentives
6. Comparative advantage
7. Knowledge problem
8. Seen and Unseen
9. Rules matter
10. Action is purposeful
11. Civil society
12. Entrepreneurship

And the Magic Formula? Perhaps it was too obvious to mention.

In *Austrian Economics and Public Policy* (2016), Richard Ebeling, a professor of economics at The Citadel, updated the contributions of the "Austrian school" of economics to practical policymaking. Unlike these other examples, the book contained a substantial discussion of Stable Money. Ebeling also indicated Austrians' favor of low taxes and small government in principle, but—as is characteristic of other writings with an Austrian theme—did not give many details. Ludwig von Mises, in his 900-page *Human Action* (1949), devoted only six pages to tax policy; even this was mostly fluff. It did include this gem:

> Yet, the true crux of the taxation issue is to be seen in the paradox that the more taxes increase, the more they undermine the market economy and concomitantly the system of taxation itself. Thus the

> fact becomes manifest that ultimately the preservation of private property and confiscatory measures are incompatible. Every specific tax, as well as a nation's whole tax system, becomes self-defeating above a certain height of tax rates.[8]

Unfortunately, the normally verbose von Mises was not inspired to go beyond this. The funny blind spot regarding taxation was perhaps most dramatically expressed by Eugene Böhm-Bawerk, a student of Carl Menger and a leading thinker in the Austrian tradition. During his career in Austria's Ministry of Finance he became the head of the tax department in 1891, where he undertook a major reform of Austria's entire tax system. In 1892, he became vice-president of a national commission that re-established the gold standard in Austria in 1896, following a long period of mildly floating currency value. In 1895-1904, he served three terms as Austria's Minister of Finance. (Before World War I, the Austro-Hungarian Empire was much larger than today's Austria.) He also wrote a three-volume work of economic theory, *Capital and Interest*, which made no mention of taxation. Bizarrely, in the last year of his life, he also said, in reference to his student Ludwig von Mises' new book *The Theory of Money and Credit* (1913): "I have not yet included the theory of money in the subject matter of my thinking …"[9] He spent his career up to his neck in the practical application of the Magic Formula, and apparently had little to say about it.

In *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor* (1998), David Landes, professor emeritus of history and economics at Harvard University, concluded that the answer was basically: culture. Undoubtedly, there must be some reason why, since about 1700, all of the Anglophone countries (Britain, the United States, Australia, New Zealand and Canada) have been consistently wealthy. There was some core of national ambition, self-confidence and mercantile ability that allowed Japan to leap from medieval feudalism directly to developed-world industrialization in the second half of the nineteenth century—a feat that no other ethnically non-European nation achieved until, perhaps, South Korea in the 1990s; and even then, mostly by imitating the Japanese example. (Korea was ruled by Japan in 1910-1945, as was Taiwan in 1895-1945.) There seems to be some element of corruption in all the Latin American governments that has kept them from reaching the first tier of developed countries, even though the elite classes are mostly European.

But, you can't legislate culture. This answer gives little advice to a leader as to what to do, and what not to do. Japan began its race to modernization and industrialization with the Meiji Restoration in 1868. It was wildly successful. In 1853, the feudal Tokugawa Shogunate cowered helplessly before four American warships; at the 1919 peace conference in Paris, Japan was considered one of the "Big Five" powers of the new international order, and had the world's third-largest navy. Landes, in his chapter on Meiji-era Japan, did not mention that the *yen* was introduced in a currency reform in 1871, to replace a heap of unreliable paper currencies, and made equivalent to one U.S. dollar. In 1873, a morass of oppressive and arbitrary feudal-era tax policy was replaced by a minimalist tax system based on a single property tax, which alone brought in about 80% of the government's revenues. Government spending was slashed dramatically in 1873, when the samurai class, which had become a hereditary class of government employees in the years of peace since 1600, was discharged *en masse*. In 1875, a reform reduced 1,600 minor taxes to 74, mostly excise taxes on items like alcohol, salt and tobacco, which brought in the other 20% of revenue. Effective property tax rates themselves had big reductions in the 1870s and 1880s. Low Taxes and Stable Money.[10]

In *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* (2012), Daron Acemoglu, an economics professor at the Massachusetts Institute of Technology, and James Robinson of the University of Chicago, claimed that successful countries could attribute their wealth to: democracy. This theory seems appropriate for the United States and, to some degree, Britain. The Magna Carta of 1215, which established the precursors to Britain's parliamentary system, was imposed specifically to limit the taxation powers of King John. But, many governments have had great success without democracy. Hong Kong, one of world's great economic success stories, has never had democracy. China went from communism and famine to capitalist success, without ever touching on democracy. Germany before 1914 was one of the most successful countries in the world, under the monarchies of Kaiser Wilhelm I and Wilhelm II. The Weimar Republic, Germany's first experiment in democracy, immediately descended into hyperinflation and economic ruin. Singapore, Taiwan and South Korea prospered with governments that were only nominally democratic, or were outright military dictatorships. In 1959, Lee Kuan Yew became Singapore's first prime minister. In 1990, he was still prime minister. Taiwan was under military rule from 1945 to 1996. South Korea regularly alternated between democratic republics and autocratic military regimes. Between 1945 and 1987, five republics and five military governments came and went; the sixth republic is still with us. These might be considered failures of democracy. It didn't matter. They had the Magic Formula.

Democratic institutions were barely developed in Japan until after 1918. The great Meiji boom took place under a Chinese-style mandarinate government. The entirety of Japan's "postwar miracle economy" happened under the rule of the Liberal Democratic Party and its conservative predecessors, which remained in power in an unbroken streak from 1947 to 1993.

After the turmoil of the Civil War ended the five-century history of the Roman Republic (509 B.C—27 B.C.), Caesar Augustus became the first emperor of the Roman Empire. During the Civil War, battling factions had issued their own coinage, much of it debased and devalued. Augustus' monetary reform in 23 B.C. set the standard for the next two centuries. Following the death of Julius Caesar in 44 B.C., taxes had soared under the rule of Brutus and Marc Antony, often degenerating into outright confiscation and plunder. After Augustus defeated Antony at the Battle of Actium in 31 B.C., and seeing the Roman realm in economic ruin, he soon reduced taxes everywhere.

Augustus eliminated the centuries-old and oppressive practice of tax farming in favor of direct government administration of taxes, and instituted a simplified system of taxes at low rates. The establishment of the new tax system required a census of taxpayers; and so, to fulfill this obligation, the Gospels say that Joseph and Mary traveled to Bethlehem to be registered. Later, the apostle Matthew became a minor administrator of this new tax system. Augustus' sales tax was 1%; on inheritances, 5%; on slaves, 4%; on imports, 5%. There was a land tax and a poll tax, paid in the provinces, but Rome itself remained free of direct taxation.[11] The military was shrunk in half, and most responsibilities were devolved to the cities and provinces, which were allowed to tax and administer themselves autonomously. The Roman Republic was gone, but Augustus' Low Taxes and Stable Money produced a Golden Age in Rome. His last words were: "I found Rome a city of brick, and left it a city of marble." The month of August was named in his honor, and it stuck.

Queen Elizabeth I of Britain (1558-1603) made taxes effectively optional; she ran her government on something like a volunteer basis. Francis Bacon, who served as Lord Chancellor under Elizabeth, said:

> He that shall look into other countries and consider the taxes, tallages, and impositions, and assizes, and the like that are everywhere in use, will find that the Englishman is the most master of his own valuation, and the better in the purse on any nation in Europe.[12]

Money was often tight, but the frugal Elizabeth did not debase the currency to pay expenses, even in wartime, as her father Henry VIII had done. The value of the British pound remained unchanged during her long reign (excepting wartime, it remained unchanged until 1931), which made the British coinage far more reliable than other European coins that were regularly debased. The British coinage became favored throughout Europe. When Elizabeth asked the aristocracy for funds to defend Britain against invasion by the Spanish Armada, they gave her more than she asked for. She inherited huge debts from her father, but by the end of her reign, her government was debt-free on a net basis. As Spain's influence faded, Britain began a long rise that would eventually give it the largest empire in the world. Art and literature flourished during the Elizabethan Age. British literature had previously consisted mostly of religious plays now forgotten; today, the era of Shakespeare is still considered the high point of eloquence in the English language. James I, Elizabeth's successor, called her "one who in wisdom and felicity of government surpassed all the Princes since the days of Augustus." This was high praise, especially considering that Elizabeth executed his mother, Mary Queen of Scots.

The clearest expression of the Magic Formula today comes from a small group of economists in the "supply side" branch of the Classical tradition. In *The End of Prosperity* (2008), Arthur Laffer, Stephen Moore and Peter J. Tanous named the "four killers of prosperity":[13]

1) Trade protectionism
2) Tax increases and profligate government spending

3) New regulations and increased government intervention in the economy
4) Monetary policy mistakes

But tariffs are just another form of taxes. The most destructive regulations such as price controls or outright nationalization are typically applied when market economies crumble as a consequence of high taxes and unstable money. When taxes are lowered and the currency is stabilized, these regulations are usually lifted soon afterwards. The accumulated burden of many thousands of minor regulations in the United States in recent decades has certainly become a detriment; but, if anything, this example shows just how many such errors can be made without major consequences, if a country has the Magic Formula. We would all like to avoid "monetary policy mistakes"; but, how do we do that? The answer again boils down to four words.

If the Magic Formula seems only hazily understood today, it has nevertheless become widely embraced, at least in a vague manner. Mostly, this is the result of hard experience: children who put their hands on hot stoves don't do it again. Governments everywhere, frightened by one currency disaster after another, and finding little value in having an independently-floating fiat currency, have sought out their own version of Stable Money usually by attaching themselves to either the dollar-centric or euro-centric currency blocs. This was the principle behind the creation of the Eurozone in 1999, and its expansion to include, formally or informally, over forty states today that are part of the euro bloc.

Low Taxes were the centerpiece of the "supply side revolution" that inspired tax reforms during the 1980s in the United States, and throughout the developed world. Since 1980, better governments have gently trended toward a lower-tax model, with a steady decline in personal and corporate income tax rates among OECD countries. A reduction in average corporate tax rates by 19.3 percentage points since 1980 has resulted in more tax revenue/GDP, not less. Punitive individual income tax rates above 50% on high incomes, which were considered a necessity among any decent-minded socially-responsible government in the 1950s or 1960s, have been rejected by governments today. The average top personal income tax rate of 41.4% in 2015, though still not very low, was nevertheless 27 percentage points lower than the average of 68% in 1980. Despite these reductions in rates, individual income tax revenue/GDP was effectively unchanged. (Table 1.1)

	Corporate		*Individual*	
	Rate	*% GDP*	*Top Rate*	*% GDP*
1980	43.5%	2.3%	68%	11.6%
2015	24.2%	2.8%	41.4%	11.5%

Table 1.1: OECD Countries, Average Corporate and Top Individual Income Tax Rates, and Income Tax Revenue/GDP[14]

While the Western governments have progressed by baby steps, the Magic Formula was more aggressively embraced by a broad swath of former Communist countries and other small states after 2000. After the fall of communism around 1990, these countries, largely following Western advisors including the International Monetary Fund, Harvard Institute for International Development and World Bank, adopted independent floating fiat currencies and high-tax systems mirroring the conventional wisdom in Western Europe. But, these fiat currencies soon collapsed into a horror of hyperinflation throughout the post-Soviet world during the 1990s. Tax systems that produced a comfortable stagnation at high incomes, in Sweden, Denmark or Germany, tended to produce an uncomfortable stagnation at stark poverty levels in post-communist Eastern Europe. Following the economic advice and example of the developed West didn't work.

The way out of this disaster was first discovered by the tiny Baltic states of Estonia, Latvia and Lithuania. Beginning in 1994, they pulled themselves out of hyperinflation by adopting a currency board based on the German mark, which later became a currency board based on the euro.

Stable Money.

Estonia then rejected the taxation systems of Western Europe, and adopted an idea that was, at the time, merely a white-paper proposal advocated by a few daring thinkers in the United States, and whose effective implementation did not have many examples beyond the tiny city-state of Hong Kong. This was the Flat Tax—a one-rate income tax, with very little in the way of exemptions or deductions.

Estonia's initial flat tax rate of 26% seemed radically low at the time. It later fell to 20%. Reinvested corporate profits were tax-free.

Low Taxes.

Hong Kong had also embraced Stable Money, in the form of a dollar-based currency board introduced in 1984. In the course of a few generations, it rose from a sweatshop producer of cheap consumer trinkets, and fleshpot for sailors on leave, to a dynamo of trade and finance. The population—95% Han Chinese, 4.5% other Asian, and 0.5% White—eventually surpassed its former colonial masters, Britain, in per-capita GDP.

The effect of implementing Hong Kong-style policy in the Baltics was awesome: in less than a decade, incomes in post-Soviet Estonia were ten times higher than in Russia, just a few miles over the border.

This outcome was mostly ignored by the Western intelligentsia, who continued to peddle the same old advice that was, by then, a demonstrable failure. But, it was noticed by other governments in the region. Russia implemented its 13% Flat Tax in 2001. This was followed by Serbia (12%, 2003), Bosnia and Herzegovina (10%, 2004), Slovakia (19%, 2004), Ukraine (15%, 2004), Georgia (20%, 2005), Romania (16%, 2005), Turkmenistan (10%, 2005), Kyrgyzstan (10%, 2006), Albania (10%, 2007), Macedonia (10%, 2007), Mongolia (10%, 2007), Montenegro (9%, 2007), Kazakhstan (10%, 2007), Mauritius (15%, 2007), Tajikistan (13%, 2007), Bulgaria (10%, 2008), Czechia (15%, 2008), Timor Leste (10%, 2008), Belarus (12%, 2009), Seychelles (15%, 2010), Paraguay (10%, 2010), and Hungary (16%, 2011). Switzerland had a flat 11% Federal rate, to which was added various Cantonal and Municipal taxes.

The Magic Formula roared from Prague to Vladivostok, raising downtrodden peoples crushed by decades of communism—and then a decade of bad advice from Western advisors—to a level of prosperity and abundance they hadn't seen in nearly a century. Adam Smith would have chuckled in satisfaction.

But these extraordinary events went largely unnoticed. Today, the Magic Formula seems to be something that everyone is doing, and nobody is aware of. The world creeps forward in a mindless fashion, a crude process of trial and error. Lots of error. It shouldn't be that way. We know how to create the prosperity we want. It hasn't changed since the days of Adam Smith.

Chapter 2: Low Taxes

Low Taxes help produce a healthy economy. This should surprise nobody; it is merely the flip side of the idea that high taxes can stifle an economy—"You can't tax yourself to prosperity." Actually, taxes don't "help" at all. They can only hinder. No process of business or investment is aided by the government confiscation of participants' property. The goal is to hinder as little as possible. Some basic government services—"peace and a tolerable administration of justice"—have always been found necessary. Additional government services may produce a benefit; but that must be weighed against the consequences of the taxes imposed to fund them.

Tax systems do not lend themselves easily to a simple numerical value that can be called "high" or "low." You cannot reduce the 70,000+ pages of the U.S. Federal tax code, upon which is added State and municipal taxes, to a single figure. The most obvious numbers are tax rates, and the "tax burden," typically represented as the ratio of tax revenue to income or gross domestic product. And yet we find immediately that some countries have had wonderful success with rather high rates; or that one tax system can be supportive of economic development, and another quite destructive, each producing the same "tax burden" of revenue/GDP. Many countries that implemented flat taxes since 2000 found that they enjoyed vastly better economic performance, with little change to revenue/GDP.

The Tax Burden

The "tax burden," or tax revenue/GDP, is easy to express as a single number, which tends to allow simpler analysis. Yet, the significance even of this is often unappreciated. Even if you have a wonderfully efficient tax system—one that generates revenue with the least negative effects on economic activity— if the tax burden is high, you are going to have to confiscate a lot of money from a lot of people. This will require a lot of taxes, and tax rates that, even if they are as low as possible, still won't be very low. Economic health will be stifled, and the familiar pathologies of a weak economy will emerge everywhere: unemployment and underemployment, welfare dependency, meager domestic investment, and all the other problems—substance abuse, broken families, neglected children, personal bankruptcy, homelessness—that emerge when people find it difficult to work and prosper. These processes themselves tend to increase the demands on the government, while also crippling tax revenues. Budget deficits are the natural consequence. Financing these deficits itself consumes capital and depresses productive investment. Further tax increases may soon follow. Henry Hazlitt described:[1]

> The larger the percentage of the national income taken by taxes the greater the deterrent to private production and employment. When the total tax burden grows beyond a bearable size, the problem of devising taxes that will not discourage and disrupt production becomes insoluble.

A number of European governments have managed to maintain a high standard of living, even with an extraordinarily high tax burden. This can be attributed, as we will see, to their high tax efficiency. However, none of these countries have been high growth economies. In the past, when they were in the process of becoming wealthy, they did not have these stagnation-inducing tax systems. France's revenue/GDP was twelve percentage points lower in 1965 (33.6%) than in 2017 (45.3%); the OECD average in 1965 (24.8%) was eleven percentage points lower than 2017 (34.3%).

High-growth economies have tended to have a tax burden of less than 20% of GDP. During the high-growth era of the 1950s and 1960s, Japan's leaders had an explicit goal of keeping tax revenue/GDP under 20%, which they considered a necessary part of their high-growth strategy. In 1965, Japan's revenue/GDP ratio was 17.6%. (In 2015, it was 30.2%.) A list of the high-growth success stories of the past fifty years repeats this pattern: China (20%), Hong Kong (13%), Singapore

(14.2%), Thailand (17.0%), Malaysia (15.5%), and Taiwan (13.0%) all had modest levels of revenue/GDP. The United States was the great “emerging market” of the nineteenth century. Before 1914, the tax burden for all levels of government was under 10%.

In general, it seems that the wealthier countries are better able to maintain a high tax burden than less-wealthy countries, simply because they are wealthier. People can give 30% or 50% of their income to the government, and still have enough left for the basic requirements of life—food, clothing, shelter. This is not true in less-wealthy places. It certainly doesn’t work when governments try to provide services that only a rich country could afford. The effects of a given tax system can vary depending on the specifics of a certain economy. What works for one country may not work for another. During the 1990s, West Germany was tolerably prosperous, while East Germany, under the same tax system, stagnated with high unemployment. Less-developed countries should target a tax burden of 20% or less.

Adam Smith described the same pattern in the 1770s:

> Such taxes, when they have grown up to a certain height, are a curse equal to the barrenness of the earth, and the inclemency of the heavens; and yet it is in the richest and most industrious countries that they have been most generally imposed. No other countries could support so great a disorder. As the strongest bodies only can live and enjoy health, under an unwholesome regimen, so the nations only, that in every sort of industry have the greatest natural and acquired advantages, can subsist and prosper under such taxes. Holland is the country in Europe where they abound most, and which from peculiar circumstances continues to prosper, not by means of them, as has been most absurdly supposed, but in spite of them.[2]

All too commonly, taxation is a secondary consideration to spending. Governments decide what they want to spend money on, and then—only after this—they decide how they are going to tax to pay for it. Maybe it should be the other way around: A government could decide how much it should tax (the tax burden), how it should best administer these taxes (tax efficiency), and then—only then!—decide how to best spend the revenues that result.

For example, a government could decide that it will spend exactly 5% of GDP on healthcare. This could be explicitly defined in legislation: that the healthcare budget shall be exactly 5% of the measured nominal GDP of the past twelve months, no more and no less. A tax to raise this revenue is decided upon—presumably, a tax that is highly efficient, and tolerably "fair." Then, it falls upon the healthcare administrators to spend this money in the most effective way possible, in programs with the highest benefit/cost ratio. A government that pursues this policy should never have an issue with bloated healthcare expenses.

Throughout history, governments—and the special interests they represent—have tended to focus their attention on maximizing "their share of the pie;" in practical terms, revenue/GDP. They want to get their hands on as much of the available money as possible. The consequences of this on economic health and growth have been poorly perceived. Such governments get a large share of a small pie.

However, the better statesmen have always understood that the government's fortunes rise and fall with the fortunes of the people as a whole. One never finds a prosperous government and a poor people; or a prosperous people and a destitute government. They are poor or prosperous together. These governments get a smaller, but still large, share of a much larger pie.

> Duke Ai asked Yu Zo: "It has been a year of famine and there are not enough revenues to run the state. What should I do?"
> Zo said: "Why can't you use a 10 percent tax?"
> The Duke answered: "I can't even get by on a 20 percent tax. How am I going to do it on 10 percent?"
> Zo said: "If the people have enough, what prince can be in want? If the people are in want, how can the prince be satisfied?
>
> *Analects of Confucius* (12:9), fifth century B.C.

To use a different analogy: the government, or the elites, are at the top of the pyramid of society. For the pyramid to become taller, the base must become larger; prosperity at the top depends on prosperity at the bottom and middle. Too often, the elites try to enrich themselves by eroding the base of the pyramid. The elites may, in this way, enjoy the personal satisfaction of lording it over the oppressed masses.

However, their pyramids will be small, and beset with more problems than their meager resources can handle. The leaders of Singapore (5.6 million people; 720 square kilometers; $537.4 billion GDP) control far more resources than the leaders of Haiti (10.8 million people; 27,750 square kilometers; $7.9 billion GDP).

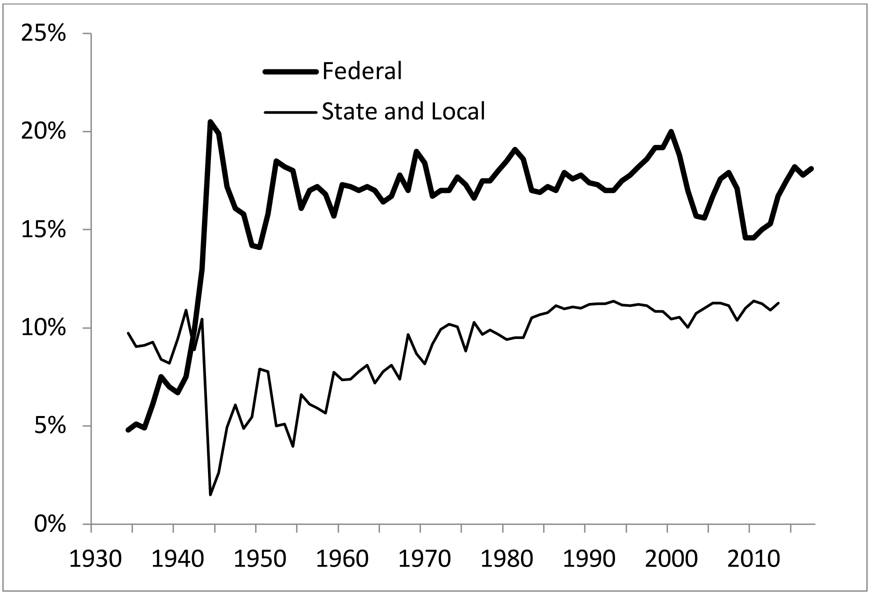

Figure 2.1: U.S. Tax Revenue/GDP, 1934-2017

In practice, revenue/GDP tends to be surprisingly sticky. Attempts to raise more revenue with higher taxes fail. People abandon the highly-taxed activities, revenues disappoint, and the revenue/GDP ratio remains largely unchanged. Reductions in tax rates that everyone assumes will cause a decline in the revenue/GDP ratio do not actually produce any such decline. People engage in more taxable activity at the lower rates, and the revenue/GDP ratio is again unchanged.

In the U.S., Federal revenue/GDP has remained remarkably stable since 1950. (Figure 2.1) No tax increases have produced any sustainable increase in revenue; no tax reductions have produced any sustained falloff. Most of the variation is related to expansions and recessions. This is not to imply that tax changes “don’t matter.” They do matter—but, they have mattered to GDP and overall economic health, not to the revenue/GDP ratio. A larger GDP, brought about by a more growth-friendly tax system, and a stable revenue/GDP ratio, implies more revenue with lower taxes. Also, a healthy low-tax economy is more likely to avoid recessions, which cause major declines in revenue, accompanied by major increases in spending and large deficits.

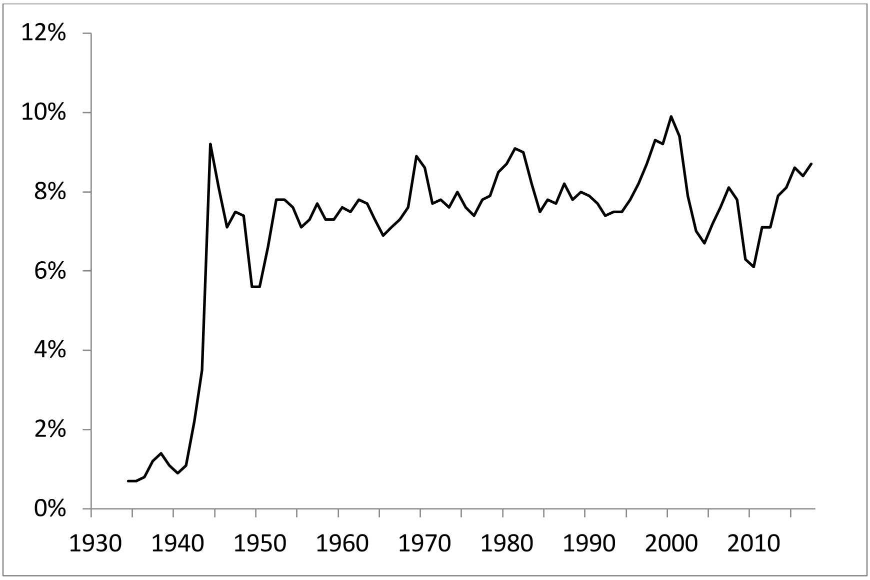

Figure 2.2: U.S.: Federal Individual Income Tax Revenue/GDP, 1934-2017

The big gains are not found by increasing the government's share of GDP—the revenue side of the revenue/GDP ratio. The big gains are on the other side: the GDP side of the revenue/GDP ratio. A government will be able to raise far more revenue, over time, if GDP growth is high. People have little understanding of just how much higher the growth is in a high-growth economy, compared to one with moderate growth. In the United States, tax reform enthusiasts often talk about the advantages that could come about from an increase in growth rates of 1% per year—for example, from 2.0% to 3.0%. After twenty years, GDP is 22% larger than it would have been otherwise; incomes are

22% higher; tax revenues are 22% greater. In fiscal 2016, the U.S. Federal government collected $3.27 trillion in taxes. If a tax reform had been accomplished 20 years earlier, in 1996—for example, the Flat Tax that Steve Forbes advocated in the presidential election that year—that increased the average growth rate by 1% over those twenty years, the Federal tax revenue could have been $720 billion greater—an extra $720 billion in revenue, year after year, with lower tax rates, not higher. The Federal deficit for 2016 was $587 billion; perhaps it would have been a surplus. A 2018 estimate of U.S. Federal government debt/GDP ratios showed a figure of 125% in 2040 with the Congressional Budget Office's assumption of 1.9% real GDP growth, and 60% with 3.0% real growth.[3] (Figure 2.3)

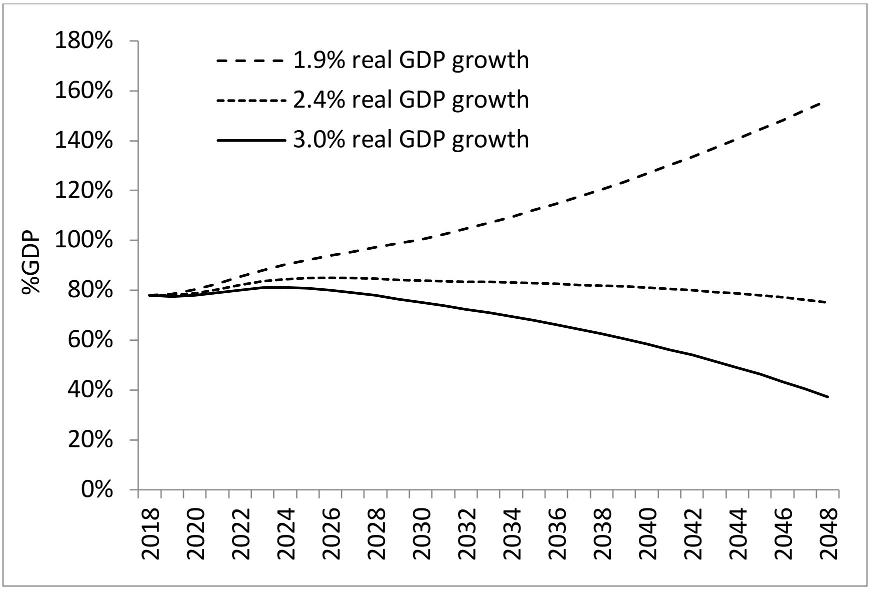

Figure 2.3: U.S.: Estimated Federal Government Debt Held By The Public, 2018-2048[4]

Over time, an additional 1% per year is a big deal. However, the growth rate of a high-growth economy can be ten percentage points higher.

During the 1960s, nominal GDP growth in Japan was ten percentage points higher than in the U.S.—even though the U.S.

economy was also quite healthy during this time. (The Japanese yen was linked to the dollar during these years at an unchanging 360/dollar, and the dollar linked to gold at $35/oz., thus eliminating monetary effects on nominal GDP.) For the period 1960-1970, the compounded annual growth rate in nominal GDP in the U.S. was 7.0%. In Japan, it was 16.9%. (Figure 2.4) This adds up: during the decade, the U.S.'s nominal GDP grew 96%, and Japan's grew 377%.

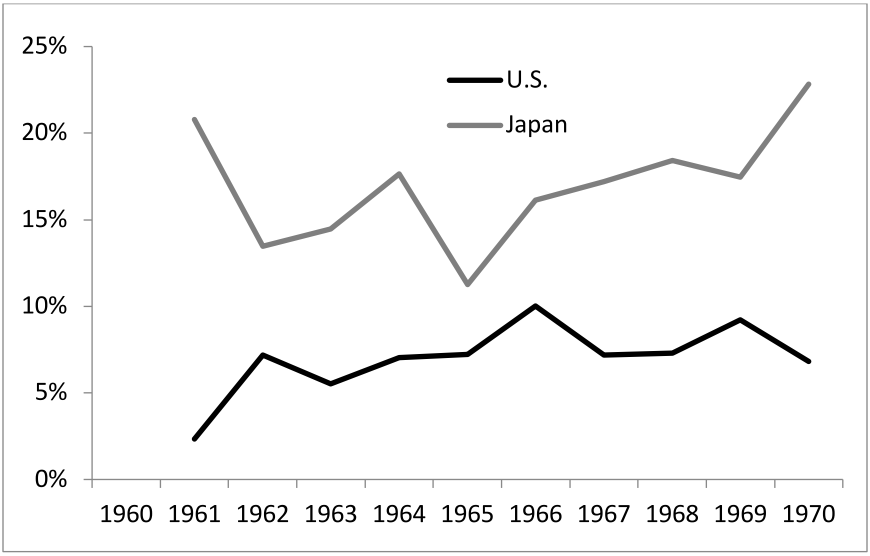

Figure 2.4: U.S. And Japan: Growth Of Nominal GDP From A Year Earlier, 1961-1970

In a single decade, Japan's economy nearly quintupled, while the U.S. economy—itself quite healthy—merely doubled. Japan enjoyed more than a doubling of the size of its economy, relative to the U.S. With a stable revenue/GDP ratio, Japan's tax revenue and government spending also expanded by more than four times. Balanced budgets continually threatened to go into surplus, and since the government was nearly debt-free, there was no need for this extra cash. A "supplementary budget" of additional spending programs became an annual event, while taxes were reduced still further.

Between 1950 and 1974, the Japanese government reduced taxes every year. Each of these reductions was projected to result in a decline in revenue, according to static accounting estimates. The result was that, between 1950 and 1970, revenue increased by sixteen times, from ¥456.4 billion to ¥7,295.8 billion. The central government revenue/GDP ratio was 9.5% in 1955, and 10.0% in 1970.

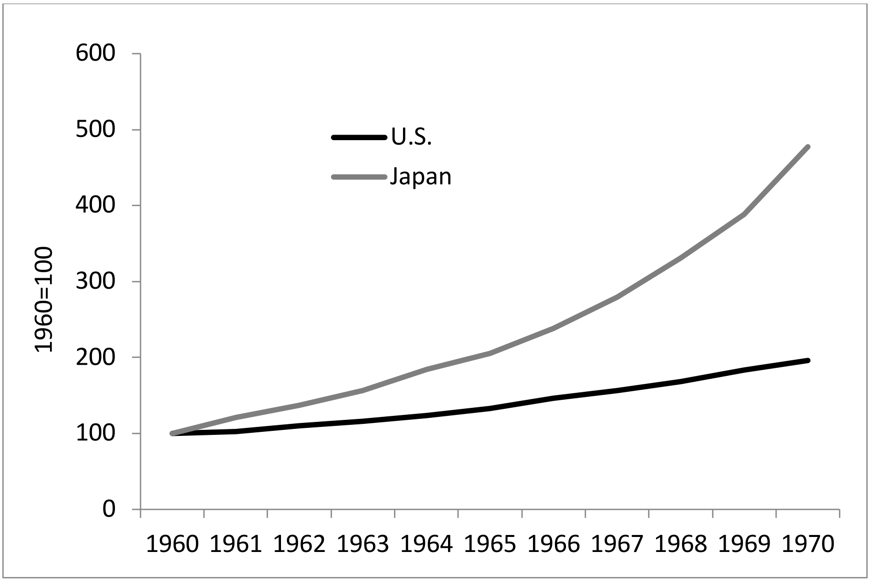

Figure 2.5: U.S. And Japan: Nominal GDP, 1960-1970

If Country A has tax revenue/GDP of 17% and Country B is at 30%, but Country A enjoys a relative doubling in size compared to Country B, we can see that Country A's government will have higher overall tax revenues than Country B, even at a much lower overall tax burden. With more revenues, Country A's government will be able to afford more abundant services. It will also have less need for them—a healthy economy has far fewer social pathologies. During the 1960s, the unemployment rate in Japan hovered between 1.1% and 1.6%. Socialistic pressures remain subdued, which allows the tax burden to remain low, which allows growth to remain high, which produces more revenue and more services—the Magic Formula.

During the 1990s, Japan's economy stagnated. Policy that had followed the Magic Formula during the 1960s was contrary to the Magic Formula in the 1990s. New taxes were added on property and capital. A new value-added tax was introduced. Payroll tax rates steadily climbed higher, gaining more than ten percentage points with no upper limit on income to which they applied. Money was no longer stable: the yen had wild moves, between 260/dollar in 1985 and 80/dollar in 1995.

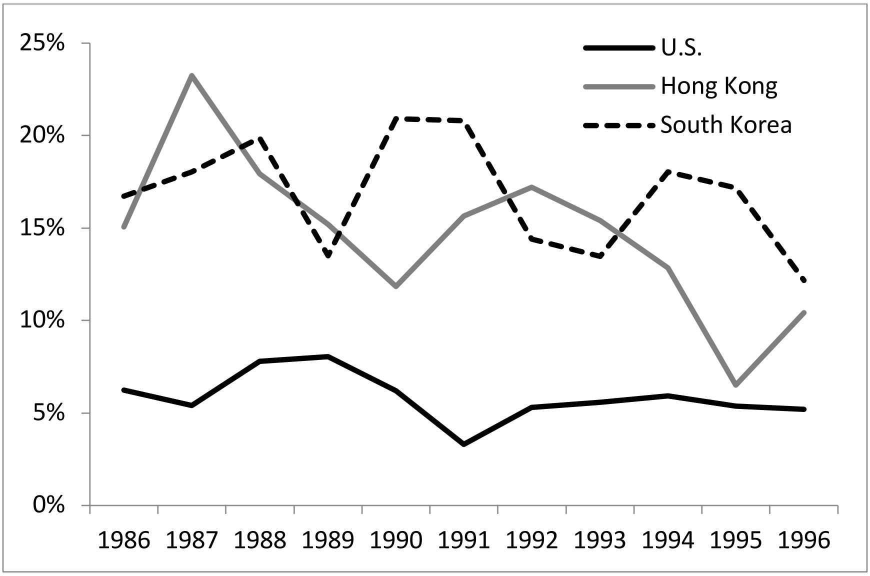

Figure 2.6: U.S., Hong Kong And South Korea: Growth Of Nominal GDP From A Year Earlier, 1986-1996

The baton was handed to the high-growth economies of Asia, including Hong Kong and South Korea. From 1985 to 1995, U.S. nominal GDP had a growth rate of 5.8%. The growth rate in Hong Kong was 14.6%, and in South Korea it was 16.8%—again, roughly a 10%-per-year advantage. Both Hong Kong and South Korea combined Low Taxes with Stable Money: The Hong Kong dollar was linked to the U.S. dollar with a currency board, and the South Korean won maintained a roughly stable value vs. the dollar.

Like Japan in the 1960s, they also had a third factor—high rates of domestic investment, paired with high rates of domestic savings, or capital creation. Savings rates are not easy to legislate directly. But, certainly domestic investment and capital creation—and the successful translation of investment and capital into productive enterprise—are also helped by Magic Formula.

Unfortunately, this astonishing growth era for the "Asian Tigers" came to an end in the Asia Crisis of 1997. Currencies collapsed, and, in the period that followed, new taxes were introduced. During 1985-1996, South Korea's average revenue/GDP ratio was 17.6%. In 2016, it was 26.3%.

A few years later, an even more incredible result was enjoyed by Russia, after it implemented its 13% "flat" income tax in 2001. This was not the only change: between 2000 and 2008, the VAT rate fell from 23% to 18%, and payroll tax rates fell from 35.6% to 24%. Between 2001 and 2008, the growth rate of nominal GDP in Russia, as measured in U.S. dollars, was a mind-bending 26.3%—an eightfold increase in dollar-based GDP in only eight years. The ruble was also stabilized against the dollar, around 28 rubles/dollar. Finally, Russia had both halves of the Magic Formula. (Russia's economy benefited from higher world prices for raw materials during this time, but mining and quarrying, including all energy commodities, accounted for only about 10% of the economy.) Yet even this degree of tax reform did not result in a decline in the revenue/GDP ratio. It was 31.4% in 2000, and 31.6% in 2008. In the first year of the new 13% income tax system, revenues from the income tax increased by 47%.[5]

This fantastic result was shared by other, mostly former Soviet-bloc countries that followed a similar strategy. In 2007, fourteen countries that had adopted a Russia-style Flat Tax had average nominal GDP growth of 21.0%.

This amazing period of growth in Russia ended in the global financial crisis of 2008-9, which, among many flat-taxers, was accompanied by a currency breakdown (unstable money). The ruble's value crashed from 24/dollar to 35/dollar in 2009, and later collapsed to 76/dollar in 2016. The economic crisis caused a falloff in government revenue, which prompted the government to increase the payroll tax by ten percentage points. With higher taxes and an unreliable currency, the boom was over. Many other former-Soviet-bloc governments followed a similar pattern.

Reducing taxes seems to produce a burst of economic activity, as existing opportunities that were blocked by the tax code can quickly be taken advantage of. A country with somewhat high taxes, that reduces tax rates aggressively, can have higher growth than an economy that has had low taxes for years. A developed country that has both Stable Money and Low Taxes for a long time, such as the United States in 1880-1914, might have a long-term per-capita real growth rate of about 3%. Similarly, a country with generally low taxes, but which raises taxes, might have a recession or economic slowdown, momentarily underperforming a country with unchanging high tax rates.

It is probably true that developing economies have a "catch-up advantage," and that their eye-popping growth rates in excess of 10% are not really feasible for a large developed country like the United States. Nevertheless, if all you had to do to become rich was to start poor, everyone would have done it. The roster of successful high growth economies remains small; even those once on the list can find themselves running off into the weeds. The successful ones stick to the Magic Formula.

Tax Efficiency

"Low Taxes" do not always take the form of low tax rates. Often, due to intellectual fashion or to placate socialistic interests, governments have maintained high nominal tax rates, but have instead shrunk the tax base through aggressive use of exemptions, deductions, expensing and accelerated depreciation. Sometimes, outright tax evasion is quietly condoned. Japan's top personal income tax rate of 55%, during the high-growth 1950s and 1960s, does not appear particularly growth-friendly. But the income to which it applied was dramatically raised, from a threshold of ¥500,000 in 1949 to ¥10 million in 1957—twenty times higher. Other brackets rose alongside. The marginal rate for most people declined dramatically. Interest income, dividends and capital gains were all taxed at the regular rates in 1949. By 1955, interest income and capital gains were tax-free, and dividends were taxed at a lower rate. Tax evasion was common among the self-employed and small business owners. Television entertainers were paid in shopping bags full of banknotes even into the 1980s. The government rather pointedly did not require the use of taxpayer identification numbers (such as a Social Security number), and bank accounts under fictitious names were common.

Even bigger changes came to corporate taxes. Corporate income tax rates also remained around 50%, but corporations were allowed to expense a wide range of benefits for employees, permitting companies to effectively compensate employees tax-free. Corporations provided company housing for employees at negligible rents; company cafeterias provided food; healthcare was expensed; employee transportation costs for commuting were expensed; semiannual "bonuses" not subject to payroll taxes were allowed; even company-owned holiday and vacation facilities were provided. Employee paid wages remained low, and thus subject to lower tax rates. Executives made use of extravagant entertainment expense accounts, lived in company-owned mansions, enjoyed a staff of beautiful young "office ladies," and rode in company cars with company drivers. Corporate capital expenditures were expensed immediately, or subject to accelerated depreciation schedules. Debt financing was used aggressively (interest was untaxed at both the corporate and personal level), which reduced taxable corporate income. Taxable corporate earnings were meager, but EBITDA was plentiful.

Other taxes were low. There was no sales tax or VAT, at the national, prefectural or municipal level. Property taxes did not reflect the gigantic gains in property values of the 1950s and 1960s, so effective rates were minimal. (The effective property tax rate in Tokyo in 1987 was estimated at 0.065%.) Payroll taxes were at low-to-mid-single digit rates. (In 2016, Japan's payroll tax rate was 29.6%, and had no upper limit to income.) The overall tax burden, or revenue/GDP, remained low. Money was stable, the yen's value fixed at ¥360/dollar, and, in the context of the Bretton Woods gold standard system of the time, fixed to gold at ¥12,600/oz.

A similar thing was happening in the United States during the 1950s and 1960s. The top personal income tax rate of 91% was moderated by a bouquet of exemptions. Those high rates were rarely paid. By one estimate, the average effective rate of income taxation on the top 1% of earners was 16.9% during the 1950s.[6] Other taxes were low. State and Local taxes generated 6.2% of GDP during the 1950s, and 10.8% in 2000-2010, an increase of 74%. The combined payroll tax rate was 3.0% in 1950, 9.6% in 1970, and 15.3% in 2015. Although top income tax rates were high, the marginal rates faced by the majority of workers were not. Ninety percent of taxpayers faced marginal income tax rates no higher than 20-22% during the 1950s, while a third were taxed at the top rate of 28% in 1989. The total U.S. government tax burden averaged 22.9% in the 1950s, and 27.9% in 2000-2009.

The U.S. economy did not perform as well as Japan or Germany in the 1950s, or as well as after tax rates were lowered in 1964. There were recessions in 1949, 1953, 1958 and 1960. At the time it seemed difficult, not the full-throttle expansion enjoyed by governments that aggressively reduced taxes. However, paired with Stable Money in the form of the Bretton Woods gold standard system, the decade is still remembered as one of the best of the past century.

You get less of what you tax. An income tax taxes taxable income. Higher tax rates result in less taxable income; lower rates result in more taxable income. This is the principle of the Laffer Curve: at a tax rate of 0%, taxable activity is maximized, but revenues are zero. You get 0% of 100. At a tax rate of 100%, there is no taxable activity, because there is no economic reason to do it. You get 100% of 0. Tax revenue is again zero.

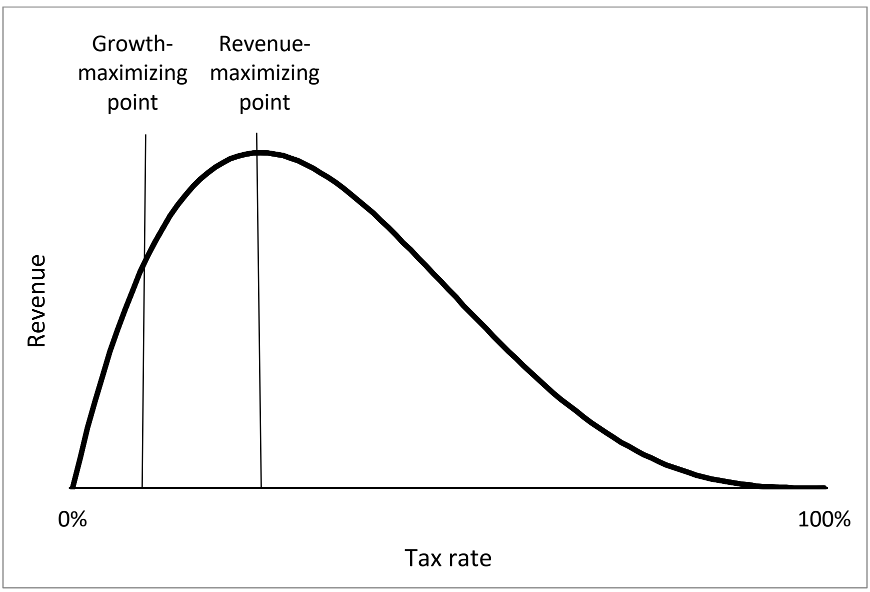

Figure 2.7: The Laffer Curve

The Laffer Curve is most useful as a thought exercise, expressing the plasticity of taxable activity in response to different tax rates. ("Taxable" here means actually taxable; that the government actually receives revenue, not taxable "in principle.") It does not capture several important aspects of taxation, and its usefulness in forming real-world policy is limited. Some taxes probably should not exist at all, such as double-taxation of corporate profits via personal taxes on dividends, and capital gains taxes. The "revenue-maximizing rate" is zero—increased economic growth soon leads to increased revenues from all other taxes. Also, there are interactions between taxes: the "revenue-maximizing rate" of a VAT is probably different if the VAT were the only tax in an economy, compared to a situation where the VAT is combined with high payroll and income taxes. Nevertheless, the basic principle expressed by the Laffer Curve remains underappreciated today.

The Laffer Curve says little about economic growth directly. At base, it merely shows that a high tax on grapefruits might lead people to eat oranges instead, resulting in low grapefruit tax revenues. It is not so obvious from the Laffer Curve that as an income tax rate goes to 100% and taxable activity goes to zero, thus all economic activity must either find an untaxed channel, or itself go to zero. The potential economic consequences can be dire. Conversely, higher economic growth from lower taxes often results in higher revenues, simply because there is more GDP to tax. The so-called "revenue maximizing point" on the Laffer Curve is not an optimum or goal; nor is it, in practice, revenue-maximizing.[7] A lower rate that allows higher economic growth can quickly lead to more revenue, in a relatively short period of time.

Likewise, we can see that a low revenue/GDP does not at all imply "low taxes." At high tax rates, revenue is low, and thus revenue/GDP is low. At a corporate income tax rate of 100%, on all activity without exemptions, all legal corporate activity comes to a halt. No taxes are paid, and tax revenue/GDP also falls to zero.

As tax rates rise, taxable income can be reduced by a wide variety of mechanisms. Greater use is made of existing exemptions and deductions. Political pressure increases to expand and multiply exemptions, deductions, credits and allowances, thus further shrinking the tax base through legislative means. Tax evasion increases, and the underground economy expands. Activity runs toward nontaxable channels. Homeowners do their own house repairs and renovations, rather than hiring someone—the disincentives of taxes outweigh the advantages of the capitalist division of labor. Wives stay out of the workforce rather than face high marginal income tax rates on a household's additional income, in addition to the costs of working, such as transportation and daycare, themselves subject to tax. People are less ambitious in general: there is less reward for the effort involved. People don't start businesses, as the reward is reduced but the risk is unchanged. Existing businesses don't expand. People retire early, or take more leisure time in general. Investment is channeled into tax-advantaged sectors. People migrate toward lower-tax jurisdictions. Each of these factors alone might not account for much change in behavior—the change may hardly be noticeable—but all of them together, acting simultaneously in response to a change in tax rates, can produce a dramatic result.

Much the same thing happens on the corporate level, turbocharged by the fact that corporations can afford large lobbying budgets, sophisticated accounting and legal advice, and can operate in multiple jurisdictions easily.

A 2004 study found that Americans of working age worked fifty percent more hours than comparable French people. A cultural difference? In 1970-74, the French worked more than Americans.[8] The IRS estimated in 2016 that U.S. taxpayers illegally evaded 16% of all taxes owed, with 90% of this coming from underreporting of legal activity.[9] Total U.S. "tax expenditures"—the reduction in revenue from all of the targeted deductions, exemptions, etc. that reduce the tax base—were estimated at $1.5 trillion for 2018, compared to estimated individual and corporate income tax revenue of $2.2 trillion. In 2015, taxable income of $7.2 trillion was 46% of total personal income (from the national income accounts) of $15.5 trillion. The cost of tax compliance has been estimated at around 11% of tax revenue.[10]

People are rarely conscious of how their behavior is affected by these factors. And yet, it is easy to see that, at a tax rate of 0%, tax avoidance would not exist, working and the pursuit of higher income would not be disincentivized, "tax expenditures" would not exist, more businesses would be started, and so forth. At higher rates, all of these factors become more intense.

This is why reductions in tax rates often do not produce reductions in tax revenue, even if such a reduction was predicted. Tax rate increases do not produce the predicted increases in revenue. These predictions are based on "static" assumptions about unchanging taxpayer behavior, and consequently, unchanging taxable income. But, taxpayer behavior can change radically. Taxable activity expands at lower tax rates. Reductions in high tax rates on upper incomes have consistently produced more—not less—revenue from those upper incomes, exactly the result expressed by the Laffer Curve. In 1921, the top income tax rate was 73%, on incomes over $1.0 million. Incomes over $100,000 paid 60%. In that year, people with incomes of greater than $100,000 paid $194 million, or 29% of all tax revenue. In 1925, the top income tax rate was 25%, on incomes over $100,000. People with incomes of more than $100,000 paid $362 million, or 51% of all tax revenue.

	1921		*1925*	
Income category	*revenue (millions)*	*% of all revenue*	*revenue (millions)*	*% of all revenue*
Less than $10,000	$155	21%	$33	5%
$10,000 to $25,000	$122	18%	$70	10%
$25,000 to $50,000	$108	16%	$109	15%
$50,000 to $100,000	$111	16%	$137	19%
Over $100,000	$194	29%	$362	51%

Table 2.1: Revenues From Upper Incomes After 1920s Tax Reforms[11]

A surprise? It was exactly the result predicted by Treasury Secretary Andrew Mellon, who designed the tax reform. In *Taxation: The People's Business* (1924), he explained what he intended to do:

> The problem of the government is to fix rates which will bring in a maximum amount of revenue to the Treasury and at the same time bear not too heavily on the taxpayer or on business enterprises. A sound tax policy must take into consideration three factors. It must produce sufficient revenue for the Government; it must lessen, so far as possible, the burden of taxation on those least able to bear it; and it must also remove those influences which might retard the

> continued steady development of business and industry on which, in the last analysis, so much of our prosperity depends. ...
>
> The history of taxation shows that taxes which are inherently excessive are not paid. The high rates inevitably put pressure upon the taxpayer to withdraw his capital from productive business and invest it in tax-exempt securities or to find other lawful methods of avoiding the realization of taxable income. The result is that the sources of taxation are drying up ...
>
> It seems difficult for some to understand that high rates of taxation do not necessarily mean large revenue to the Government, and that more revenue may often be obtained by lower rates.[12]

In 1916, with a top tax rate of 7%, the Treasury reported $81.404 million in revenue from incomes over $300,000. In 1921, with a top rate of 77%, the Treasury reported $84.797 million of revenue. The number of returns filed with income over $300,000 fell from 1,296 in 1916 to 246 in 1921.[13]

A similar result happened in 1964, when the top income tax rate was reduced from 91% to 70%, and all brackets reduced proportionally.[14] Tax revenues from upper brackets increased. Tax revenues from people earning more than $500,000 increased by 45% in the first year of the new tax system, compared to the previous year, even as the tax rate fell by 23%. Higher revenue at a lower rate. The implied change to taxpayer behavior was immense: taxable income for these upper brackets effectively rose 88% in a single year.

$ millions Income	*$50,000-$100,000*	*$100,000-$500,000*	*more than $500,000*
1964 (old law)	$3,622	$2,405	$701
1965 (new law)	$3,693	$2,780	$1,020

Table 2.2: Revenue From Upper-Income Taxpayers After 1964 Tax Reform[15]

This is why "static" estimates of tax revenue, despite their alluring precision, have no relation to the real world. Estimates of real-world results are, by nature, imprecise: there is no way to estimate, with high precision, the behavior of taxpayers toward the new changes. Anyone can claim that a reduction in tax rates from 91% to 70% would result in 70/91ths of the revenue; and extend this to as many decimals as convention requires. But, it would not have been possible to predict the actual outcome of the reform, with precision. The result is that, in policy debates, those relying on "static" models tend to seem precise, sober and scientific, while those that have a broader understanding of real-world outcomes sound like vague dreamers making seemingly-impossible claims. And yet, the former are always wrong, and the latter are far more likely to be right. The actual outcome in 1965—that tax revenues from incomes over $500,000 would not only increase with lower tax rates, but increase by 45% in a single year—would have seemed like idiotic fantasy in 1964. It even seemed like idiotic fantasy in 1966, when the actual results were known, since most people simply assume that the various projections bandied about during the discussion phase actually took place. But it happened.

In May 1965, Joseph A. Pechman published "Evaluation of Recent Tax Legislation: Individual Income Tax Provisions of the Revenue Act of 1964" in the *Journal of Finance*. Let's see how his predictions compared to the actual result:

Adjusted Gross Income	*Actual Revenue*	*Forecast Revenue*	*Percentage Actual Revenue Exceeded Forecasts*
$0-$5,000	$4,337	$4,374	-0.8%
$5,000-$10,000	$15,434	$13,213	16.8%
$10,000-$15,000	$10,711	$6,845	56.5%
$15,000-$20,000	$4,188	$2,474	69.3%
$20,000-$50,000	$7,440	$5,104	45.8%
$50,000-$100,000	$3,654	$2,311	58.1%
$100,000+	$3,764	$2,086	80.4%
Total	$49,530	$36,407	36.0%

Table 2.3: U.S.: Forecast And Actual Revenues From The Personal Income Tax, 1965[16]
Calendar year, revenue in millions

Oops! So much for the "experts."

In practice, the lack of precision is not so important, because it is easy to estimate the general outcome—when rates are reduced, the results are always better than the "static" estimates predict.

Sometimes, a lot better. When rates are increased, the "static" estimates for increased revenues prove to be overly optimistic. The principle that revenue/GDP will remain roughly unchanged has been quite reliable; reliable enough to serve as a good first guess. It must always be remembered that any additional economic growth, arising from a reduction in income tax rates for example, does not only affect income tax revenues. It affects the revenues of all taxes, including State and Local taxes.

In 1980, the top U.S. Federal income tax rate was 70%. The top one percentile of income paid 19.3% of all tax revenue, and the top 5% paid 37.9%. In 1989, the top income tax rate was 28%. The top 1% paid 25.2% of all tax revenue, and the top 5% paid 43.9%. The experience of the 1920s and the 1960s was repeated. More revenue at a lower rate.

Tax Year	*Top Rate*	*Top 1%*	*Top 5%*	*Top 10%*	*Top 25%*	*Top 50%*
1980	70%	19.3%	37.9%	49.5%	73.1%	92.9%
1981	70%	17.9%	35.4%	48.2%	72.4%	92.6%
1982	50%	19.3%	35.4%	48.8%	72.6%	92.7%
1983	50%	20.7%	37.7%	50.1%	73.3%	92.9%
1984	50%	21.8%	38.6%	51.1%	73.8%	92.7%
1985	50%	22.3%	39.3%	51.9%	74.3%	92.9%
1986	50%	25.8%	42.7%	54.9%	76.0%	93.5%
1987	38.5%	24.8%	43.3%	55.5%	76.9%	93.9%
1988	28%	27.6%	45.8%	57.3%	77.8%	94.3%
1989	28%	25.2%	43.9%	55.8%	77.2%	94.2%
1990	28%	25.6%	44.0%	55.7%	77.2%	94.3%
1991	31%	24.7%	43.5%	55.4%	77.3%	94.5%

Table 2.4: Portion Of Total Income Tax Revenue Paid, By Adjusted Gross Income Percentile, 1980-1991[17]

Thus, it appears that, in U.S. history, tax revenues from upper incomes continued to increase even at a rate of 28%. The total revenue from the personal income tax, of 8.0% of GDP in 1989, with a top rate of 28%, was higher than the average of 7.6% in 1950-1980, when top rates were between 70% and 92%. Would a still lower rate produce still higher revenue? This would obviously depend on taxpayer behavior, and would thus be apparent only with experimentation.

Perhaps the most effective way to get "the rich" to pay for government is to tax them at 20%, or even lower. (Bulgaria's individual income tax produced more revenue/GDP at a 10% top rate than it did at 50%.) Part of the reason the 1986 tax reforms generated more revenue at lower rates was due to the widespread reduction of itemized exemptions and deductions, or "tax expenditures," in that reform. "Tax expenditures" of $500 billion in 1986 fell to $400 billion in 1989.[18] But, certainly one reason this reduction in "tax expenditures" was politically possible was the fact that it was paired with much lower rates. In the end, most of the reductions in itemized deductions were offset by a larger standard deduction. Deductions as a percentage of Adjusted Gross Income were 24.6% in 1986 before the reform, and 22.7% in 1989 after.

State	*First Year of Tax*	*Maximum Tax Rate (2012)*	*Population*	*GSP*	*State and Local Tax Revenue*
CT	1991	6.70%	-18%	-20%	-4%
NJ	1976	8.97%	-26%	-21%	-3%
OH	1972	5.93%	-37%	-47%	-27%
RI	1971	5.99%	-36%	-33%	-22%
PA	1971	3.07%	-38%	-41%	-28%
ME	1969	7.95%	-25%	-23%	-0.2%
IL	1969	5.00%	-34%	-41%	-24%
NE	1968	6.84%	-30%	-19%	-17%
MI	1967	4.25%	-35%	-57%	-46%
IN	1963	3.40%	-29%	-38%	-32%
WV	1961	6.50%	-50%	-47%	-37%

Table 2.5: Relative Performance Of U.S. States That Introduced An Income Tax, 1960-2012[19]

Another example of the negative effects of overtaxation comes from the experience of U.S. State governments. Between 1960 and 2012, eleven states implemented a state income tax that did not previously have one. In terms of population, "gross state product," and tax revenue, all eleven states fell significantly behind the average of the other 39 states. (For example, Ohio's population prior to the implementation of the income tax was 7.59% of the remaining 39 states in 1972, and 4.79% in 2012, a relative decline of 37%.)

Pennsylvania's relative population declined by 38%; Michigan's GSP declined by 57%; and Indiana's tax revenue declined by 32%.

The purpose of the new taxes was to raise revenue, and fund services. The result was that relative revenues declined. Since you can't spend on services without revenues, it is no surprise that high-taxing states also do not have any apparent advantage in services.

A tax system with high rates, but a wide variety of exemptions—a narrow base—such as Japan and the U.S. had in the 1950s and 1960s, can allow abundant growth, especially when paired with Stable Money as was the case during the Bretton Woods era. However, it is not an efficient system—economic distortions are created, which impair growth. Any economic action that is taken because of advantageous tax treatment tends to be less productive than an action that is taken due to its fundamental merits. If Investment A is chosen because it is a tax shelter, rather than Investment B which promises the highest before-tax risk-adjusted return on capital, then the economy as a whole gains less benefit from the investment. Capital is misallocated. If a person spends his money on a good or service A because it is relatively tax-sheltered—perhaps, a larger and more expensive house—when, without tax-related considerations, he would really like to spend the same amount of money on B, then that person does not get as much enjoyment from the use of his money as he could. Besides, a very complicated tax system becomes very difficult and expensive to administer, for both taxpayers and tax collectors. The cost to taxpayers of filing income tax returns in the U.S. has been estimated at over 15% of tax revenue.[20]

Even when the revenue from a tax is low, it can have substantial negative economic effects. In 2017, the United States had the highest effective corporate income tax in the OECD, while the revenue/GDP from this tax was among the lowest in the OECD. The low revenue indicates the tax's high effectiveness in discouraging taxable activity. It was the distortion of behavior toward low-tax alternatives that allowed corporations to pay little tax.

Thus, tax experts have generally concluded that the most efficient taxes are those with a broad base and a low rate—and this is true whether government is big or small, and revenue/GDP high or low. The low rate ensures that behavior is altered as little as possible, from what it would be if there were no tax at all. The broad base ensures that adequate revenues are collected. In practice, this has meant taxes on consumption, especially the Value Added Tax, which has several advantages to a retail sales tax; the payroll tax on employment income; and other income taxes with a broad base and a low rate, such as the "flat tax" systems that have been popular especially since 2000.

Taxes on consumption generally have the fewest negative economic effects, compared to their revenue. Taxes on wealth and investments, including corporate income taxes, dividend, interest and especially capital gains taxes, and also inheritance taxes, have generally been found to be harmful to economic health far out of proportion to their modest revenue. Taxes on dividend income are simply a double-taxation of corporate income. Interest income should be taxed at the corporate level, to eliminate an artificial distinction between equity and debt capitalization due to tax treatment. Having been taxed at the corporate level, interest income should not be double-taxed at the individual level. Capital gains taxes and inheritance taxes are taxes on wealth, which was already taxed, at the individual and corporate level, through the income tax system. It amounts to another form of double-taxation.

The idea of "taxing all income the same"—taxing dividends, interest and capital gains at the same high rates as employment income—has re-emerged time after time, but has been widely rejected among OECD countries. Instead, the more successful countries have tended to avoid capital-related taxes altogether. Hong Kong, Singapore, New Zealand, Belgium, Germany, Malaysia, the Netherlands, South Korea, and Switzerland do not tax capital gains at all. (Japan used to be part of this club, but alas, is no longer.) The revenue-maximizing rate of these taxes is often zero—by eliminating these taxes, more revenue is gained from other taxes, and from a larger overall GDP.

Governments have generally found that high corporate tax rates have been counterproductive; in part because of the negative economic effects of high rates, and also, because corporations can eventually find a way not to pay them. Corporate income tax rates have come down throughout the developed world. The median corporate income tax rate, among the OECD countries, was 24.2% in 2017. Britain's corporate income tax rate was 52% in 1980. In 2017, it was 19%. (The revenue of this tax, as a percentage of GDP, was about the same in both years.)

From this, we can see why European countries with a high tax burden are not as poorly off as one might expect. Their taxation systems focus on highly efficient VAT and payroll taxes, with relatively light taxes on business, investment and capital. The United States has a lower overall tax burden, but more aggressive taxation of dividends, interest, capital gains and inheritances, a monstrously complicated and inefficient personal income tax system, and also, before 2018, the highest corporate income tax rate in the OECD—which produced, exactly as the Laffer Curve predicts, among the lowest revenue/GDP in the OECD. The United States still did somewhat better, in terms of economic performance, but not much better.

It is best not to spend too much time making distinctions between subtle variations in mediocrity. Governments that aspire to better results than this should keep the tax burden low, and the tax system efficient, with a broad base, low rates, and light taxes on corporations, capital, and investments.

Government Spending

The best way for a government to raise revenue is with low taxes that foster a healthy, growing economy. Over time—usually, not very much time—the increased revenues from rapidly expanding GDP will overshadow anything that could have been accomplished with a high-tax strategy. Since you have to receive revenue before you can spend it, the best way for a government to spend more is to tax less.

You would think that the idea that lower tax rates can result in increased revenues would make everyone happy. Small-government conservatives get a business-friendly environment and low tax rates; big-government socialists get larger budgets to play with. Instead, it tends to bother everyone. Small-government conservatives are disturbed by the idea that government budgets could get larger and larger, with more and more government handouts, even while tax revenue/GDP remains low and stable. Big-government socialists want high taxes as a matter of principle, even if they don't produce much revenue, and actually create the problems that government spending programs attempt to solve. In practice, revenue/GDP could be gradually reduced, by further reductions in tax rates, even as rising GDP produced higher revenue. Tax revenues "go up" (in nominal terms) and "go down" (in revenue/GDP terms) at the same time—one of the best of all possible outcomes. (Exactly this result was achieved in Ireland, as discussed in Chapter 6.)

But, tax policy also affects the spending side of the budget. A healthier, high-growth economy has fewer demands on the government to solve one problem or another. Unemployed (or underemployed) people generate little tax revenue, and are soon petitioning the government to relieve their many unmet needs. If they get a job, they become a generator of tax revenue (and, consequently, a political supporter of lower tax rates), and have fewer unmet needs. Much the same is true for people who are already employed, and enjoy an increase in income.

Any government contains some people who wish to spend more money, and some who wish to spend less. When the economy is weak, hardship increases and demands upon the government increase. Spenders get the upper hand, while GDP is depressed. Spending/GDP rises.

If a healthier economy comes about from Low Taxes and Stable Money, demands on the government are reduced. Deficit hawks get the upper hand, while GDP is plentiful. Spending/GDP declines.

From this, it follows that the best way to reduce government spending is to reduce taxes. This typically makes the deficit-hawks' heads spin: they are always trying to reduce deficits by pairing spending cuts with higher taxes. Sometimes, since the deficit-hawks usually support the idea of a smaller government in principle, they want to put spending cuts first, and tax cuts later, when there is a budget surplus, which of course never happens. Tax cuts first, and spending cuts later; or, at least, make them concurrent.

The experience of the U.S. showed a rise in Federal spending, as a percentage of GDP, during the difficult 1970s, with a peak during the 1975 recession. Another peak in spending took place at the 1982 recession, the 1991 recession, the 2001 recession and, most dramatically, the 2009 recession. The 1982-2000 period was generally a time of an improving economy, and during this time, Federal spending gradually came down, leading to a surplus in 1999-2000. (The level of spending in 1999-2000 was just about the same as during the prosperous 1950s and 1960s.) After 2000, the economy had more difficulty. Combined with increasing costs for mandatory entitlement programs, this was met with a gradual rising trend in spending in 2000-2017.

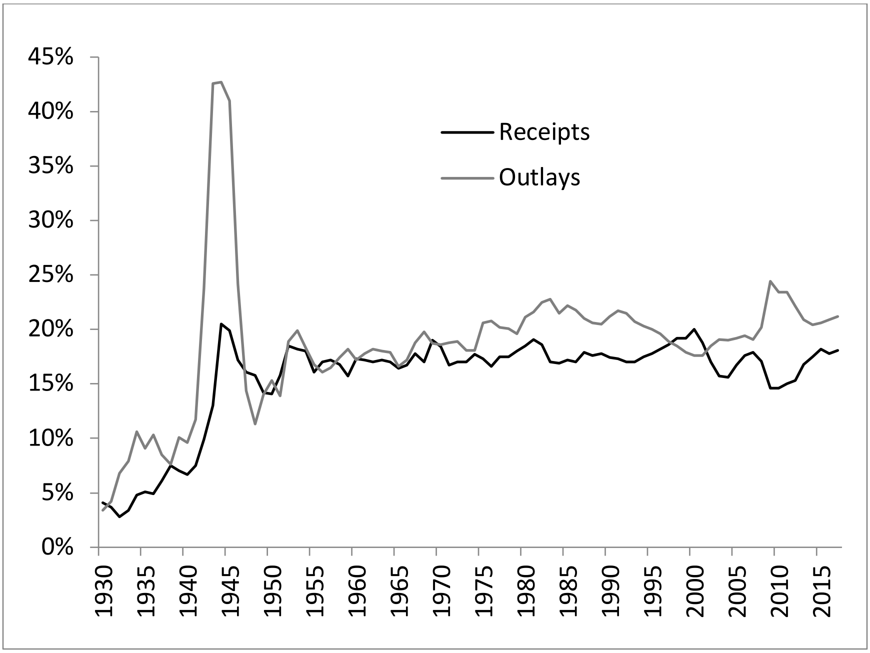

Figure 2.8: U.S.: Federal Government Receipts And Outlays, % Of GDP, 1930-2017

The magnitude of this difference is significant. Between the peak in spending in 1982, and the low in 2000, spending declined by about 5% of GDP. In 2000-2017, it rose by about 5% of GDP. Thus, we find that higher taxes (and unstable money), in the 1970s, did not create any additional revenue/GDP, but did result, due to economic weakness, in more spending/GDP. Conversely, lower tax rates and more stable money, in 1982-2000, did not cause a decline in revenue/GDP, but allowed, due to a healthier economy, a decline in spending/GDP. Changes in tax rates seem to have had a stronger effect on spending/GDP than on revenue/GDP. All of the deficit hawks' basic assumptions are backwards.

This process can be illustrated with a lifeboat analogy: in a declining private economy, the government serves as a "lifeboat," providing government jobs, welfare, corporate subsidy, crony payoffs or nationalized support of industry. You can attempt to order people out of the lifeboat, but when the alternative is unemployment, bankruptcy and destitution, they simply will not leave. In a real lifeboat, on the open ocean, they would kill you first. However, once the lifeboat reaches dry land, and the healthy private economy offers a superior alternative, the people will leave of their own accord, to seek better opportunities elsewhere.

Another example of this principle is from Britain. In the 1950s through the 1970s, Britain took a far more socialistic approach than the United States, with more aggressive use of very high tax rates, and outright nationalization of a wide variety of industries. This long-term trend changed with the victory of Margaret Thatcher, who became Prime Minister in May 1979.

Again, government spending followed a general pattern of rising in difficult times, and falling in prosperous times, both in terms of long-term trends, and also shorter-term business cycles. A peak occurred in the 1975 recession, and a lower peak in the 1982 recession. Another rise coincided with the 1991 recession, which included a dramatic unplanned devaluation of the British pound in 1992 and its exit from the European Exchange Rate Mechanism (unstable money). Nevertheless, spending declined by around 8% of GDP between 1982 and 2000; and then rose by a similar amount, with a peak in the recession of 2008-9.

The first thing Thatcher did was to reduce tax rates. Top income tax rates fell from 83% to 60%; they later fell to 40%. An investment income surcharge was abolished. The corporate tax rate was cut from 52% to 35%. The tax rate on capital gains fell from 75% to 30%, and was indexed to inflation. Just as was the case in the United States, the reduction in tax rates resulted in more tax revenue from top earners. In 1978-79, with an 83% top income tax rate, the top 5% of income earners paid 24% of income tax revenues; in 1987-88, when the top rate was 40%, they paid 28%. An increase in the VAT, from 8% to 15%, was not part of Thatcher's original plan, but was forced upon her by the deficit-hawk wing of her party. Nevertheless, the move indicated a change of focus from punitive income tax rates toward far more efficient consumption-based taxation, at low rates.

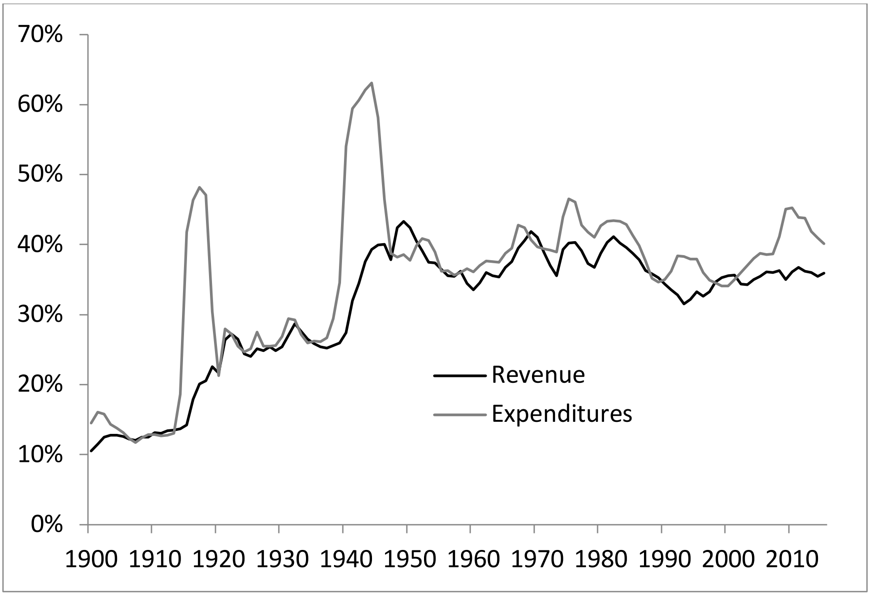

Figure 2.9: Britain: General Government Revenue And Expenditure As A Percentage of GDP, 1900-2015[21]

Much of British industry had been nationalized in 1946-1950. It wasn't until the 1982 recession that the Tory party began to talk seriously about mass privatization of state-owned industry. By 1986, the British government had sold off Jaguar, British Telecom, Cable and Wireless, British Aerospace, Britoil, and British Gas. The private economy was doing better than it had in decades. A third election victory by the Tory Party inspired their most aggressive privatization push in 1987-1990, with the sale of British Petroleum, British Steel, Rolls Royce, British Airways, many water and electric utility companies, and publicly-owned housing. Major efforts to reduce union power took place in 1984-1990, notably with a battle with the coal mining union beginning in 1984. Regulations were reduced everywhere.

As was the case for many governments, the British government's first reaction to the recession of 2008-9, and the budget shortfalls that resulted, was to raise tax rates. The top income tax rose from 40% to 50%. The VAT rose from 15% to 20%, and the payroll tax rose from

23.8% to 25.8%. These tax increases did not produce a meaningful rise in revenue/GDP, which was 36.0% in 2007, 36.3% in 2010, and 35.9% in 2015.

In 2010, the Conservative Party won a victory over the Liberal Party, and began to reduce tax rates again. The top income tax fell back to 45%. But the big changes were in corporate tax rates, which fell from 28% to 19%. As the economy improved, government spending fell dramatically. Total government employee headcount declined by a million people, from 6.5 million in 2009 to 5.5 million in 2015.

Socialistic measures, such as nationalization of industry, are implemented during times of distress, when these steps seem better than abandoning companies and workers to a private economy in decline. The remarkable thing about the British experience in shrinking government during the 1980s and 1990s was that it was successful: that the battles were not only fought, but won. This required a healthy private economy that was clearly a better alternative than the socialistic status quo. The healthy private economy must come first. To shrink the spending side of government, use the Magic Formula.

Chapter 3: Stable Money

The need for Stable Money is inherent in the market economy. As economic interaction becomes more complex, more and more cooperation arises between economic participants. A stable monetary unit is necessary to organize this extended web of cooperation.

In today's market economy, the web of exchange has expanded to a degree that is almost unimaginable. Wheat is no longer something grown outside one's door with the help of a horse, plow and sickle. It requires the coordination of thousands of people, fertilizers, pesticides, specialized machinery, transport, storage, electricity, milling and processing, packaging, marketing, retail, professional management and access to sophisticated capital markets. All of these inputs have their own networks of cooperation. Nearly the whole world, it seems, is involved in the production of your daily bread.

Nobody knows how the wheat was made. Nobody could possibly even imagine a system of such complexity, let alone make it function. This was one of the early criticisms of the Soviet command economy; and indeed, the Soviet system failed to produce adequate food to feed its people, even with some of the most extensive and fertile agricultural lands on the planet.

The system is organized with the use of markets, prices, profits, interest rates, and returns on capital. The price of crude oil rises on the world market. The higher price causes a reduction in demand: some people would rather curtail their usage than spend the additional money. Profit margins in the oil business rise, returns on capital improve, new investments are made, people are hired, and production increases. The effects ripple outward. Automakers find that they cannot profitably sell their larger models, while demand increases for fuel-efficient compacts. Production is curtailed here and expanded there. Wages rise in the oil business, and college students begin to study geology. The cost of airline tickets rises, and Caribbean resorts end up offering their empty rooms at a discount to attract customers. The returns on capital in the resort business shrink, and new construction plans are cancelled, while thermal window producers build additional factories.

All of these changes in behavior make sense if the rise in oil prices represented a real change in the supply/demand balance in the oil market. They would make no sense at all, and would be quite destructive, if the change in oil prices was caused by a change in the value of the currency. Between 1970 and 1980, the value of the dollar, in terms of gold, fell from $35/ounce to a nadir of $850/oz., before stabilizing around $350/oz. in the 1980s and 1990s. The price of oil soared from $3.07 a barrel to $39.50. Newspapers screamed about the "oil shortage," but there was no real shortage of oil, only a decline in the value of dollars. Economies went into convulsions nevertheless.

Changes in the value of the monetary unit can only be destructive, as they distort the system of prices, profits and returns on capital that allows the market system to function. For this reason, humans have always wished their money to be as stable and reliable as possible.

In practical terms, this has meant money based on gold and silver. From the beginnings of civilization, around 3000 B.C., gold and silver were the premier high-value monies and units of account. By 400 B.C., gold and silver, in coin or bullion form, were predominant not only in the Mediterranean realm, but also in Persia, India and China. Over the centuries, this never changed; gold remained the basis of money worldwide during the 1960s as well. Ibn Khaldun (we noted his views on taxation in Chapter 1) summed up neatly:

> And God created the two precious metals, gold and silver, to serve as the measure of value of all commodities … For other goods are subject to the fluctuations of the market, from which they are immune.[1]

Five centuries later, in 1853, Michel Chevalier described:

> When mankind, by common consent, and with an unanimity which is deserving of notice, selected these two metals to serve as coin or measures of value, and equivalents for every other exchangeable

> article, … the circumstance of the value of these two commodities being … little subject to fluctuation, doubtless exercised a decisive weight in the choice.
>
> The functions of coin require that the material of which it is made should nearly approach—it can never attain—the condition of fixity of value; for were the material so selected subject to great and sudden fluctuation in value, it is evident, that in employing it as the standard by which all the productions of human industry are to be appraised and exchanged, we should introduce into business transactions an element of uncertainty which would hamper and derange them.[2]

The simplest expression of stability is physical: gold doesn't rot. Over time, and many bad experiences, people found that gold and silver coinage should not be devalued or debased, but should contain the same amount of gold and silver over centuries—that the contained gold of the coinage should be stable. In time, people recognized that gold and silver—eventually, gold alone—had a much more stable value than other commodities. This was related to the very large stock of aboveground gold, compared to annual mining supply. Gold is rarely consumed or lost, but simply accumulates over time, in the form of bullion or artisanal works. Nearly all the gold ever mined remains in human possession. In an average year, the output of mines increased the total amount of gold in the world by only about 2%. Gold is insulated from the vagaries of mining production. Even a tenfold increase in world gold production in 1830-1855 did not produce any discernible change in the value of gold.

The use of gold as the basis of money allowed market prices, interest rates, profit margins and returns on capital to form without the distortion caused by variance in the value of money. Long term contracts could be formed—debt, rents, wages, pensions—with some certainty that the value of money in the future would be nearly the same as that of today. Over centuries and indeed millennia of experience, it was found that, whatever gold's deviation from this perfect ideal of Stable Money may be, it didn't matter very much. There was no need to look for something better.

Governments have always played games with their currencies. The very first coins, of Lydia in the seventh century B.C., were also the world's first example of coinage debasement—the coins did not contain the gold and silver indicated by their face value. Devaluing and overissuing currency as a means of government finance is as old as coinage itself. The idea of "managing the macroeconomy" via monetary manipulation is nearly as old, with examples as early as Greece in the sixth century B.C. (This experiment was not repeated.) The philosopher Plato, in the fourth century B.C., proposed what amounted to a floating fiat currency, likely made of iron. There is even some evidence that Dionysus of Syracuse invited Plato to put his theories into practice; it was not a success.

Over the years, there have been a multitude of propositions to operate monetary systems in some other fashion. But, none of these propositions aimed to create a more stable monetary unit than could be achieved by using gold. They all had other goals—government finance, employment, production, interest rates, trade advantages, debtor relief, and dozens of other objectives which remain familiar today, since they haven't changed much in the last several centuries. To achieve these ends, the currencies' values had to float.

One of the earliest expressions of these ideas was *The Key To Wealth: or, a New Way, for Improving Trade: Lawful, Easy, Safe, Effectual*, by William Potter, an Englishman. The "New Way" was simply the issuance of a floating fiat paper currency, the supply of which would be managed to produce the desired economic outcomes. Potter listed twenty-five supposed macroeconomic advantages of his scheme; they are virtually identical to what is found in economic texts today. The book was written in 1650.

These myriad propositions can be reduced to three basic outcomes: a currency that generally rises in value; a currency that might go up and down in value, and end up roughly where it began; or a currency that generally declines in value. The first is recessionary and favored by nobody. The second has some proponents, who argue that some sort of short-term gain can be had, but has generally been found to be counterproductive—if one is to start and end with the same currency value, it is best to just keep it stable throughout, rather than rising and falling, chaotically, unpredictably and disruptively, and end up in the same place. The third has been popular throughout history, as it offers many seeming short-term advantages.

"You can't devalue yourself to prosperity," it has long been said. If it was possible to become wealthy simply by jiggering the unit of account, someone would have done it. But there is no evidence of this.

The most successful countries have always embraced the principle of Stable Money.

Nevertheless, money manipulation doctrines, and general incompetence, reached a climax in 1971 that ruptured the world's long history of gold-based money, and began the era of floating fiat currencies that we live in today. But, even in our time of floating currency values, times are best when currencies float the least, whether against each other, or against the timeless monetary standard expressed by gold. In our error, we have proven, yet again, that the old maxims are still true.

"Money"

To understand what Stable Money means, we have to start by understanding what is meant by "stable," and what is meant by "money." On these topics, even among supposed experts, confusion is more common than clarity.

"Money" shall here mean: the universal item that is traded for goods and services, in monetary transactions. Thus, it has to change hands. This changing of hands constitutes a payment.

While economists remain confused on this topic, lawyers have no difficulty with it. Every legal contract has to have a definition of what constitutes a payment, or fulfillment of that contract. Every businessman knows whether or not he has been paid. This is defined in a "legal tender law." If a person owes a debt of "$10 million," and tenders a dozen bananas in payment claiming this to represent repayment of "$10 million," obviously there will be a (brief) legal dispute. Commonly today, legal tender is defined in law to be the currency that is issued and managed by a country's central bank. It could be something else. It could be a banknote issued by a private currency issuer, such as an independent commercial bank, which used to be common in the United States. In 1930, over 5,000 U.S. banks issued their own banknotes. The system still exists in a few locales today, including Hong Kong and Scotland. The contract itself could specify what constitutes its fulfillment: "gold clauses" were a common feature in commercial contracts before 1933. Obligations could be defined in euros, Bitcoins, or bananas. But, absent such exceptions, the legal tender is the currency issued by the central bank.

This central bank currency takes two forms. One is the banknotes and coins that we are all familiar with. We go to a store, acquire goods and services, and tender banknotes in payment. The banknotes change hands.

The other form of payment is the deposits of banks at the central bank, known as "bank reserves." Only member banks of the central bank clearing system can hold this form of money, so it is not familiar to most people. When Bank A makes a payment to Bank B, the central bank reduces Bank A's deposit account at the central bank by the amount of the payment, and increases Bank B's account. The effect is much the same as if Bank A delivered a briefcase of banknotes to Bank B. A member bank may, at any time, swap bank reserves for banknotes, or banknotes for bank reserves, with the central bank. Banknotes and bank reserves (central bank deposits) are not two separate forms of currency, but more like two different denominations, like one-dollar bills and ten-dollar bills, which are also exchangeable on demand. Together, they make up what is known as "base money," or the "monetary base," the entirety of which is recorded on the liabilities side of the central bank's balance sheet.

These are the only two forms of payment in common monetary systems today.

People often apply the term "money" to a wide variety of things, especially bank deposits such as checking accounts. It seems to be possible to make a payment using a written check, a debit card, a credit card, or other such instruments. But, all of these ultimately result in one bank paying another, using their bank reserves at the central bank.

Let's say that you have a checking account at Bank A. This is actually a loan to the bank, callable on demand, and is recorded as such on the liabilities side of the bank's balance sheet. (When banks make deposits in other banks, it is called "overnight lending.") If you use a check to make a payment, the payee does not receive a checking account at Bank A. The checking account does not change hands. Rather, Bank A pays the payee's bank, Bank B, using bank reserves at the central bank. (Checking accounts do occasionally change hands, perhaps after a divorce, or the execution of a will, or a merger or acquisition of corporations. This is, as should be obvious, very different than a monetary payment.)[3]

We could imagine an economy where all monetary payments are made with gold coins. Or, consider a country that uses a foreign currency, like dollarized Panama or El Salvador. Nothing the banking system does, including the expansion and contraction of lending, or the expansion and contraction of money-like forms of credit like deposits or money-market funds, can have any influence on the monetary unit itself. These changes in credit might have broader economic effects, but the money itself is independent of banking system activity.

With this in mind, money becomes simple and easy to understand. Today, it is issued and managed wholly by central banks, and has only two forms, banknotes and bank reserves, both of them part of the central bank's balance sheet. This is a very different mental picture than one in which "money" includes checkable bank deposits, and an array of bank-deposit-like instruments such as money market funds, repurchase agreements, savings accounts and time deposits. People disagree on what money even consists of, or how much of it there is (the "money supply"). Some economists once defined thirteen different kinds of "money"; others, naturally, disagreed with this categorization. It seems as if money is not subject to any control, but emerges from a bewildering complexity of transactions by a multitude of banks and other financial institutions, all of them acting independently without any coordination or plan. Then, one must somehow relate this seething mass of mystifying complexity to foreign exchange rates, interest rates, inflation rates, economic growth, credit expansion, or unemployment. This cannot be done, since it is based on an error to begin with. The result is that people collapse into impotence, unable to make much sense of any of it, and defer to central bankers to, one hopes, not make too many mistakes. Central bankers, who know no better, make mistakes anyway, and then attempt to rationalize this away with a soothing stream of econobabble. This is farce; but it passes for serious discussion today.

"Stable"

"Stable" here means: money of stable value. The simplest expression, in history, is a coin that contains an unchanging quantity of gold or silver. This is of course rare today, but people seem to have an intuitive understanding of bullion coinage, which helps to illustrate broader principles.

If a "$10" coin has 10 grams of gold, and then, after a debasement, the "$10" coin contains 5 grams of gold, we can see that the contained gold of the coin has been reduced by half. Usually, this would mean that the market value of the 5-gram coin would also be half of that of the 10-gram coin, and that the value of "$10" would also be cut in half as a result, since nobody would use a 10-gram coin to make a payment of "$10" if they could use a 5-gram coin instead.

On the foreign exchange market, if the U.S. "ten dollar" and Mexican "ten peso" coins both had 10 grams of gold, they would be worth the same. The foreign exchange rate would be 1:1. If the gold content of the "ten peso" coins were then reduced to 5 grams of gold, the market value of the peso would fall to only half that of a dollar, and the exchange rate would go to 1:2.

Note that the "domestic" and "international" value of coinage, in these examples, are the same. The market value of a 10-gram gold coin is effectively the same throughout the world. A 10-gram coin that is debased to 5 grams loses half its value on the "international" foreign exchange market, and also "domestically." This is true today as well: the value of a $20 banknote, or $20 of bank reserves held at the central bank, is the same everywhere. If it was not the same everywhere, there would be arbitrage opportunities, which apparently do not exist. Thus, the changes in value of the $20, that are expressed by the foreign exchange market, represent the changes in value that are also taking place for the $20 bills in your pocket. If you took the banknotes in your pocket to a small-scale foreign exchange dealer that deals in banknotes, such as is common in airports or areas favored by tourists, you would see that the changes in foreign exchange value really do apply to the banknotes in your pocket. In actual practice, the "dollars" traded in the interbank foreign exchange market are bank reserves held at the central bank. These are the same bank reserves that are used when you make a payment with a debit card or credit card. The impression that a currency has two values, a "domestic" value and an "international" value, arises from the fact that domestic prices do not change immediately to reflect changes in currency value that are indicated in foreign exchange markets. Nevertheless, currencies only have one value.

For over 2600 years, humans suffered the problems that ensue when governments changed the amount of gold or silver in their coins. The desirability of "stable money" is deeply ingrained. Thus, it becomes useful for anyone promoting any sort of monetary quackery to describe it as some form of "stability." Some people propose stability—not of value—but of some quantity of "money" (of some arbitrary definition), or some stable growth rate of some measure of "money." Others promote a system that aims to produce a stable growth rate of nominal GDP, or some measured price index, or stability of short-term interest rates, or to maintain a stable unemployment rate—various forms of "economic stability."

All of these proposals, to attain their ends, must also produce a currency whose value changes—maybe, a lot. Thus, all these claims of "stability" are, actually, an anathema to Stable Money.

"Stable" here means stable value; this value is expressed in the foreign exchange market; and the changes expressed in the foreign exchange market also apply to all currency, everywhere. Despite all the confusion of economists, most governments have found that, indeed, Stable Money is desirable. More than half of all governments explicitly "anchor" the value of their currencies to some external standard, most commonly a major international currency like the dollar or euro—in other words, they have fixed exchange rates. (Table 3.1) Some use a "composite" currency basket, such as Singapore. Of the remainder, many have a "stabilized" arrangement, in which exchange rates are not fixed, but are managed in reference to another currency. (The Chinese yuan, for example, is allowed to meander somewhat against its U.S. dollar benchmark.) Only 26.2% of currencies worldwide are considered "floating" by the International Monetary Fund, but even among these—including Britain, Japan, Canada, South Korea and New Zealand—most governments aim to keep their floating currencies in an informal trading band with the major international currencies. Despite notional independence, if there is a 10% or 20% move of the British pound or Japanese yen against the U.S. dollar, many discussions are held about what to do about it.

By linking the domestic currency to a major international currency such as the dollar or euro, governments achieve two goals. First, small independently-floating currencies have been quite difficult to manage properly, and have produced an endless series of currency blowups, or long periods of chronic decline, especially since 1970. The major international currencies have been far more reliable—that is, closer to the ideal of Stable Money, even if they too are floating currencies. There does not seem to be much advantage to be gained, in having an independent currency, and many risks and difficulties involved. Second, a fixed exchange rate with trading partners vastly simplifies all cross-border business and investment. Smaller countries are more deeply enmeshed in trade and investment with the rest of the world, simply because they are smaller. Whatever they do not produce domestically must be obtained in trade; consequently, they must sell their own production to foreigners. Floating exchange rates just make all of this more difficult. The small countries of Europe have always been tightly interlinked, which is one reason why they abandoned independently-floating currencies and use the shared euro currency.

	Number of countries	*Percent of total*
Anchored	102	52.3%
U.S. dollar bloc	40	20.5%
Euro bloc	44	22.6%
Composite	9	4.6%
Other	9	4.6%
Stabilized	42	21.5%
Floating	51	26.2%
Total	194	100%

Table 3.1: Exchange Arrangements, 2016[4]

When a currency declines in value, a series of distortions of the economy follow. One of the most elementary distortions is that prices tend to rise, as markets naturally accommodate the change in the value of the unit in which prices are denominated. In 1994-95, the value of the Mexican peso fell dramatically against the U.S. dollar. (Figure 3.1)

The bulk of the devaluation was complete by the beginning of 1995. Nominal prices in Mexico immediately began to adjust higher, in response to the decline in the value of the peso. (Figure 3.2)

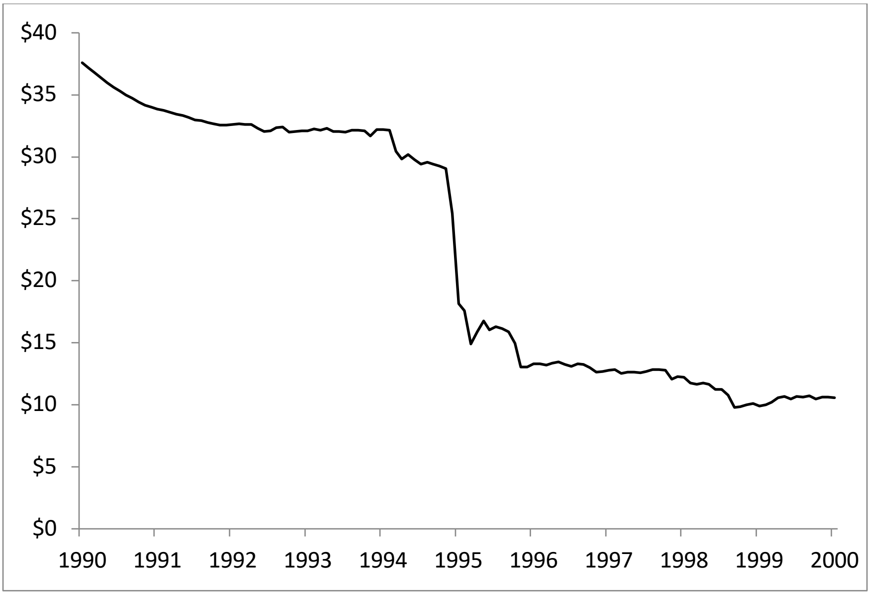

Figure 3.1: Mexico: Value of 100 Pesos in U.S. Dollars, 1990-2000

Note that the changes in prices followed the change in currency value. It is not the other way around—that prices change first, and currency value adjusts later to reflect this. Nor is it concurrent. This process of price adjustment, as markets accommodate the new currency value, takes place over several years. The CPI was rising at an elevated pace in Mexico for five years after the devaluation. The manner in which domestic prices adjust to changes in currency value is different from one economy to the next, and is dependent on many unique factors within the economy. Mexico had already suffered a dramatic hyperinflationary period during the 1980s, so people in Mexico were well accustomed to all that needs to be done in an environment of collapsing currency value. Their habits and institutions were conditioned by that experience, and the adjustment process happened relatively quickly, with the CPI rising by over 50% in the space of twelve months. A developed country, where such currency debauchery is not within living memory, and where institutions are established upon an assumption of tolerably stable currency value, can have a much longer adjustment process, perhaps stretching over thirty years, roughly the length of the longest fixed-price contracts in the economy, such as government or corporate bonds paying a fixed yield, mortgages, pensions, annuities, or leases.

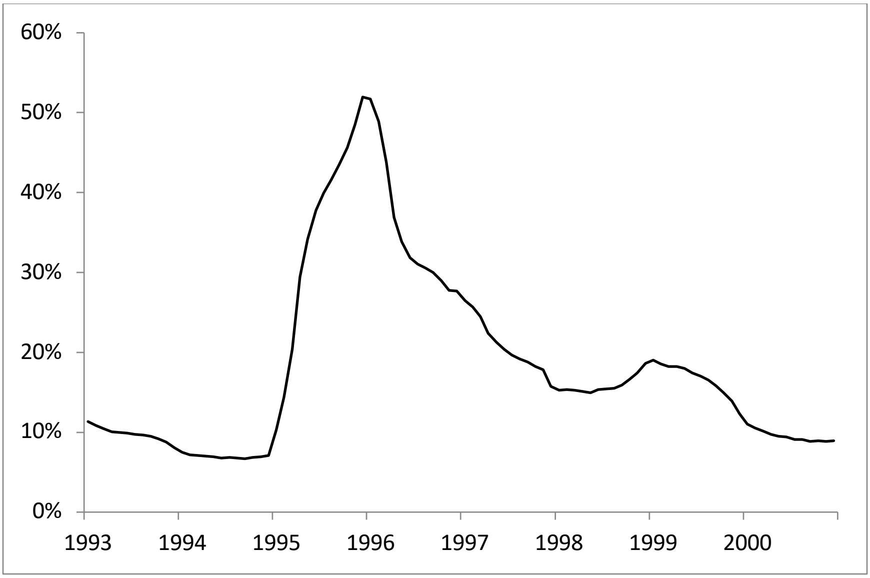

Figure 3.2: Mexico: Percentage Change In CPI, From A Year Earlier, 1993-2000

A store with a long-term lease, that pays rent far below market rates due to a prior decline in currency value, can take advantage of this artificial reduction in its expenses by offering a more competitive price. When the lease is renewed at higher rents, the higher costs must be passed on to customers, and prices rise. A corporation that finances a factory expansion with debt finds that its debt burden is artificially lightened by currency decline. Its costs of interest and principal have been inflated away, allowing it to charge lower prices. When the equipment at the factory must be replaced, the higher current costs of equipment, debt service and depreciation must be passed on to customers, and prices rise. The response of price adjustment, to a prior decline in currency value, depends on contract length, and other such structural factors unique to each economy.

A falling currency value tends to make an economy "overheat." As the value of a currency declines, the real value of nominal prices also declines. Demand for goods and services thus increases, pushing prices higher. The overall effect can be of an "artificial boom." Naturally, an "artificial boom," despite being artificial and ultimately destructive and impoverishing, seems attractive; and this is one reason for the popularity of "soft money" doctrines down through the centuries. But, the reaction of an economy to a decline in currency value is dependent on the particulars of the economy. If an economy has many liabilities denominated in foreign currencies, which is common in smaller countries, the effect of a decline in domestic currency value is to make those foreign-currency debts unpayable. Mass bankruptcy results.

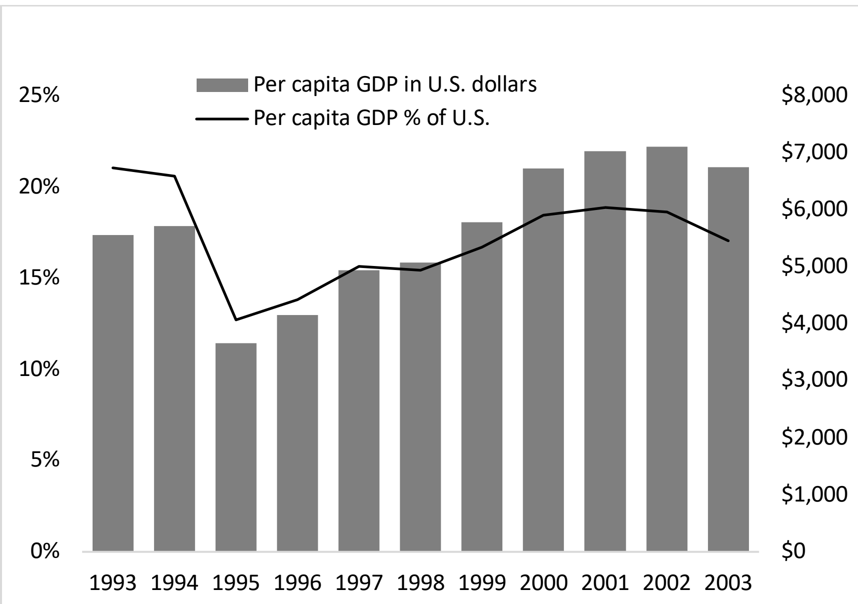

Figure 3.3: Mexico: Per Capita GDP In U.S. Dollars, 1993-2016

In simple, practical terms, the value of wages in Mexico declined, as a result of the decline in the value of the peso. Nominal wages soon rose to compensate, but it took five years for Mexico's per-capita GDP (in nominal dollar terms) to attain its pre-devaluation level. Expressed as a percentage of U.S. per-capita GDP, Mexico remained below its pre-devaluation level over twenty years later. You can't make people richer by cutting the value of their wages. Owners of export-related industries, however, can be made richer by this process, and are always eager to convince their friends in government of the benefits of currency devaluation to the Mexican people as a whole.

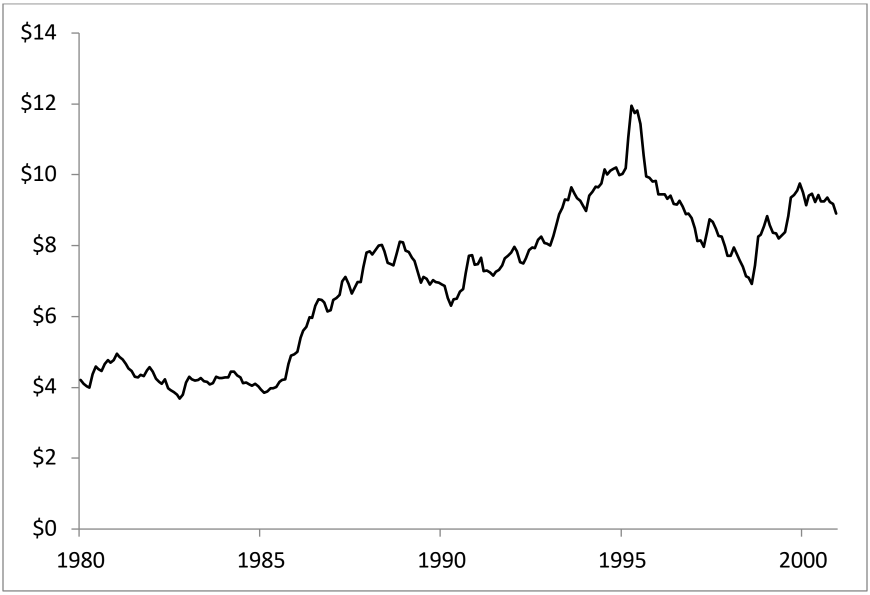

Figure 3.4: Japan: Value of 1000 Yen In U.S. Dollars, 1980-2000

Examples of a dramatic rise in currency value are much rarer. One is from Japan. Between 1985 and 1995, the value of the Japanese yen tripled vs. the U.S. dollar. (Figure 3.4) This rise in currency value was reflected in a depressed CPI in Japan vs. the United States after 1985, going negative several times. A rising currency value tends to make an economy "underheat." As the value of the currency rises, the real value of nominal prices becomes too high, and a decline in sales results. Prices are cut to move the merchandise; but this eventually requires lower production costs, and thus lower wages. The real value of debt liabilities also increases, leading to increased default and bankruptcy, and consequently, a bad debt crisis at banks. The overall effect is recessionary, an "artificial bust."

In any economy, with a currency of stable value, some prices will be going up, and some prices will be going down. If the economy is healthy and prosperous, prices for manufactured goods will generally be declining, while wages, rents, and prices for services will generally be rising. The overall effect, as it is commonly measured by statistical agencies, is a modest rise in a Consumer Price Index. In a deteriorating economy, prices will generally decline, even when the value of the currency does not change.

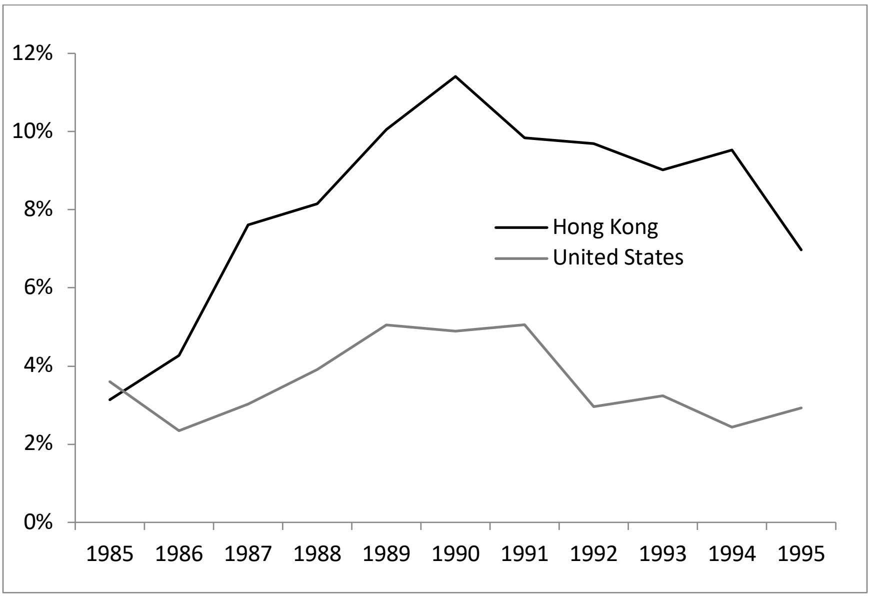

Figure 3.5: Hong Kong and U.S.:
Consumer Price Index, 1985-1995
Percentage change from a year earlier

These effects can be seen by comparing the measured CPI of countries that effectively use the same currency but have different economic conditions. Between 1985 and 1995, the Hong Kong dollar was linked to the U.S. dollar using a highly reliable currency board. However, growth in Hong Kong was much higher. This was expressed as a much higher rate of growth in Hong Kong's CPI, compared to the U.S., during this period. This higher CPI was not a monetary effect, but related to the higher growth rate. (Figure 3.5)

Since 2000, both Germany and Greece have shared the euro currency. At first, this was an advantage particularly for Greece, which no longer had the problems of the unreliable drachma currency that had preceded euro adoption. After 2010, a crisis in Greece led to a dramatically worse economy in Greece, compared to Germany. A lower CPI was the result. This was also not a monetary effect, but was related to overall economic conditions. (Figure 3.6)

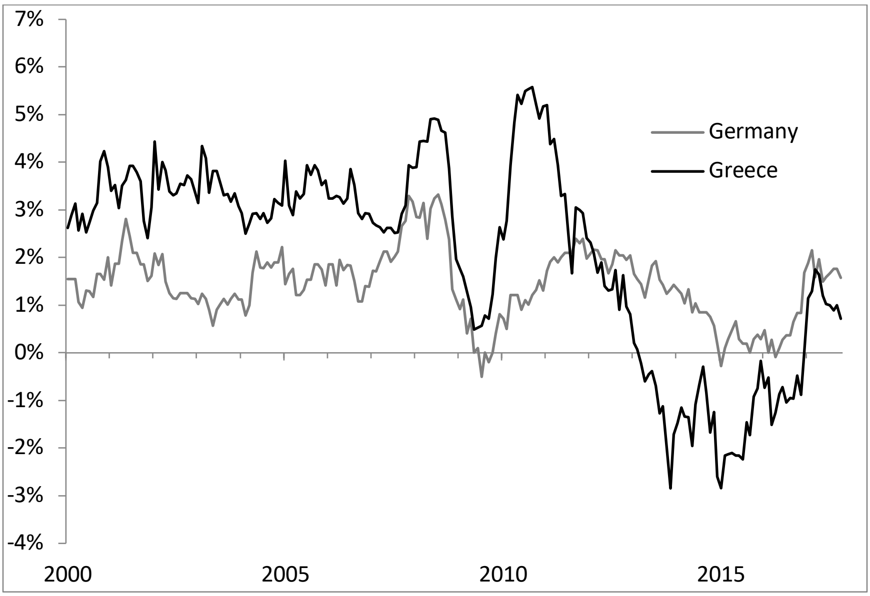

Figure 3.6: Germany and Greece: Consumer Price Index, 2000-2017
Percentage change from a year earlier

Thus, currency value is very different than "purchasing power," as expressed by a consumer price index or some other price index, such as a commodity price index. In practice, "purchasing power" varies dramatically depending on where one is located. The "purchasing power" of a dollar in Manhattan is perhaps half of what it is a subway ride away in eastern Queens, but the value of the dollar is the same in both places.

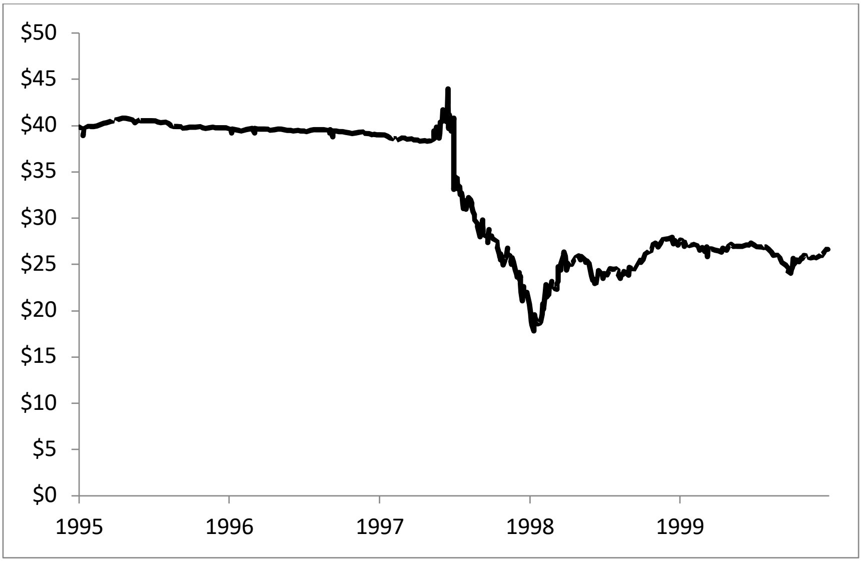

**Figure 3.7: Thailand:
Value of 1000 Baht In U.S. Dollars, 1995-1999**

From this, it can be seen that various CPI targeting proposals, or other methods based on "price stability" or "purchasing power," cannot produce a stable currency value.[A] "Price stability" is not a goal or expected outcome of a Stable Money policy. Rather, the goal of Stable Money is to allow prices to form freely without distortion by monetary effects. The CPI in Japan rose by 70% (5.5% per year annualized) during the high-growth 1960s, but the value of the yen was unchanged at ¥360/dollar and ¥12,600/oz. of gold. These price

[A] Between 2000 and 2010, the U.S. annualized rate of CPI increase was 2.5%, while value of the dollar vs. gold fell from $279/oz. to $1225/oz., accompanied by a similar fall against commodities and foreign currencies. Many investors concluded that the CPI figures were so heavily massaged as to be essentially falsified. It appears that government statistical agencies have already adopted "CPI targeting."

increases were simply a benign effect of growth. With fifty years of hindsight, nobody has identified any problem caused by them.

The value of a currency does not have a close relation with "money supply" by any definition; or, more specifically, the monetary base. Certainly, the value can be affected by changes in supply, but the relationship is highly nonlinear. After a long period in which the value of the baht was stable against the dollar, in 1997 the Thai baht suffered a collapse. (Figure 3.7)

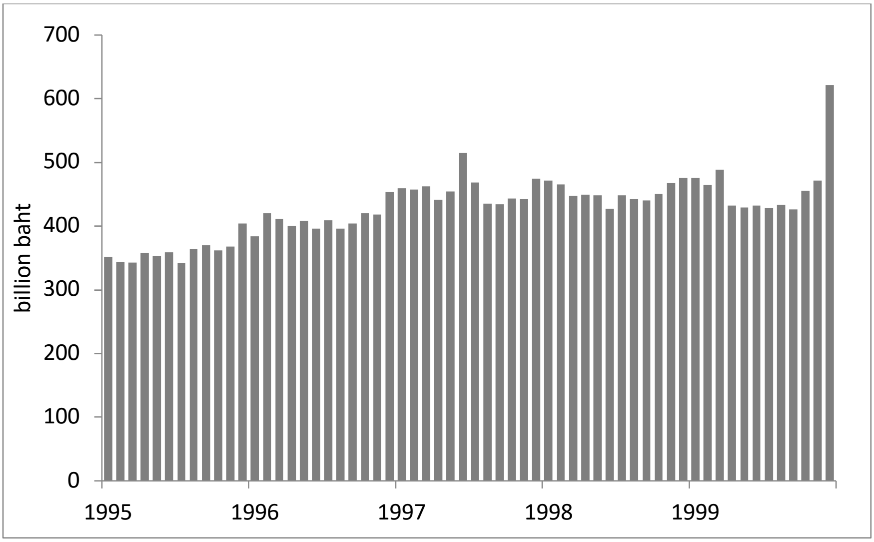

Figure 3.8: Thailand: Monetary Base, 1995-1999

Although the value of the baht fell by roughly 50%, the supply of baht—the monetary base—was largely unchanged during this entire episode. (Figure 3.8) This was completely contrary to any expectations that the value of the currency would be somehow proportionate to the supply; that, for example, a doubling of supply would cause the value to fall by half, or any other simple linear relationship of that sort. These theories have no relationship to the real world, and amount to simplistic fantasy. The baht fell in value because of a decline in demand for baht; demand fell because the baht was falling in value, without a coherent central bank response. Macroeconomic effects follow from changes in currency value, not changes in quantity, except to the degree that those changes in quantity cause changes in value.

A similar result happened in the United States in 1933. That year, the dollar was devalued from the $20.67/oz. parity that had prevailed since 1834, to the $35/oz. parity that remained until 1971. However, during this period of depreciation, the monetary base hardly changed. (Figure 3.9)

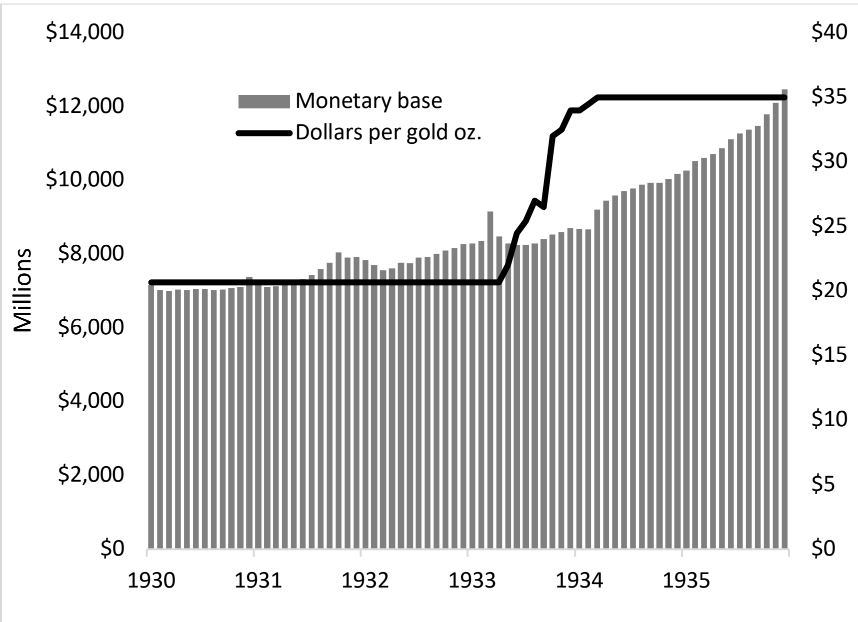

Figure 3.9: U.S.: Monetary Base and Dollars Per Gold Oz., 1930-1935

Thus, any expectations that "currency stability," and consequently, macroeconomic stability, can be achieved by having an unchanging monetary base, or one that grows by an unchanging rate each year—or any other quantitative measure of this sort—are wholly incorrect. This has been abundantly demonstrated by cryptocurrencies such as Bitcoin which, despite the fact that their supply (coins in existence) grows by a small amount each year, have had wildly variable market values. In essence, the value of the currency reflects not only supply, but also demand. Demand can be highly variable, and responds to changes in currency value, interest rates, the stated intentions of politicians and central bankers, and most any other factor that one could name.

Foreign exchange rates can only express the relative value of one currency with another. When the Japanese yen falls against the dollar, we do not know if the value of the dollar has risen, or the value of the yen has fallen, or whether there was some combination of the two. It is possible that the value of both the dollar and yen have fallen, but the yen has fallen more; or that the value of both has risen, but the yen has risen less. In the years since the yen began to float against the dollar in 1971, all of these scenarios have happened.

From this is implied the idea of an “absolute value” of a currency. We know that currencies are constantly changing in value, because we can see their relative values (exchange rates) in constant flux. If they are rising and falling in value relative to one another, they must be also rising and falling in value compared to some absolute ideal of Stable Value. This is easier to perceive in the example of the Mexican peso’s decline in 1994. We can declare, with confidence, that the value of the peso fell; and that the value of the dollar did not rise, by any significant amount. We can observe that the expected effects of a currency decline (a rising CPI, among many symptoms) were abundantly apparent in Mexico, while the expected effects of a currency rise were nowhere apparent in the United States. There is no possible retreat here into hand-waving and relativism, as might be the case for some 10% drift between the dollar and the euro. Thus, although the principle of “absolute value” can be rather abstract, the effects of changes in value, against this “absolute” ideal, are tangible and immediate. The value of the peso fell, in both relative and absolute terms.

The notion of “absolute value” tends to make people fidgety who have not been trained with such terminology, but virtually everyone who thinks about money has some idea of it. It is so useful, and so inherent in the understanding of monetary topics, that people naturally have the urge to incorrectly assign this abstract ideal to some real-world indicator. Often, it is assigned to the domestic currency itself. When the price of oil rises from $50 a barrel to $80, it is assumed that the dollar serves as an unchanging standard of value, and that the rise in nominal prices is wholly due to a rise in the real value of oil, caused by changes in the supply/demand characteristics for oil. Yet, the dollar is explicitly a currency of floating value; and we can see, from the foreign exchange market for example, that the value of the dollar does indeed float, along with the values of other currencies that also float in a similar fashion. The rise in the nominal price of oil may be the market's reaction to a change in the value of the dollar.

The desire for money to serve the role of a stable measure of value is so inherent to the concept of "money" itself that people will often assume that a domestic currency is stable in value, even in the midst of a roaring hyperinflation. Historians marvel at how, during the hyperinflation of the early 1920s, Germans assumed that real market values of goods and services were going up, rather than that the value of their currency was going down. Americans were not much better: at the time, the "inflation" of the 1970s was commonly blamed on everything but a decline in monetary value. The thirteen-fold increase in the price of a barrel of oil between 1969 and 1980 was assumed to have something to do with a shortage of oil, when it was really caused by a decline in the value of the dollar—and not only simple common people believed this, but also the U.S.'s top economic experts, and President Jimmy Carter himself, who established the U.S. Department of Energy in 1977 to solve the problems caused by the Federal Reserve. In the sixteenth century, Nicolaus Copernicus (better known for his astronomical insights, he also served as a monetary advisor to the Prussian government) was amazed that people assumed that coinage was stable in value—and that rising prices reflected the supply and demand of commodities—even when they could see with their own eyes that the new coins contained less gold and silver than the old.

The role of a measure of "stable value" can be assigned to a major international currency. In the case of the Mexican peso in 1994, this was largely correct—the dollar did represent an approximation of "absolute value" during that episode, and the change in the peso/dollar rate was almost entirely a matter of a change in peso value. But certainly the dollar's value itself does indeed vary.

It can be assigned to the Consumer Price Index, or some other measure of "purchasing power"; but this is a fallacy, as we have already seen. It could be assigned to a commodity basket, but the values of commodities vary from year to year due to their own supply/demand factors (sometimes a rise in the price of oil from $50 to $80 per barrel really is all about oil), tend to be heavily affected by shared global disruptions such as wars and recessions, and also have longer-term secular trends. The U.S. yield per acre of wheat has risen by about three times since 1950, and the real value of wheat has apparently declined during that period by a similar degree.

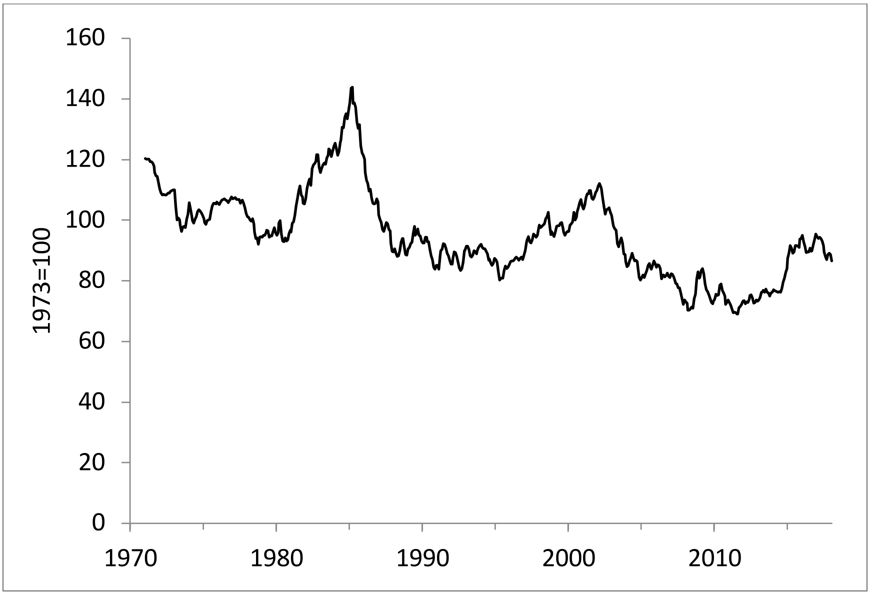

Figure 3.10: U.S.: Dollar Index Vs. Major Currencies, 1971-2017

It is possible for many currencies to rise or fall together. This happens today when one currency is explicitly linked to another. A fall in the value of all currencies would not be particularly apparent in the foreign exchange market. There would be a fall in absolute value, but little change in relative values. This happened during the 1970s. All currencies declined in value, although their exchange rates (as expressed by a U.S. dollar index vs. major currencies) did not change to a large degree. The result was the usual phenomena that we see when an individual currency declines in value—a general rise in prices, as markets accommodate and adjust to the new currency value, along with many other related symptoms such as rising interest rates.

During the 1970s, this monetary "inflation" interacted with the existing tax systems to produce an effective rise in tax rates. As nominal wages rose, "bracket creep" pushed people into higher and higher tax brackets, which were not then indexed to the CPI. Capital gains taxes were based on nominal increases, not changes in real value. Corporate depreciation was based on prior purchase prices, not current replacement costs. The result was a stagflationary disaster: High Taxes and Unstable Money.

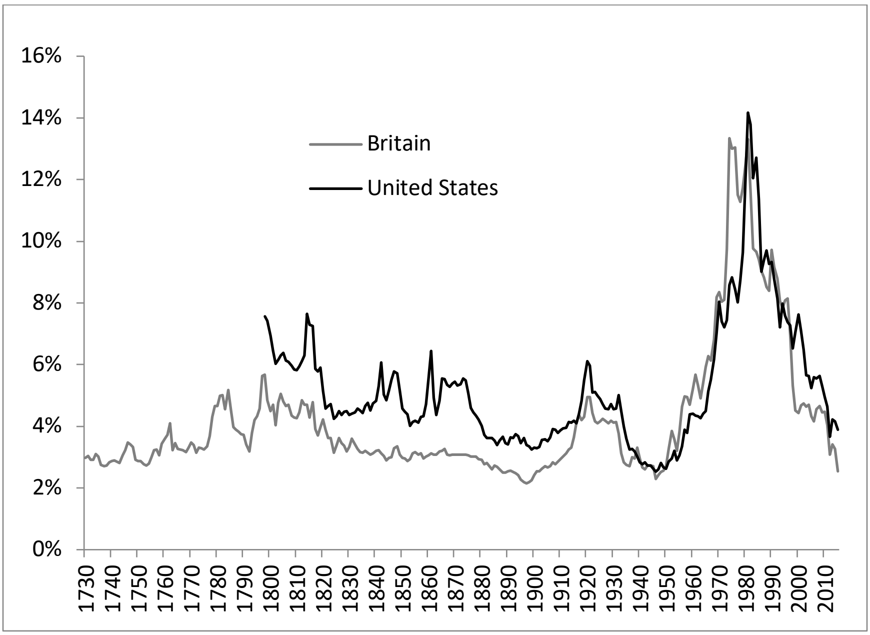

Figure 3.11: U.S. and Britain: Yield on Long-Term Government Bond, 1730-2016

Unfortunately, there is no way of evaluating this "absolute standard of stable value" in a precise, scientific sort of manner, as is possible for other weights and measures. And yet, the consequences of substantial variations in currency value—monetary "inflation" and "deflation"—are real-world phenomenon that are easily perceived. If a currency falls in value enough, familiar "inflationary" effects will gradually intensify, as markets accommodate the new currency value. If a currency rises in value enough, familiar "deflationary" effects will gradually intensify. Between these two must lie a neutral midpoint, where prices are not affected by either "inflationary" or "deflationary" monetary forces, but reflect the supply/demand characteristics of individual goods and services themselves—Stable Money.

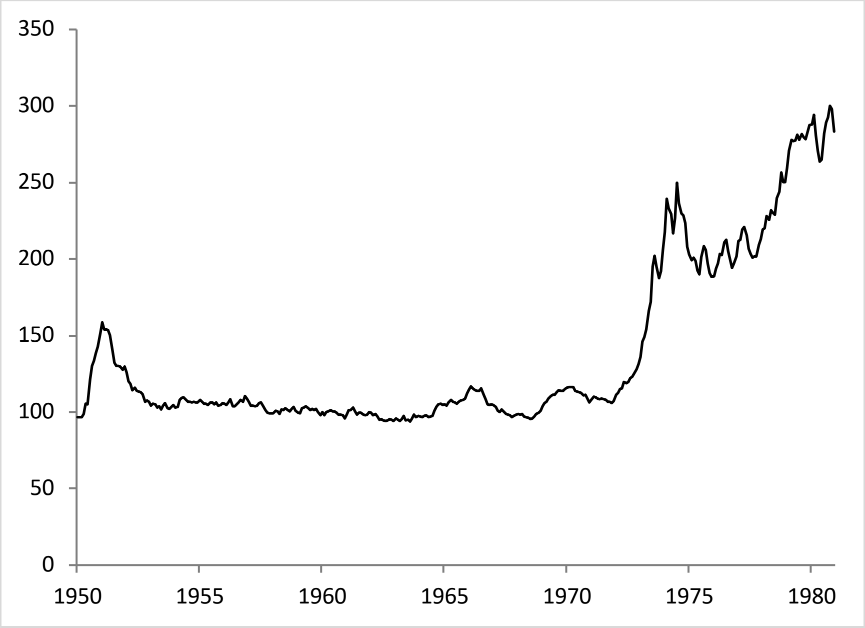

Figure 3.12: U.S.: CRB Commodity Index, 1950-1980

Gold has long been recognized as the best real-world approximation of this "standard of stable value," an unchanging measuring-rod against which the value of other things can be evaluated. The need for such an item is, as we have seen, inherent in the market system itself. Even those who claim that gold has varied in value, by some uncomfortable degree, must nevertheless have some notion of gold's value varying *compared to what?* and: *by what magnitude*?

The information contained in prices, interest rates, profit margins and returns on capital must be transmitted among economic participants without being corrupted by noise in the transmission mechanism itself—money. In past centuries, this was expressed by comparing changes in the value of money to changes in the length of the meter, or weight of the kilogram, or duration of the minute—an analogy that neatly describes the disruption of the market economy due to changes in monetary value. Here again is Nicolaus Copernicus:

> Coinage is imprinted gold and silver, by which the prices of things bought and sold are reckoned. … It is therefore a measure of values. A measure, however, must always preserve a fixed and constant standard. Otherwise, public order is necessarily disturbed, with buyers and sellers being cheated in many ways, just as if the yard, bushel or pound did not maintain an invariable magnitude.[5]

John Maynard Keynes described in 1923:

> We leave Saving to the private investor, and we encourage him to place his savings mainly in titles to money. We leave the responsibility for setting Production in motion to the business man, who is mainly influenced by the profits which he expects to accrue to himself in terms of money. Those who are not in favour of drastic changes in the existing organization of society believe that these arrangements, being in accord with human nature, have great advantages. But they cannot work properly if the money, which they assume as a stable measuring-rod, is undependable. Unemployment, the precarious life of the worker, the disappointment of expectation, the sudden loss of savings, the excessive windfalls to individuals, the speculator, the profiteer—all proceed, in large measure, from the instability of the standard of value.[6]

More recently, the idea was explored in ingenious detail by George Gilder in *The Scandal of Money* (2016), using contemporary principles of information theory.

> This monetary coup, changing money from the medium of economic activity to the message itself, has thwarted economic growth, punished savers, and rewarded prestidigitory finance over innovation. Casting a shroud of uncertainty over all valuation, monetary manipulations shorten the time horizons of the economy. In information theory, the dominant science of our age, when a medium sends a message of its own—static on the line—it's called

> noise. Noise in the channel reduces the channel's capacity to transmit accurate information.[7]

Gold itself, undoubtedly, varies somewhat against this perfect ideal of absolute stability of value. Perfection is not possible in human affairs. However, on reviewing centuries of experience, we can conclude that it didn't vary to such a degree as to cause any great problems. Economies using currencies whose values were linked to gold have not exhibited dramatic symptoms of changes in currency value. No better system has ever been found. The need for a better system has, arguably, never arisen. Even today, a better approximation of the ideal of Stable Value does not exist even as a proposal; and certainly, no other system has stood the test of centuries of real-world experience.

If gold's value varied to some intolerable degree, someone would have looked for a better solution. The countries that adopted a better solution would have risen above their peers. But history shows no evidence of this. The countries that adopted some other solution—whether the periodic coinage debasements of France or Prussia, or the fiat paper money systems that China used for four centuries, or the commodity-based and fiat paper systems that the American Colonies used for a century—found that they ran into trouble. Those countries that maintained unchanging gold and silver parities rose to the top.

If some human-created statistical concoction could be made that might provide a better measure of Stable Value than gold (there is, as yet, no evidence of this), we have to ask whether any human-created institution could possibly administer it. Benjamin Bernanke was known as an inflation-targeting advocate until, upon becoming Chairman of the Federal Reserve in 2006, he largely abandoned such concerns. The European Central Bank has been explicitly ordered to focus solely upon "price stability," and yet, in 2012-2016, ECB head Mario Draghi thought it fit to drive long-term government bond yields to sustained negative values for the first time in human history. The track record of central banks in adhering to any principle of operation besides a fixed value target (a "price rule") is rather poor. Nevertheless, many governments have managed to anchor their currencies to some external benchmark, whether it be gold or the euro, and maintain these fixed parity values for long periods of time. The Athenian *drachma* was, with a few lapses, unchanged for six centuries. The Byzantine *solidus* maintained its original gold parity for over seven centuries. The British pound was (also with lapses) unchanged for four centuries, as was the Spanish silver dollar. The method has been proven to be not only conceptually sound—that is, it produces real-life positive results—but also politically robust: it is something that humans are actually capable of. President James Madison summed up nicely:

> The only adequate guarantee for the uniform and stable value of a paper currency is its convertibility into specie [gold]—the least fluctuating and the only universal currency.

Thus, the rational reason to use gold as a standard of value for a currency is to, as closely as possible, achieve a currency of stable value—a currency whose value does not go up and down, in the process causing all manner of distortions to the system of market prices, interest rates, profit margins and returns on capital, which guide and organize the market economy.

All major civilizations have used gold, or its adjunct silver, as the basis of their monetary systems from ancient times up to 1971. For a long time, the market value of silver was closely linked to gold, such that they served practically as two versions of the same thing, much as a one-dollar bill and a ten-dollar bill are two denominations of the same thing. (The original one-dollar U.S. coin, as defined in the Coinage Act of 1792, was made of silver, and the ten-dollar coin was made of gold.) In the 1870s, instability in the value of silver rendered it unusable as a standard of value alongside gold—known as "bimetallism"—which reduced the available options to gold alone.

All countries that used gold as the basis of their money—a gold standard system—effectively also had fixed exchange rates with each other, thus also eliminating all disruption due to floating exchange rates, and vastly simplifying cross-border trade and investment. Today, over forty countries link their currencies to the euro (or use the euro itself), thus forming a "euro bloc" of fixed exchange rates. The only significant difference between this "euro bloc" and the "gold bloc" of the past was the standard of value—in one case gold, in the other, the floating fiat euro.

The World Gold Standard System

The world has always used money based on gold and silver in some combination, the "gold/silver complex." The first pharaoh of Egypt, Menes, around 3000 B.C., made payments with standardized 14-gram gold ingots stamped with his name. In 1000 B.C., before the widespread use of standardized coinage, all of the ancient Mediterranean world—Egypt, Babylon, Crete—used gold and silver as high-level money and a unit of account. A thousand years later, in 1 A.D., little had changed. The money of the Roman Empire was based on gold and silver. So was the money of the Han Dynasty of China, whose vaults held more gold than those of Rome at its peak. In 1000 A.D., the Byzantine *solidus*, a gold coin that had remained unchanged since its creation in 312 A.D., was the premier monetary unit of Europe. The Arab *dinar* was a copy of the *solidus*; as were the gold coins in common use in India. Alongside these were silver coins—the Greek drachma, the Roman denarius, the British silver penny, the Arab dirham. Coinage had spread to the peripheries: Roman coins from the fourth century have been found in Japan. Roman coins from 270 B.C. have been found in Thailand, and hoards of seventh-century Persian coins were common in China. When the Spaniards conquered the Aztec and Inca empires, they were delighted to find that the princes of the New World also had vaults stockpiled with gold and silver. In the 1570s, Spain established a direct maritime link between Mexico and China. The Spanish silver dollar, made of silver mined in Bolivia and Mexico, became the regular silver coinage in China until the early twentieth century. In 1600 A.D., Europe was still using descendants of the *solidus*—the *florin*, the *ducat*, the *gulden*—alongside silver coinage including the British penny and shilling, and a variety of "dollar" coins including the German *thaler*, Dutch *daler*, and Spanish silver dollar.

The value of the U.S. dollar was defined in 1792 as 24.75 troy grains of pure gold, or 371.25 troy grains of pure silver. It was based on the Spanish silver dollar, and its equivalent in gold. As there are 480 grains in a troy oz., this translated into $19.39 per oz. of gold. A small revaluation within the bimetallic system in 1834 reduced the gold value of the dollar to 23.22 grains, or $20.67/oz., while the value in silver was unchanged. A major break in this policy took place during the Civil War, which was financed, in the Union, in part by the issuance of paper money ("greenbacks"). This resulted in a decline in the value of the dollar against its gold parity during wartime. After the war ended, the value of the dollar was raised back to its prewar gold parity, and the gold standard was resumed in 1879 at $20.67/oz. At this time, the dollar was effectively on a monometallic gold-only system, which was formalized in 1900.

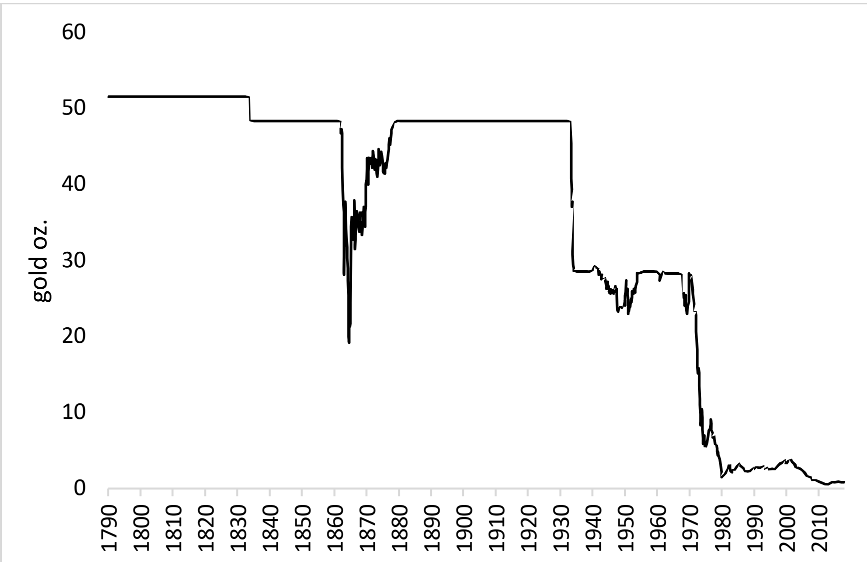

Figure 3.13: U.S.: Value of $1000 in gold oz., 1790-2017

World War I introduced another round of what amounted to printing-press finance during the U.S.'s brief participation in the war. The value of the dollar certainly declined during this time, but the degree of this decline was obscured by capital controls and the conditions of wartime. The dollar's value was again raised to its prewar parity soon after the war ended, and the gold standard effectively resumed in 1919, again at $20.67/oz. This standard held until a devaluation in 1933, to $35/oz. World War II introduced another round of moderate softness in dollar value, which was again resolved after the war, with the $35/oz. parity effectively reinstated in 1953. This gold parity for the dollar was maintained until 1971, when the present floating fiat era for the dollar began.

The monetary arrangements of the rest of the world mirrored those of the U.S. Britain, France and Germany all had reliable gold standard systems during the nineteenth century. The effect was a worldwide "gold bloc," in which exchange rates between currencies were effectively fixed. Other countries were less reliable, but nevertheless adhered to the principle of gold-based money, with occasional lapses. This "Classical gold standard era" was considered a great triumph by those living at the time.

World War I threw all of this into turmoil, as currencies floated everywhere. The world gold standard system was reconstructed after 1925, but this period was brief, coming to an effective end in 1931. Many countries devalued their currencies during the difficulties of the 1930s, and many currencies effectively floated. This was problematic, and by the end of the decade, governments were again moving back toward a world gold standard system, with fixed exchange rates. World War II intervened, but even before the end of hostilities, at the Bretton Woods Agreement of 1944, the world gold standard system was again reconstructed. Currencies worldwide were again linked to gold, and exchange rates were fixed. Although many currencies had their individual issues, nevertheless Stable Money was the organizing principle—stability of one currency against the other (fixed exchange rates), and the stability of all vs. gold. This was maintained until 1971, when the decline of the dollar vs. its $35/oz. gold parity effectively destroyed the entire system.

The Floating Fiat Era

The floating fiat era that began in 1971 was never intended. The Bretton Woods gold standard system, with the dollar's value fixed at $35/oz. of gold and other currencies fixed to the dollar, had produced a wonderful bounty during the 1950s and 1960s—the best economic conditions worldwide in the century since 1914. There was no evidence, in the late 1960s, that gold was somehow failing its role as a stable standard of value; nor was there any Great Depression-like disaster that might cause governments to devalue their currencies in desperation. The international consensus, in 1971, was that the Bretton Woods gold standard system should continue.

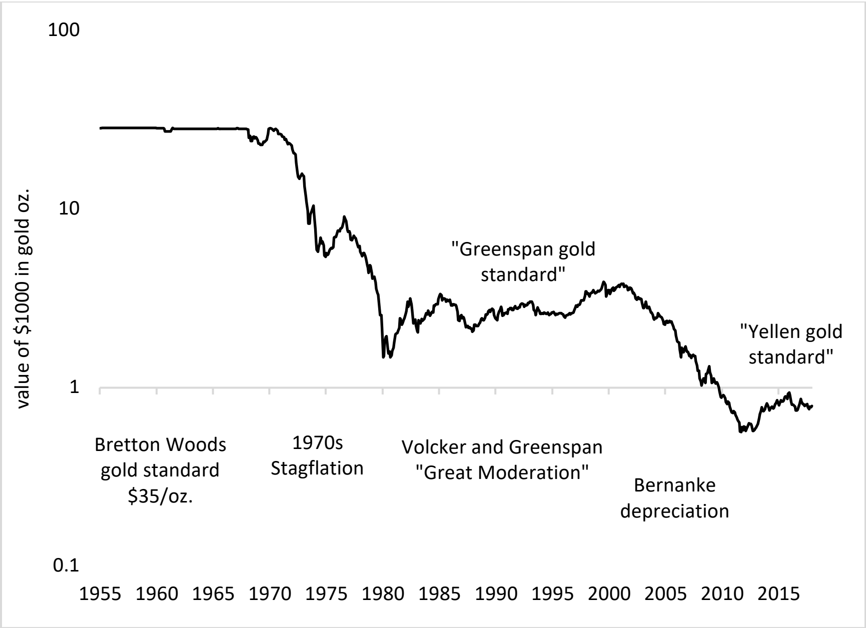

Figure 3.14: U.S.: Value of $1000 in gold oz., 1955-2017
logarithmic scale

The system failed because of an unresolved contradiction that was introduced at the Bretton Woods meeting itself, in 1944. People wanted to have their cake and eat it too: they wanted to have currencies whose values were linked to gold, and also attempt to manage the domestic macroeconomy using central bank currency and interest rate manipulation. The first goal implied the abandonment of all manipulative techniques. "Monetary policy" would consist simply of maintaining the value of the currency against its defined benchmark, using simple automatic systems much like a currency board today. The second goal implied a floating fiat currency. This inherent contradiction was nervously maintained by market intervention, combined with trade and capital controls. In their ignorance, governments could not figure out why the gold standard system had been placid and easy to maintain in the pre-1914 era, but endlessly problematic in their own time.

Figure 3.15: Japan: Value of 1000 Yen In U.S. Dollars, 1950-2016

Eventually, a crisis emerged. It was easy to resolve—governments simply had to give up their ambitions to manipulate the economy via currency distortion—but they were not only unwilling to do this, they did not even understand the contradiction to begin with, or what the alternative was. The Bretton Woods system disintegrated, and we live today among the rubble of that failure.

The result, in the 1970s, was a disastrous decline in currency value throughout the world. "Inflation" raged worldwide. (Figure 3.14)

This decline was halted in the early 1980s by Paul Volcker at the U.S. Federal Reserve. At the time, there was some discussion of returning the dollar to a gold standard system. Yet, the Bretton Woods system had crumbled because the knowledge of how to maintain such a system—or even the reasons for its use and existence—had been lost; and by 1980, this knowledge had not yet been adequately recovered. The value of the dollar had wild swings in the early 1980s, but it gradually stabilized against gold in a wide band around $350/oz., one tenth of its value during Bretton Woods.

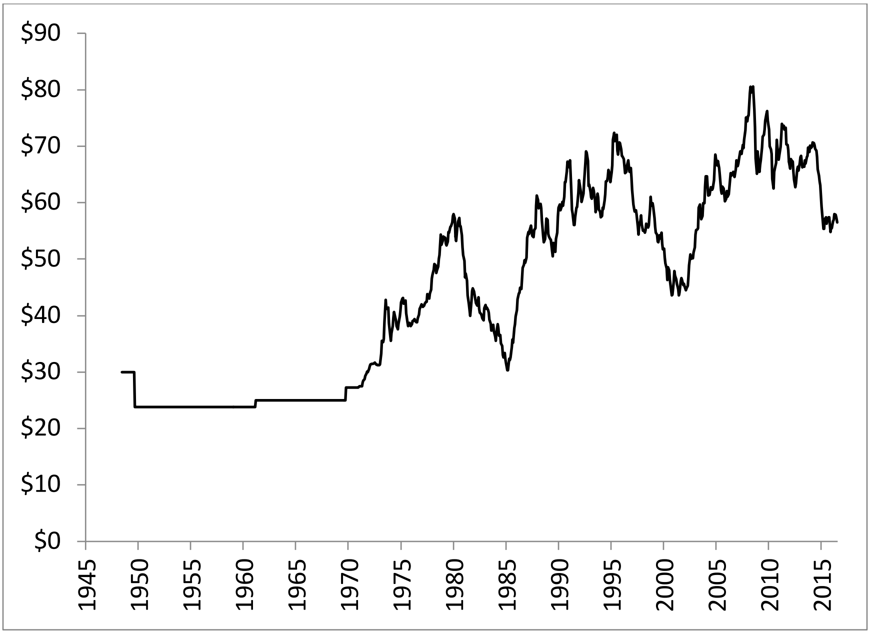

Figure 3.16: Germany: Value of 100 Marks In U.S. Dollars, 1948-2016

Volcker began in late 1979 with the "monetarist experiment," following the principles of economist Milton Friedman. After a period of frightening volatility—of dollar gold prices, foreign exchange rates, commodity prices, CPI inflation rates, GDP and interest rates—this was abandoned in 1982. Arthur Laffer recalled:

> In the early 1980s under gifted Federal Reserve chairman Paul Volcker (1979-87), the United States once again returned to a price rule, only this time the dollar wasn't pegged to gold. Following a meeting I had with Chairman Volcker in 1982, I cowrote an article for the editorial page of the *Wall Street Journal*. In this article Charles Kadlec and I outlined in detail Chairman Volcker's vision of a price rule, a vision that is as relevant today as it was in 1982. Volcker essentially said, "Look, I have no idea what prices are today. Or what

> inflation is today. And we won't have those data for months. But I do know exactly what the spot prices of commodities are."
>
> In short, what Chairman Volcker did was to base monetary policy on the secular pattern of spot commodity prices (the market price of a commodity for current delivery). … It's very similar to a gold standard, except that Chairman Volcker was using twenty-five commodities instead of just one. Every quarter from 1982 on, monetary policy has been guided by the spot price of a collection of commodities, save for our present period [2005-2010].[8]

Alan Greenspan took over from Volcker at the Federal Reserve in 1987, and managed to stabilize the dollar's value against gold still further. The effect was a sort of "dirty gold standard," and the result was that Greenspan was showered with accolades, including a reverential nickname—"the Maestro"—and a knighthood. In the 1960s, Greenspan had been part of a small circle of gold standard advocates led by Ayn Rand. In 1981, he wrote an op-ed for the *Wall Street Journal* in support of restoring the dollar's link to gold. In 1997, he overtly told a Senate committee that he would favor a return to a gold standard system.[9] Particularly after his retirement in 2006, Greenspan indicated several times that the dollar's stabilization against gold during his tenure was intentional. In 2017 he said:

> [During my term] U.S. monetary policy tried to follow signals that a gold standard would have created. That is sound monetary policy even with a fiat currency. … [E]ven if we had gone back to the gold standard, policy would not have changed that much.[10]

In 2010, Greenspan said at a meeting of the Council on Foreign Relations:

> Fiat money has no place to go but gold. If all currencies are moving up or down together, the question is: relative to what? Gold is the canary in the coal mine. It signals problems with respect to currency markets. Central banks should pay attention to it.[11]

Again speaking before the Council on Foreign Relations, Greenspan said in 2014:

> Gold is a currency. It is still, by all evidence, a premier currency. No fiat currency, including the dollar, can match it.[12]

Beginning with Volcker, but particularly under Greenspan, the world enjoyed a period of tolerable monetary stability and general prosperity that economists have called the "Great Moderation." It was the most prosperous period of the floating fiat era that began in 1971. Another round of currency depreciation took place in 2001-2012. A decline in currency values vs. gold was accompanied by a rise in commodity prices, and evidence of new monetary distortion in the formation of asset bubbles worldwide.

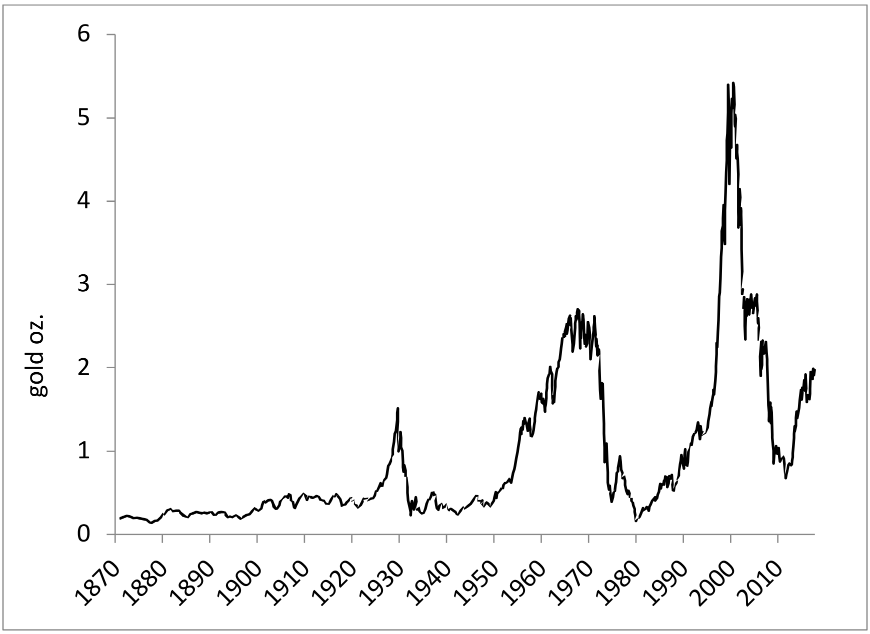

Figure 3.17: U.S.: S&P 500 Stock Index in Gold Oz., 1871-2017[13]

A new period of dollar stability vs. gold began in 2013. Federal Reserve Chairman Janet Yellen never mentioned any gold advocacy in public, but the result was effectively the same. Seth Lipsky of the *New York Sun* asked in October 2017:

> Has America been secretly on the gold standard? We ask because as Janet Yellen nears the end of her term as chairman of the Federal Reserve, the value of a one-dollar Federal Reserve note is at 1,269th of an ounce of gold — essentially identical to the 1,262nd of an ounce of gold at which it was valued on the day she acceded to the Fed chairmanship. Is that just a coincidence?[14]

Much as Paul Volcker met with Arthur Laffer in 1982 to discuss monetary options, in February 2015, Yellen invited a group including several prominent gold standard advocates to give presentations at the Federal Reserve. This group included Sean Fieler, Steve Lonegan, Ralph Benko, Brian Domitrovic, Judy Shelton and John Allison. Officially, this group had no effect on policy; in practice, the outcome was much the same as if they did.[15]

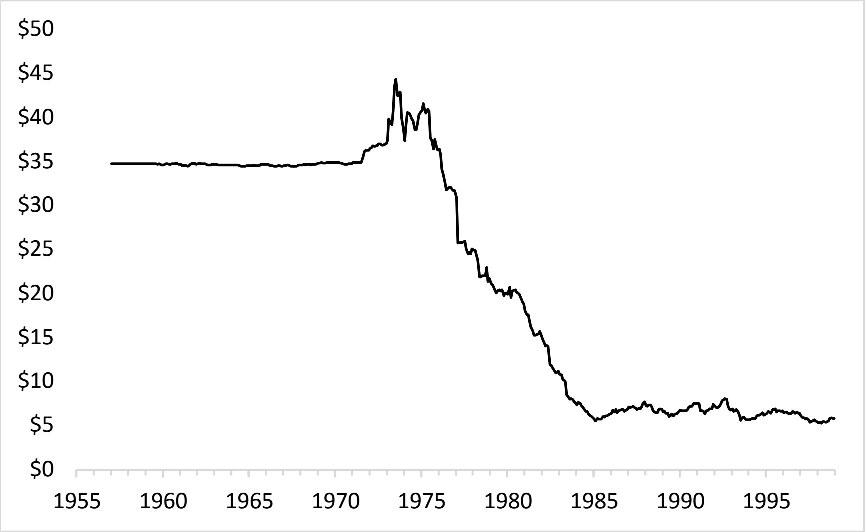

Figure 3.18: Portugal: Value of 1000 Escudos in U.S. Dollars, 1957-1998

Just as the world as a whole has been led (mostly by rough experience rather than theoretical insight) to adopting the dollar and euro as their standards of currency value, so too the United States has found that the U.S. dollar has done best—under Volcker, Greenspan and Yellen—when it too is loosely "anchored" to an external standard of value, at first a commodity basket including gold, and then gold exclusively. Among all the hundreds of experiments in fiat currency management worldwide since 1971, gold is still the winner.

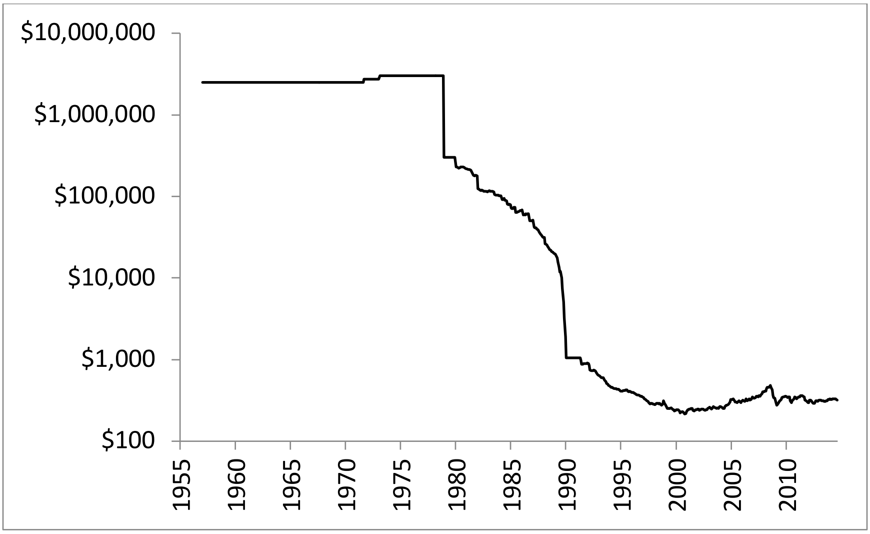

Figure 3.19: Poland: Value of 1000 Zloty in U.S. Dollars, 1957-2014
Logarithmic scale

In the 1980s and 1990s, although the disasters of the 1970s were resolved, the world still struggled with floating currency chaos. Exchange rates among developed countries still had wild swings, throwing all cross-border trade and investment into confusion and contention. The situation was worse for less-developed countries, which suffered an endless parade of currency disasters. All of Latin America descended into hyperinflation in the 1980s. In the early 1990s, the end of the Soviet Union promised a new era of capitalist prosperity, but that is not what happened. The once-reliable Russian ruble collapsed, and all of post-Soviet Eastern Europe and Central Asia erupted into hyperinflation. The successful East Asian countries had maintained a reliable link to the dollar in the 1980s and early 1990s, but this was destroyed in the Asian Crisis of 1997-98. Many countries did not suffer a moment of crisis, but instead languished with poor quality currencies that tended to gradually depreciate. These included Greece, Portugal, India, and Turkey.

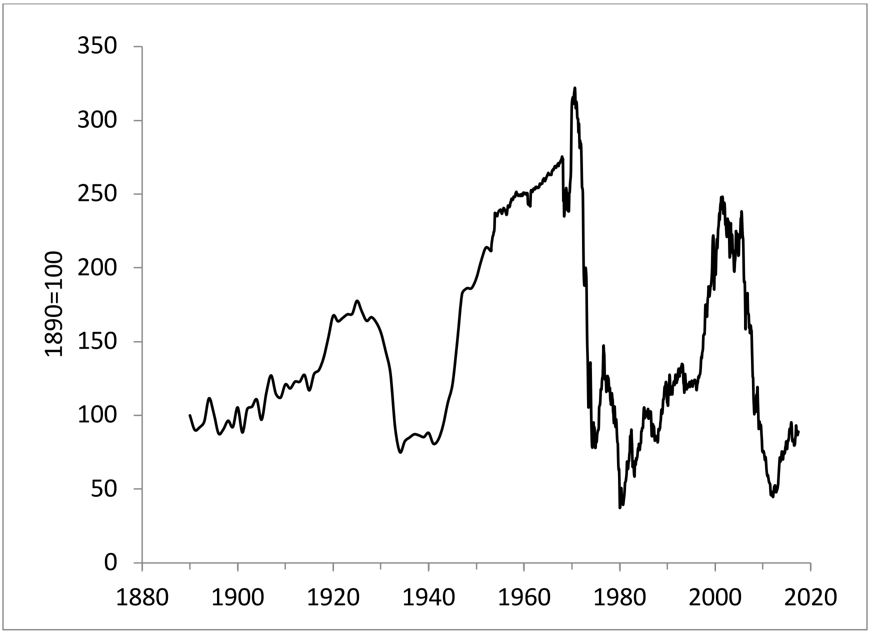

Figure 3.20: U.S.: Home Prices in Gold Oz., 1890-2017[16]

Just as the devaluation of the Mexican peso reduced the value of Mexican wages, as expressed in dollars, so too the depreciation of the U.S. dollar vs. its historical standard, gold, has reduced the value of U.S. wages and assets as expressed in terms of gold. We know that, if the dollar hadn't been devalued, it would still be worth 1/20.67th of an ounce of gold, the same as in 1930 or 1840, just as the British pound maintained its gold parity unchanged for centuries. Another way to think of it is to compare the present market value of wages or assets to the present market value of a $20 gold piece from 1929, the beautiful Saint-Gaudens double eagle, which contains 0.97 troy oz. of gold and was a regular part of the coinage system of the time. Its market value then was $20, the same as a $20 banknote.

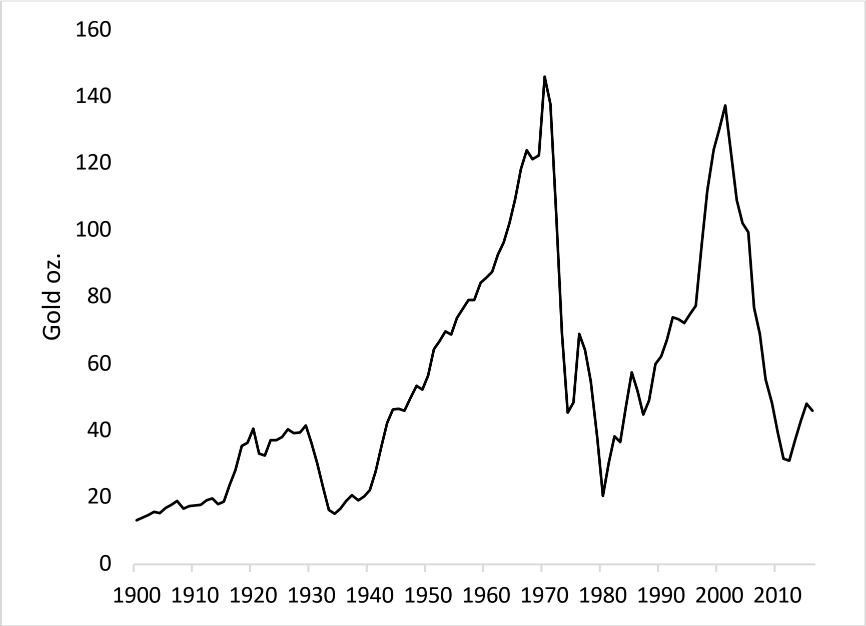

Figure 3.21: U.S.: Per Capita GDP In Gold Oz., 1900-2016

Although valuations in 2017 were generally higher than in the late 1960s, the stock market's value, in terms of gold, was lower than when the floating fiat era began.

Since 1970, technology has improved in many ways, bringing many new advances and comforts to daily life. And yet, the "American lifestyle" that a single-earner family could afford in 1968, with limited debt and a 10% savings rate, seems strangely out of reach today even for a two-earner family. The costs of housing, transportation, education, and health care seem to chew up every available dollar. "Real" per-capita GDP, in inflation-adjusted 2009 dollars, was supposedly $51,993 in 2017, and $23,064 in 1970. If that really happened, shouldn't everything be much more affordable now than in 1970? And yet, if one measures per-capita GDP in ounces of gold—for centuries the universal standard of value—it was 150 ounces in 1970 and 46 ounces in 2017, a level comparable to the 41 ounces of 1929 or the 56 ounces of 1950. The cost of the Ford Model T automobile was $260 in 1929, or 12.6 ounces of gold using the $20.67/oz. parity of the time. The cost of a 2018 Ford Fiesta, the company's lowest-priced model, was $14,205, or 11.3 ounces of gold at the $1,257/oz. average of 2017. Whether you measure in ounces of gold, or Fords, a similar picture of stagnation appears. Technological advances since 1970 have made our lives better in many ways—the Fiesta is unquestionably a better car—but they have not made us prosperous and wealthy. Just as a Ford Fiesta today is no more affordable, to the average American, than the Ford Model T in 1929, so too housing, healthcare and university costs seem no more affordable today than they were in 1955; and even then, it often takes a two-income family to make the payments.

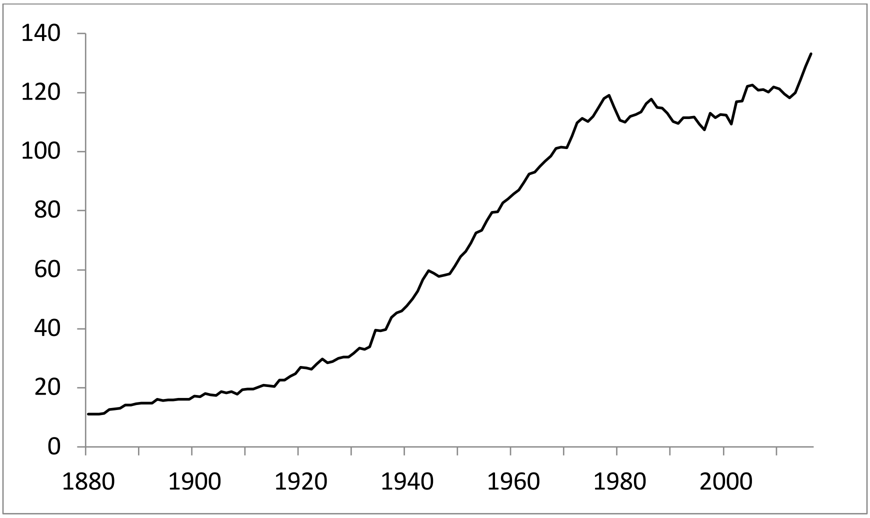

Figure 3.22: U.S.: Wages of Production Workers, Adjusted By CPI, 1880-2016

Since 1970, the U.S. government's official Consumer Price Index has been altered numerous times, and each time, the changes produced a sunnier picture than if the statistics hadn't been changed. And yet, even by this heavily-scrubbed measure, "real" wages in the U.S. have stagnated since 1970. The wealth-creating machine that made the U.S. the growth leader of the nineteenth century, and the dominant superpower of the mid-twentieth century, seems to have gone off the rails. Not even major setbacks including a Civil War, a Great

Depression, and two World Wars could stop the engine of progress for very long; but Unstable Money seems to have done it, even in the absence of other major turmoil. This is why Stable Money is part of the Magic Formula: with Stable Money, you can recover even from a Civil War or Great Depression, and within a few short years, soar to even higher heights. Without it, all other efforts come to naught.

Gold as a Standard of Value

Since the monetary system of the world, prior to 1971, was based on the principle that gold is a reliable proxy for Stable Value, it is worth examining to what degree this was achieved.

Certainly, gold was not chosen to serve the role of a standard of monetary value through some kind of rational process, a scientific weighing of pros and cons. It appeared out of practical experience.

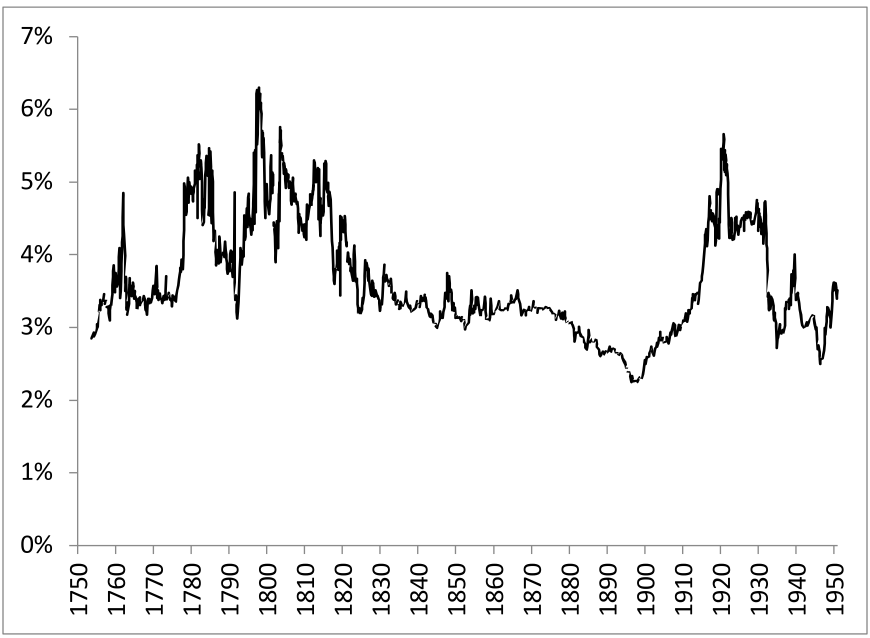

Figure 3.23: Britain: Yield On Consol Bond, 1756-1950

The extraordinarily low and stable long-term interest rates on government bonds enjoyed in Britain after 1720 (Figure 3.23) indicate a degree of monetary and macroeconomic stability that has never been achieved since 1971. The record was marred only by a rise in interest rates coinciding with the very expensive Revolutionary War in Britain's American colonies, followed shortly thereafter by the Napoleonic Wars (1792-1815)—a period during which the British pound itself became a floating currency beginning in 1797. Napoleon's defeat at Waterloo in 1815 began the process of restoring the British pound back to its prewar gold parity, which was achieved in 1821. This was followed by nearly a century of extraordinary stability in the yield of government bonds, which lasted until the outbreak of World War I in 1914. No central banker has achieved anything like this since 1914. No central banker would like to even admit that such a thing is possible. The idea of government bond yields wavering within a few fractions of a percentage point for decades at a stretch is inconceivable today. But this was the norm, during the gold standard era of the nineteenth century.

To illustrate just how different the gold standard era was to the floating fiat era since 1971, we can compare the yield on the British Consol bond (a government bond of infinite maturity) during a particularly unruffled period, 1830-1880, to the yield on the thirty-year (or other long-term) U.S. government bond since 1970. (Figure 3.24) Only in recent years have interest rates for U.S. government bonds returned to the levels that were commonplace during the gold standard era. Even this was achieved only with an unprecedented degree of central bank intervention, which was not likely to be sustainable.

A look at commodity prices, in terms of gold, describes a similar stability lasting centuries. (Figure 3.25) Commodity prices had some short-term variation, most likely related to the supply and demand conditions for commodities themselves. Larger moves were related to wars and other global synchronized economic events. Commodity prices in Britain were elevated during the Civil War of 1642-1651, and again during the Napoleonic Wars (1792-1815), which engulfed all of Europe. World War I introduced an enormous surge commodity demand, while commodity production and transport were curtailed by wartime conditions. A spike in prices was the result. World War II did much the same thing. The Great Depression of the 1930s crushed commodity demand, resulting in lower prices.

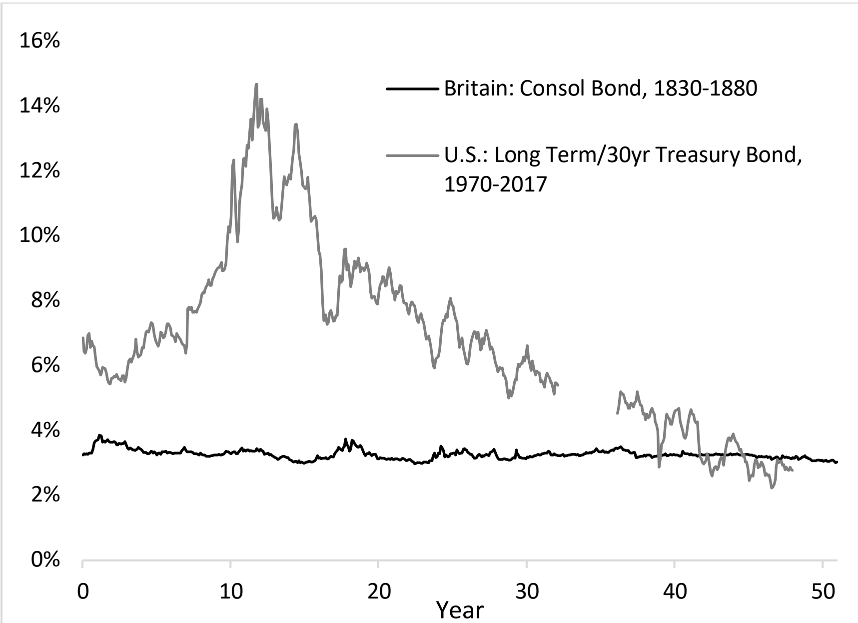

Figure 3.24: Britain And U.S.: Yield On Long-Term Government Bonds, 1830-1880/1970-2017

Commodity prices were somewhat depressed in the 1880s and 1890s. This was related to a surge in commodity production worldwide, as the introduction of railroads and steamships allowed huge swathes of formerly isolated land to be cultivated or mined for sale on world markets. Production soared in the United States, Canada, eastern Europe, Australia, southern Africa, Brazil, Argentina and elsewhere. In the United States alone, during the peak years of the railway boom in the 1880s, over 7000 miles a year of new railroad track were built. From 1866 to 1900, U.S. land under cultivation increased by 180%, and prices for agricultural commodities fell. In the next 70 years, from 1900 to 1970, land under cultivation increased by only 11%; not surprisingly, commodity prices recovered. Despite the depressed prices resulting from surging commodity production, and their consequences for commodity producers including family farms, the economy boomed. From the resumption of the gold standard in 1879, to 1913, U.S. industrial production increased by 454%, one of the most impressive economic expansions in U.S. history. If the "deflationary" declines in commodity prices were in part due to a rise in gold's value, as some claim, it didn't matter very much.

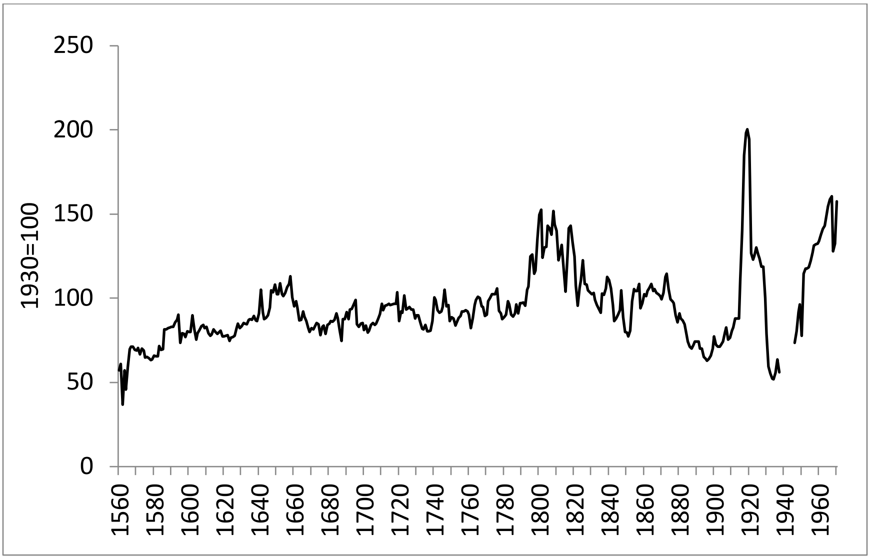

Figure 3.25: Britain: Commodity Prices In Gold, 1560-1970[17]

Reviewing this four-century history of gold as a proxy for Stable Value, the other main period of contention is the Great Depression of the 1930s. But neither the left-leaning Keynesians, nor the right-leaning Austrians or Monetarists, made the claim that gold's value changed by some enormous degree—unprecedented in four centuries, and without any credible cause—that blew up the world economy. Their claims are actually quite different: that the gold standard prevented central banks from reacting to a downturn they did not understand, with an "easy money" solution.[18] Gold is reviled, not because it failed its duty as a stable measure of value, but because it blocked their funny-money ambitions.

A minority today do make the claim that gold's value did change by a large degree, in the early 1930s. Their claims are based on a premise of extraordinary accumulation of gold bullion by central banks. But this amounts to wishful thinking—no such accumulation took place.[19] The Great Depression appears to have come about from a combination of nonmonetary factors—particularly rising tariffs, rising domestic taxes, socialistic intrusions upon business such as wage and price controls or nationalization, bank failure and sovereign default—to which was added a new element of monetary chaos beginning with the British devaluation of 1931. High Taxes and Unstable Money.

With that, we can now look back on four centuries in which gold was used as the universal standard of value, a practical expression of humans' desire for the ideal of Stable Value which is inherent in the concept of "money" itself, and we find that no significant problem seems to have arisen from this policy. In that time, a simple pattern emerged: governments which maintained their currency value at gold parities tended to succeed, and those that did not tended to have difficulties. This makes perfect sense when we consider why Stable Money is necessary for coherent market interaction. Many countries experimented with floating and devaluing their currencies in the nineteenth century, including: Italy, Austria, Spain, Portugal, Greece, Chile, Sweden, Japan, Russia, Argentina, Brazil and the United States. Not one of these countries ever experienced any sustainable advantage from this, while the countries that maintained an unchanged gold parity, including France, Britain and Germany, remained world leaders. The lesson was learned, and most of these countries returned to a gold standard system. During the Bretton Woods era as well, the countries that engaged in devaluation and floating currencies (Britain, France, Argentina, Brazil) did worse, while those that maintained unchanged gold parities (U.S., Germany, Japan, Mexico) had the best performance.

The Rise of Soft-Money Ideologies

Hard Money—money that is precisely defined, unchanging, and immune from human manipulation; in practice, this meant money based on gold and silver—was a foundational principle of all statesmanship. And yet, from the earliest days, people noticed that changing the value of the coinage (in the past, this meant reducing their metal content) was not only profitable to the state, but also had broader effects, which we now call "macroeconomic effects." They thought they could use these effects to their advantage. This is the Soft Money paradigm—the idea that money is to be manipulated to achieve various policy goals. This implies a currency that changes in value, perhaps on a continuous basis; that is, a floating currency.

Since the invention of coinage in the seventh century B.C., governments have experimented with altering the values of their coins. In 1736, the Japanese emperor Tokugawa Yoshimune reduced the value of the coinage explicitly to stimulate the economy and raise prices. On the other side of the world, in 1767, British Mercantilist writer James Denham Steuart imagined a "statesman" who would use a paper fiat currency to guide the macroeconomy by managing the money supply, interest rates and credit.

> He ought at all times to maintain a just proportion between the produce of industry, and the quantity of circulating equivalent [money], in the hands of his subjects, for the purchase of it; that, by a steady and judicious administration, he may have it in his power at all times, either to check prodigality and hurtful luxury, or to extend industry and domestic consumption, according as the circumstances of his people shall require one or the other corrective …
>
> If money can be made of paper, … a statesman has it in his power to increase or diminish the extent of credit and paper money in circulation, by various expedients, which greatly influence the rate of interest. …
>
> From these principles, and others which naturally flow from them, may a statesman steer a very certain course, towards bringing the rate of interest as low as the prosperity of trade requires.[20]

Others observed that not much good came of this chicanery, and argued that it is best to keep the money as unchanging as possible. Around 1360, the French clergyman Nicholas Oresme wrote the first book devoted to monetary affairs in the West, *De Moneta*, in which he argued:

> Many great disadvantages arise from such alterations in the coinage, some of which specially affect the prince, others the whole community, and others particular parts of the community. … It is a great scandal, … and contemptible in a prince, that the money of his kingdom never remains the same, but changes from day to day … As time goes on and changes proceed, it often happens that nobody knows what a particular coin is worth, and money has to be dealt in, bought and sold, or changed from its value, a thing which is against its nature. And so there is no certainty in a thing in which certainty is of the highest importance, but rather uncertain and disordered confusion …[21]

Despite the arguments of Steuart and others, Hard Money principles predominated, especially during the eighteenth and nineteenth centuries, when the connection between the reliability of the British pound, the sophistication of the British banking system, and the success of Britain as a whole was too obvious to ignore. Nevertheless, the idea of managing the macroeconomy via currency distortion gradually spread, as part of socialistic notions percolating everywhere during the late nineteenth century. “Centralization of credit in the hands of the state, by means of a national bank with State capital and an exclusive monopoly” was one of the ten principles outlined in Karl Marx’s *Communist Manifesto* of 1848. Centralization of currency management certainly took place in the latter half of the century, as monopoly central banks replaced arrangements based mostly on coinage and multiple small local banks of issue. The creation of the Federal Reserve in the U.S. in 1913 represented the culmination of this global process, eventually superseding the United States’ long tradition of bullion coinage combined with hundreds of independent note-issuing banks.

Monopolization of money creation by central banks opened the door to the introduction of floating currencies. Already by the second half of the nineteenth century, many currencies floated, including those of Portugal, Greece, Spain and Argentina. The floating currencies that erupted as a result of World War I further encouraged the soft-money manipulators. The world gold standard system was reconstructed in 1925-1930 in much the same model as the pre-1914 period. But, the idea of macroeconomic management via monetary distortion enthralled many at the time, including Federal Reserve chairman Benjamin Strong and economist John Maynard Keynes.

During the Great Depression, tax rates and tariffs soared around the world. Socialistic notions that had been germinating since the mid-nineteenth century were implemented on a broad scale, crippling commerce with bureaucratic impositions. To counter a disastrous downturn that they did not understand, governments reached for the "easy money" solution that had been bubbling in the background for decades. This did indeed bring some relief—there is a reason why devaluation has been popular for millennia. But, it also brought a series of unpleasant consequences, which is why, over millennia, governments have also abandoned Soft-Money doctrines—eventually. A series of currency devaluations beginning with the British pound in 1931 introduced a new factor of monetary chaos. Policy worldwide was contrary to the Magic Formula, and the results were as expected.

Nevertheless, Soft Money doctrines came to the forefront during the Great Depression. The idea that money should be stable, reliable, neutral and unchanging was fading; the idea that money could be manipulated to achieve certain targeted economic outcomes was rising. Many feared a return to Depression-like conditions when World War II ended. In the Bretton Woods Agreement of 1944, a strange beast was created, in which the dollar would remain linked to gold at $35/oz., and other currencies linked to the dollar at fixed exchange rates, thus also linking them to gold—the doctrine of Hard Money. Also, governments could manage their domestic macroeconomy via interest rate manipulations or changes in money supply—the doctrine of Soft Money. This construction was inherently self-contradictory, but this was not well perceived at the time. Conflict between the official "international" policy of fixed exchange rates and "domestic" policy of "easy money" manipulation led to capital controls and trade restrictions. Even so, the internal conflict could not be easily papered over, and major currencies were periodically devalued. The British pound was devalued in 1949 and 1967, falling from $4.03 to $2.40. The French franc was devalued several times in the late 1940s, and again in 1957, 1958, and 1969. It fell from 1.19/dollar to 5.55/dollar. Germany and Japan, however, mostly embraced a simple fixed-value system without aggressive "domestic" macroeconomic management—closer to the pre-1914 model where currency managers would simply maintain their fixed-value link to gold. Both had suffered hyperinflation in the late 1940s, and had no interest in new funny-money games.

In the United States, intellectual trends and central bank methods were much the same as in Britain or France, so it is no surprise that the outcome was the same: the U.S. dollar was devalued in 1971. However, the devaluations of Britain and France were limited to those currencies alone. Due to the U.S.'s central role in the Bretton Woods monetary system, the devaluation and floating of the dollar in 1971 led to the demise of the entire system by 1973.

Today, enthusiasm for Soft Money is waning. Even central bankers themselves admit that their ability to artificially manufacture positive outcomes is limited, and that the distortions they create tend to have unpleasant consequences. Most governments do not embrace floating currencies. They have a fixed-value policy with some international standard of value, commonly the dollar or euro. To do this, they have largely, or completely, abandoned the idea of domestic macroeconomic management via currency distortion. Most of those governments that do have independent floating currencies actively try to keep them in a trading range, minimizing big swings in foreign exchange rates with trading partners.

For major currencies, Stable Money is an implied, though rarely explicit, goal of policy. This is commonly expressed as the combination of a CPI target ("price stability") and an unofficial but typically strong interest in minimizing large variation in exchange rates with other major currencies.

Despite this practical, real-world embrace of the principle of Stable Money, intellectuals are still lost in a miasma of soft-money rationalization. The idea of linking major currencies to gold—in this way, also enjoying fixed exchange rates with each other—remains uncomfortable. And yet, using gold as a proxy for Stable Value worked very well, for centuries. Nothing has taken its place. Central bankers today could try to achieve an even more perfect representation of the Stable Money ideal, by some other means besides relying on gold. But, they do not do this; have never done this; and do not seem to be capable of even imagining what that goal could be.

In the end, the practical choice boils down to a gold standard, or a "PhD standard." After nearly five decades of floating currencies, there seems to be little consensus among central bankers and academics as to how these floating currencies should be managed. Instead, the outcome has been a constant scrum of one idea against another, accompanied by a steady pattern of disappointment as today's fashionable notion becomes tomorrow's proven failure. Our money has been based on gold; or it has been based on this never-ending tempest of econobabble. In the end, this maelstrom of contention and confusion produces some kind of unintended result—the currency ends up with some definite value. Is that result better than what would have been obtained with a gold standard? It never has been.

Confusion Over Fixed-Value Methods

If one is to anchor a currency to some definite standard of value—whether gold in the past, or the euro and dollar for many governments today—then one must know exactly how to achieve this.[B]

The inherent contradiction of the Bretton Woods era—the impossible combination of Hard Money and Soft Money goals in one system—unfortunately remains common today, in "pegged" currencies worldwide. Economists' and central bankers' ability to learn from past error has proven to be sadly limited. Although most governments aim to maintain fixed exchange rates with major international currencies—and actually do not have meaningful ambitions to engage in "domestic monetary policy"—they do not know how to achieve this goal in an effective and reliable manner. As a consequence, their "currency pegs" also have a terrible habit of blowing up. "I have never nor ever would advocate a system of 'pegged' rates," economist Robert Mundell said in 2001. "Pegged rate systems always break down."[22]

Particularly after the Asian Crisis in 1997-98, academic economists came to a better understanding of the self-inflicted difficulties that have plagued currencies since 1944. It is now broadly understood that a fixed-value policy also implies the abandonment of any "domestic" funny-money ambitions, in favor of a simple, automatic system without discretionary input—a concept known among academics as the "currency trilemma." The most rigorous expression of this principle today is the currency board, which has

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[B] An extensive discussion of this topic is found in *Gold: The Monetary Polaris* (2013), by Nathan Lewis been used by many countries with a very high degree of reliability. The currency boards of Hong Kong and Argentina weathered the 1997-98 crisis intact even as “currency pegs” worldwide collapsed in failure. Again in 2008-2009, the euro-linked currency boards were unruffled while several euro-linked “currency pegs” were demolished. The currency managers of the pre-1914 era also had simple, automatic systems much like a currency board in operation.

The basic method is: when the currency’s value is above its parity, the monetary base is increased via the purchase of assets; when the currency’s value is below the parity, the monetary base is reduced through the sale of assets. These methods also work in the context of floating currencies, whenever they are higher or lower in value than is desired.

A gold standard system is just another variant of a fixed-value system, one that uses gold instead of the dollar, euro, currency basket or some other measure as its standard of value. Further progress toward Stable Money—either in the form of a link to an international “currency bloc,” or to gold—is hindered by the fear that the system will blow up, as has happened so many times over the years. This risk is real; but it is also easy to resolve. In all cases, the fixed-value policy is best achieved with an automatic currency-board-like system. Steve Hanke, a currency expert at Johns Hopkins University who helped several governments establish currency boards, found that, since the first such system was introduced in 1849, they have functioned without failure in seventy out of seventy instances—a 100% success rate.[23]

Stable Money

The consequences of serious instability in the currency are so great as to overpower everything else. The spectacular Japanese economy of the 1960s was crippled in the stagflation of the early 1970s, along with all other countries worldwide. The booming Asian Tigers collapsed into wreckage when their currencies crumbled in 1997-98. Soaring economies in eastern Europe, fueled by flat tax reforms, crashed in 2008-9 when, on top of the global financial crisis of the time, their currencies broke down.

Besides these dramatic boom-to-bust events, a multitude of countries with low-quality currencies quietly grind through decades of hardship, seemingly never able to get on their feet and begin the process of getting wealthy. Other countries, once wealthy, fade from the world stage as currency difficulties sap their strength. Hyperinflation has demolished at least seventy countries just since 1970.

Countries that have a period of success share the common characteristic of stable currency value. No country has made itself wealthy with funny-money manipulation. This can, at times, produce short-term effects that seem beneficial. But no lasting benefit can be had from a method that disrupts the system of market prices, profit margins, interest rates and returns on capital that makes prosperity possible. You can't devalue yourself to prosperity. If it was that easy, someone would have done it.

Today, it is common to propose a single unified world currency system, perhaps centered on the International Monetary Fund's Special Drawing Rights, which would eliminate the frustrations of variable exchange rates. While such a system would have some advantages—that is why governments form into currency blocs today—it would also be, if anything, even more variable in "absolute value" unless it was anchored by gold. There would no longer be any other currencies to compare to, nor any place to run if this one world currency should bumble into crisis. And why wouldn't it? The history of the U.S. dollar since 1971 seems to have been either: that the Federal Reserve has intentionally stabilized the dollar against either gold or a commodity basket; or that the dollar has declined dramatically in value.

But, this presumes that those managing this one world currency even have the best interests of the population at heart. Many elites might find advantage in intentionally creating booms and busts, systematically stripping the wealth of the masses by buying cheap and selling dear. This pattern has already been evident in Latin America for decades, as the wealthy families shelter in international currencies while local currencies are demolished, and then step in to buy up domestic assets at fire-sale prices. Intentional hyperinflation can be used to undertake societal reconstruction on a grand scale—Vladimir Lenin intended to use it for exactly that purpose, and, if he had his way, throughout the world. The hyperinflations of Revolutionary France and Weimar Germany may have served similar purposes.

Linking all the world to a single point of failure was a core reason why the devaluation of the U.S. dollar in 1971 led to the disintegration of the Bretton Woods system as a whole. A system based on gold requires no such centralization. Anyone who wishes to participate in the world gold standard system may do so, unilaterally.

The world will end up with Stable Money eventually, simply because to do otherwise eventually becomes too painful. Governments have always debased, devalued and floated their currencies; and, eventually, they always went back to Stable Money. The Chinese experimented with fiat paper money for four centuries. During this time, things often went well for a decade or two. At other times, currencies and economies would be on a steady deteriorating trend, although this is obvious only with the hindsight of history; people living at the time probably thought it was tolerable enough. The periodic hyperinflationary implosions were accompanied by the collapse of states and empires. It eventually became so traumatic that the Chinese abandoned paper money entirely, and used metal coins and bullion alone for six hundred years. We are only in our fifth decade of floating currency experimentation. Whether people come to their senses quickly, or, perhaps, it takes economists another four centuries to figure out something so rudimentary, the outcome is the same, because it can be no other way.

Chapter 4: The Spiral of Success

The beginnings of success are often born in crisis. A country finds itself destitute; commonly, this involves High Taxes and Unstable Money, even hyperinflation. This is unacceptable. The better minds decide that their goal is to make their people happy and prosperous. Before long, they decide that taxes must be low and the money must be stable.

Low Taxes, in themselves, give a moral tone to government. Taxation, it is said, is theft; and certainly, those subject to high rates feel this to be true. A government that taxes lightly is also likely to respect property rights; a government that imposes heavy taxes is more likely to confiscate private property by more direct means, or allow confiscation by politically-connected cronies. Once the principle is established, of plundering the citizenry using the government's monopoly on force, it is a small extension to then plunder the government. Kleptocracy becomes the operative principle of political life, on both the revenue and expenditure side. But low tax rates are adopted specifically to the benefit of the general good, and according to the principle of restrained government. This tone transfers to all aspects of government. Corruption still exists, but it remains manageable. Money is stable, neutral and unchanging, not subject to the arbitrary whims of bureaucrats, or the ceaseless struggle between those who benefit and those who are harmed by monetary changes.

Private investments are made, and soon it becomes apparent that the rewards of investment are high. The climate for business is better than in other countries that have neither Low Taxes nor Stable Money. Each investment implies more employment. The capital of the country accumulates, and production increases. Government revenues increase, which allows investment in public projects that produce an overall benefit to the society—roads, bridges, sewer systems, ports, schools.

The private sector becomes more attractive than the public sector. Great fortunes are made in the private economy. Private-sector jobs become more appealing than government jobs. Work is easy to get, and better than welfare.

A core principle of the capitalist system is that it directs the energies of the ambitious and talented toward activities that benefit the society as a whole. The ambitious do not need to be very virtuous. It is enough that they are law-abiding—and since abiding by the law is good for business, and business is good for personal gain, they abide by the law.

In history, whole societies have been based on the principle of plunder. Wealth, glory and status come to those who steal resources from others. This was true of the Viking marauders, the Greeks of Homer, or the Mongol hordes. On a smaller scale, it is true of the gangs, bandits and warlords that appear wherever the rule of law is lax, even down to the most primitive tribes, where plunder raids for food or women are familiar to anthropologists from Papua New Guinea to the savannahs of Africa and the jungles of Brazil.

To gain wealth, glory and status in the capitalist system, one must provide a good or service that others will purchase of their own free will. Production, rather than plunder, becomes the organizing principle.[A] To provide goods and services, one must provide an attractive environment for employees. By competing for employees, wages are driven higher. The compensation for providing this profusion of goods, services and employment is typically modest; the average corporate profit margin is about 6% of sales. The other 94% goes to paying workers, suppliers and taxes. But, this 6% is enough to attract energy and capital, and provide abundant rewards for those that are successful.

When wealth is obtained by providing something of benefit to others, and by creating prosperous employment, complaints of wealth inequality are muted. This wealth may come from something necessary, like electric power or automobiles, or it may come from something frivolous, like a toy or a popular entertainment. In either

[A] *The Law* (1850), by Frédéric Bastiat, is a classic discussion of the government impulse toward plunder.

case, people paid for it freely, and presumably got their money's worth. Whether success is achieved as a businessman or as a football player, people recognize the great skill necessary to excel, along with the benefits received to the society as a whole. Indeed, these benefits could not come about without the businessman becoming wealthy.

Because wealth comes from production, and production requires capital investment and employees, wealth inequality itself moderates. The wealthy become very, very wealthy; but all strata of society are becoming better off. The rich get richer, and the poor get richer too.

The cycle of capital creation and investment amplifies. Abundant corporate profits are reinvested into expansion. As household incomes rise, households have additional income beyond the expenditures that they have become accustomed to. Some of this surplus is spent, but some of it is saved. Savings rates are high, and this capital cycles back into corporate investment, creating new, more productive, and higher-paying jobs. Capital is relatively abundant, and labor is relatively scarce. Competition for skilled labor ensues; and opportunities for unskilled labor to gain skills on the job increase. Wages rise, and unemployment falls.

The demand for skilled employees produces a need for education. Employers complain of the lack of skilled tradesmen; corporate managements absorb thousands of graduates of liberal arts colleges. The higher incomes enjoyed by the educated produce a means to finance education.

As the economy grows, government revenues rise. As GDP rises, the debt/GDP ratio falls, and debt service costs become a smaller fraction of the budget. Demands on the government are modest. The ambitious seek wealth in the private economy, rather than plundering wealth from the government. The needy are relatively few in number; and because jobs are plentiful, they don't stay needy for long, do not develop the pathologies of long-term welfare dependency, and remain a relatively small political constituency. Government budget surpluses appear. Some of this is directed toward new spending projects, particularly if a country remains deficient in basic public investment and services. But also, tax rates are reduced further. This produces yet more growth, and the cycle continues.

Socialistic policies, perhaps left over from prior times of difficulty, become unnecessary and indefensible, and are removed. Price controls are lifted. Nationalized industries are privatized. Public housing is sold. Restrictions on labor are reduced. Freeing up these resources allows more growth, and more growth makes remaining measures less relevant. A robust economy makes “monetary stimulus” or interest rate manipulation unnecessary.

A government that adopts Low Taxes and Stable Money commonly does so because it recognizes that a healthy private economy, unfettered by government obstruction, is in the interests of all. This tone of public service and promotion of the general welfare spreads to other spheres. Problems in regulation are recognized and corrected. Property rights and the justice system are reasonably well administered. Over time, with continued commercial success, contract law and property rights become more precisely codified. Businesses get bigger, and securities markets become necessary to raise large amounts of capital. Stable Money allows the spread of banking. With continued use, these securities markets and banking industries become more broad, liquid, and sophisticated. A financial center forms. Eventually, a domestic financial center becomes an international financial center. A wealthy country has lots of capital to invest; and so, everyone that seeks capital goes there. Abundant capital at home has led to increased competition and reduced opportunities to invest, so domestic capital seeks opportunities overseas. Decades of Stable Money, and the sophisticated banking and financial systems that have grown around it, make the domestic currency one that lenders trust will not be devalued. Thus, they are willing to lend at lower interest rates. Borrowers, seeking these lower interest rates, agree to borrow in debt denominated in that currency.

People are aware that they have been prospering under beneficial government. The government thus becomes popular. Its institutions are protected, nurtured and defended. Radicals and subversives find no popular support. Politicians do not have to hand out special favors to maintain their positions. Military defense gets enthusiastic commitment. Ample government tax revenues fund substantial military spending. Expansion of borders, even conquest of other foreign peoples and their lands, becomes acceptable. The conquered people are even seen to be beneficiaries of a better form of government. The conquered people themselves may share that view. Defense of their lands is weak and apathetic. If their existing government is bad enough, large-scale defections to the opposing side may occur.

Other governments, recognizing both the beneficial leadership and swelling military might of the successful country, are quick to form alliances. Spheres of influence quickly grow, tribute is paid to the seat of empire, military threats dissipate, and military alliance forms multi-ethnic armies.

Free trade, as it is experienced today, is largely a phenomenon that followed World War II. Before then, prohibitive tariffs and outright restrictions limited trade among states. Free trade zones typically coincided with the boundaries of states and empires; and empires were built in part to facilitate large trading zones. The Roman Empire was all one free trade zone. Its conquest of Egypt opened up a sea route to Asia, bypassing the hostile states of the Middle East, and Roman trade soon reached India. This wider circle of trade created new economic opportunities, and thus more wealth and prosperity. The European empires of the late nineteenth century combined the industrial prowess of Europe with the natural resources, exotic products and large markets of Asia, Africa or Latin America, all within free trade zones.

Begun in crisis, the state expands to a level of prosperity and influence that makes it a world leader; at the very least, an example for others to imitate. Decades of prosperity lead to an atmosphere of complacency. Younger generations do not remember that the prosperity is based on the Magic Formula, and that it can be lost just as it was once created out of the ashes of failure. Prosperity is taken for granted; it is treated as an unchanging feature of the landscape. Government revenues are abundant, and have funded a growing range of infrastructure and services even while taxes remain low. Perhaps tax rates should rise to fund even more services, a “Great Society” that will bring abundance not only to many, but to all. Perhaps higher tax rates will reduce the irritation caused by a range of wealth and outcomes that is, even in the best of times, always very wide. Perhaps a recession, financial crisis or war leads to budget deficits, and tax rates rise in response, or the money becomes destabilized. In a state of complacency and forgetfulness, or distracted by issues that seem more pressing, a government begins to act opposite to the Magic Formula; and typically, does not even realize what it has done.

The Muslim Caliphates

The superpowers of the Mediterranean world, at the beginning of the seventh century, were the Byzantine Empire (also known as the Eastern Roman empire) and the Persian or Sassanid Empire. The Byzantine Empire was Christian—the Roman Catholic Church was created when the emperor Constantine converted to Christianity and then made it the state religion in 325. Its holdings stretched south from the capital at Constantinople across the Levant into Egypt. The Sassanid Empire held Mesopotamia and lands east to the Indus river, now Pakistan. Zoroastrianism was the most common religion in Persia, although Christians, Buddhists, Hindus and Jews also lived in the realm.

In 622-632, under the leadership of the prophet Muhammad, founder of the Muslim faith, all of Arabia was unified under Islamic rule. Immediately after the death of Muhammad in 632, Muslim armies burst forth from the Arabian Peninsula and, in the space of twenty-four years, conquered the Byzantine Empire's southern holdings including Egypt, North Africa and the Levant to Armenia. To the east, they conquered all of Persia, to the borders of India.

The Muslim invaders offered a simple choice: convert to Islam and live tax-free; continue your religion, and be subject to lower taxes than your present rulers; or death. This was an attractive proposition to those suffering under the oppressive taxation of Byzantium or Persia, and the Muslim armies found that they were victorious over much larger armies.

At one point, the Byzantine armies threatened to retake Palestine, whose population was mostly Christians and Jews. The Muslim rulers, arguing that their taxes amounted to a cost of protection which they could not guarantee, refunded the entire amount of the year's taxes. The Christian leaders openly wept with gratitude. "By the law and the prophets," the Jewish leaders responded, "the Roman emperor shall not take this city as long as the spark of life scintillates in our bodies."[1] The Muslims were victorious. In time, Christianity and Zoroastrianism disappeared from the Islamic world.

The Byzantine empire used the highly reliable gold *solidus* coin. The solidus remained in use in the Byzantine realms conquered by the Rashidun Caliphate. In 696, the Islamic gold *dinar* coin containing 4.25 grams of gold was created, basically a copy of the *solidus*; the name itself derives from the Roman *denarius aureus* (Latin for "gold coin"). This Arab dinar was also highly reliable, and remained unchanged for over four centuries. The Caliphates also issued a silver *dirham* coin, which mimicked the primary Sassanid silver coinage.

With lower taxes, the Islamic Caliphates thrived. They discovered a recurring theme among all governments in history—that revenue stayed the same, or grew, under their lenient, low tax regime, compared to their predecessors' high-tax systems.[2] Eventually, the Muslim armies expanded into Spain, at their peak controlling nearly all of the Iberian peninsula. Beginning around 800, the Caliphates enjoyed a Golden Age as the former Arab nomads assimilated and synthesized the knowledge of Persia, Greece, Rome, India and China.

But over time, the religious exemption could not be sustained, and was removed. Taxation grew more oppressive. An account from that time described the situation:

> The land tax is the tent pole of the realm. How great it becomes by justice, how mean by oppression.
>
> The quickest way to ruin a country, the disuse of the cultivated land, the destruction of the subjects, and the cessation of the land tax is by tyranny and extortion. A ruler who burdens his taxpayers until they cannot cultivate the land is like one who cuts off his own flesh and eats it when he is hungry. He grows stronger in one part and weaker in another, and the pain and weakness he brings on himself are greater than the ache of hunger which he remedies. He who taxes his subjects beyond their capacity is like one who coats his roof with earth from the foundations of his house. He who makes a habit of cutting the tent pole will weaken it and bring down the tent. If the cultivators become weak, they cannot cultivate the land, and they leave it. Then the land is ruined, cultivation is weakened, and the tax diminishes. This leads to the weakening of the army, and when the army is weakened, enemies covet the realm.
>
> I heard some of the old men of Spain, from the army and others, who said that the Muslims were victorious over their enemies and their enemies were weak and inferior as long as the tax-paying peasants were treated kindly. … the land was distributed and assigned to the army in the form of 'iqta. They exploited it and dealt kindly with the peasants and cared for them as a merchant cares for his merchandise. The land flourished, there was plenty of money, and the armies were well-supplied with equipment and provender and weapons beyond what they needed. So it was, until in his last

> days Ibn Abi Amir reintroduced a fixed monthly pay for the army, took the money by force, and sent tax collectors to the land to collect it. They devoured the subjects and misappropriated their money and exhausted them, so that the subjects fled and could not cultivate the land. The revenues brought to the Sultan diminished, the armies became weak, and the enemy grew strong against the lands of the Muslims and seized many of them. The Muslims remained inferior and the enemy victorious.[3]

The original tax of one dinar per commoner per year eventually rose to four dinars. This was in part to finance the unbelievable opulence of the sultans. By one account, just one of the Sultan of Egypt's many wives wore a dress costing 30,000 dinars (equivalent to 4,100 ounces of gold) to the event of her son's circumcision.[4] An additional tax of 25% of the crop was imposed, and a 5% sales tax, which, unlike a modern retail sales tax, was applied to all transactions. Five centuries later, a similar tax, the *alcabala*, would play a part in the demise of the Spanish Empire. Eventually, the sultans' tax gatherers became as rapacious as those of Rome and Persia that they had displaced centuries earlier. Half a millennium of currency reliability ended when the Baghdad-based Abbasid Caliphate began to debase its coinage in 1160. It fell to the Mongols in 1258.

China

Mao Zedong ruled China from 1949 to his death in 1976 by the precepts of Marxism and communist central planning. The Cultural Revolution of 1966-1976 was a particularly dark time, as economic disaster was combined with destruction of cultural tradition and the intelligentsia. The education system ceased to operate altogether. Deng Xiaoping, denounced by Mao as a "capitalist-roader," was twice purged from the ruling party.

After Mao's death, his successor Hua Guofeng effectively ended the tyranny of the Cultural Revolution, but he still ascribed to Marxist ideals. Hua proclaimed the "two whatevers": "Whatever Chairman Mao said, we will say, and whatever Chairman Mao did, we will do."[5] In 1978, a faction in the ruling party led by the resurgent Deng Xiaoping replaced Hua.

Deng immediately set China upon the path to capitalism, using Singapore in particular as a model for emulation, and Singapore's prime minister Lee Kuan Yew (an ethnic Chinese) as a model Asian leader. Over 22,000 Chinese officials were sent to Singapore to study its methods, along with additional tens of thousands sent to Japan and the other "Asian Tigers" including South Korea, Malaysia, Taiwan and Thailand. Although the government remained "communist" in name, in practice it was not much different than the mandarinate bureaucracies that ruled China, in the name of the Emperors, for thousands of years.

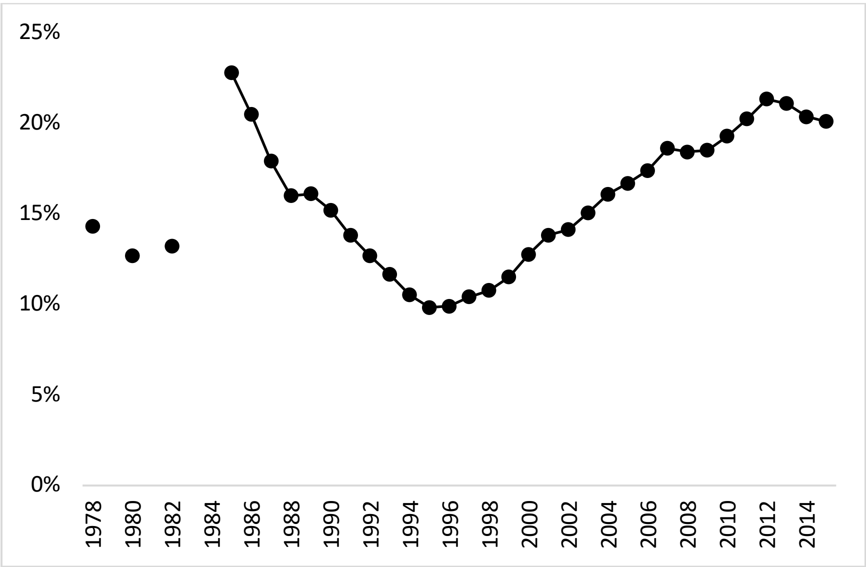

Figure 4.1: China: Tax Revenue/GDP, 1978-2015[6]

Deng began by privatizing agriculture, dividing state-owned communes into individual plots. State-owned industries were liberalized, allowed to operate on the principle of profit, and later privatized. A series of Special Economic Zones were created, open to foreign investment with lower taxes and reduced regulation and bureaucratic oversight. The Special Economic Zones offered a 15% tax rate to foreign investors, and development in the Special Economic Zones soon became a growth dynamo for the economy as a whole.

Much of the early foreign investment came from overseas Chinese from Hong Kong, Taiwan and Singapore.

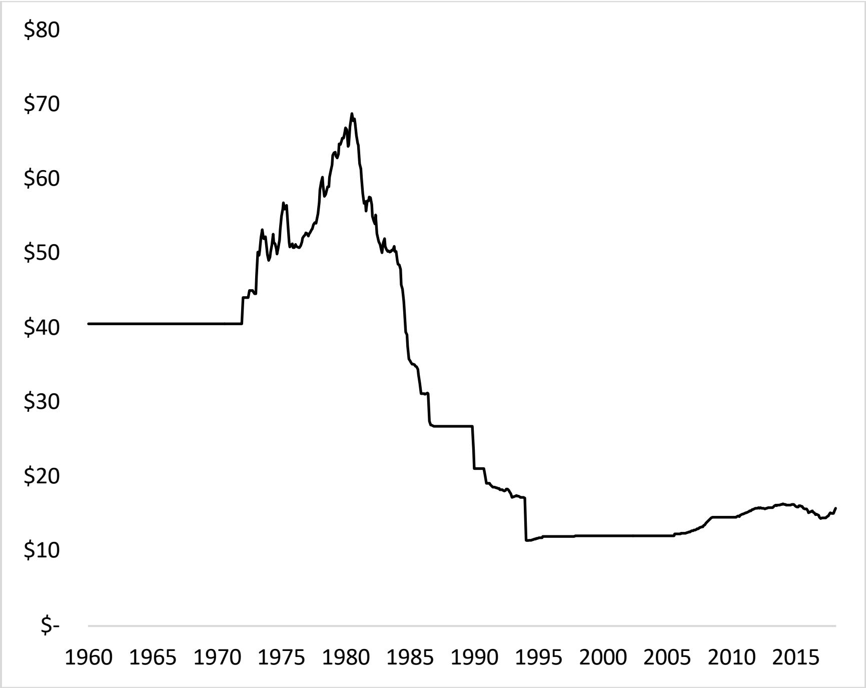

Figure 4.2: China:
Value of 100 Renminbi in U.S. Dollars, 1960-2017

The tax revenue/GDP ratio remained low, generally below 20%, after liberalization began in 1978. In 1995, it even slipped below 10%. A special landmark was achieved in 2006 when, for the first time in thousands of years, peasant farmers were relieved of all agricultural taxes.

This process of liberalization, and the adoption of Low Taxes especially in the Special Economic Zones, was nevertheless hindered by the instability of the currency during the 1980s. The value of the renminbi steadily declined, until, after a particularly sharp devaluation at the end of 1993, the renminbi was more securely linked to the dollar.

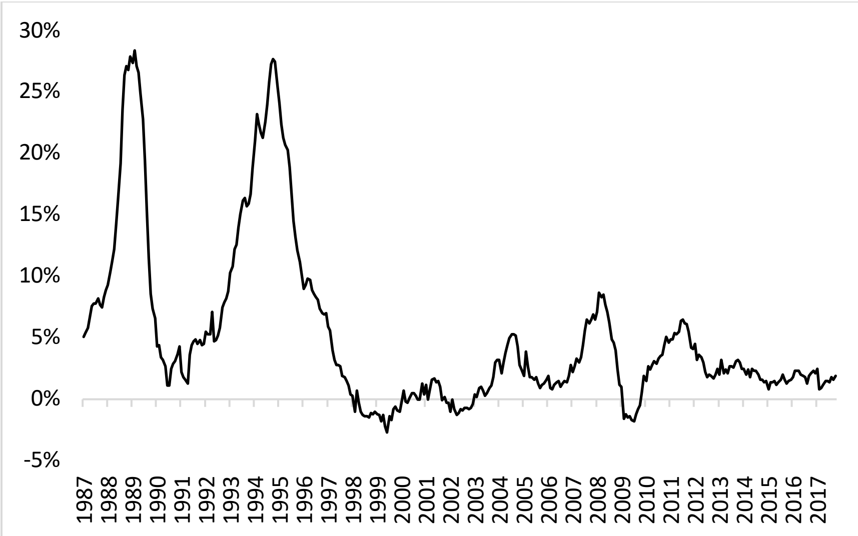

Figure 4.3: China: Consumer Price Index, 1987-2017
Percent change from a year earlier

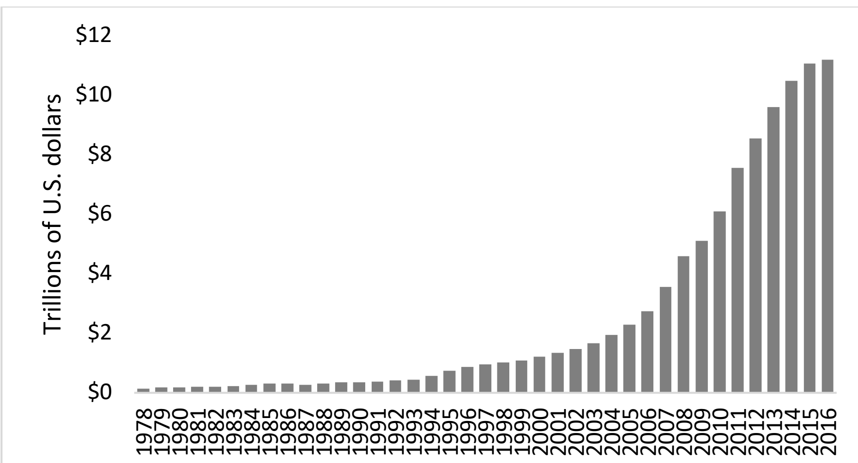

Figure 4.4: China: GDP in U.S. Dollars, 1978-2016

Growth of GDP in the 1980s, though strong, was not particularly high in terms of U.S. dollars. Chronic devaluation, and the resulting high rates of CPI inflation, depressed the real value of incomes and made finance difficult. In terms of U.S. dollars, China's nominal GDP increased by 133% between 1980 and 1993, the year of the last big currency decline. This was certainly positive, and reflected the continuing effort to liberalize and deregulate the formerly communist economy. But, it was about the same as the United States, which had an increase in nominal GDP of 140% over the same period. Even these increases in nominal dollar GDP, in both the U.S. and China, mostly reflected inflationary adjustment after the currency declines of the 1970s.

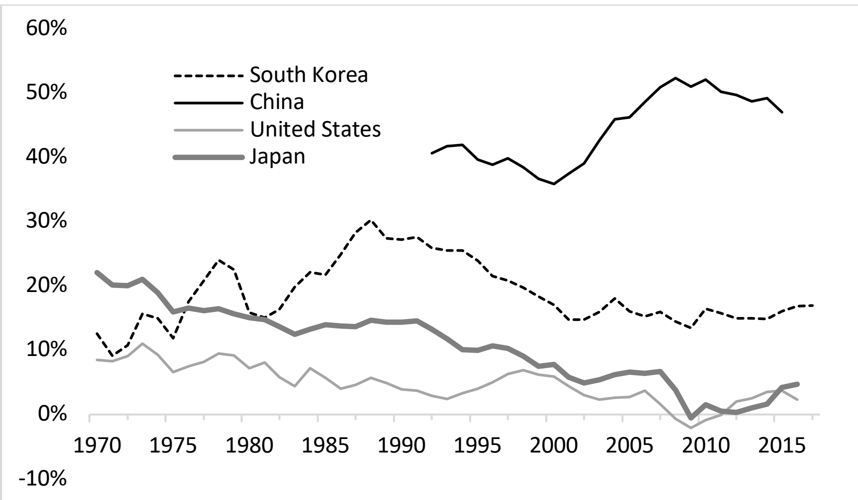

Figure 4.5: Savings Rates, 1970-2017

In 1994, with the stabilization of the yuan, China finally had Stable Money, and Deng's capitalist vision could reach its full potential. Between 1994 and 2014, the Chinese economy, as measured in U.S. dollars, got twenty-four times larger. Again, extremely high levels of domestic savings and investment played an important role. Japan and the "Asian Tigers" had savings rates often in excess of 20% during their high-growth eras. China, however, beat them all, with savings rates commonly in excess of 40%.

South Korea

Like China in the 1980s, South Korea's industrialization during the 1960s and 1970s was marred by an unreliable currency. In 1960, it took 50 won to purchase a dollar; at the beginning of 1985, a dollar cost 830 won. (The dollar itself lost about 90% of its value vs. gold during this period.) Around 1985 the won's decline was halted, and its value even rose a bit against the dollar, for the first time in decades. Finally, Stable Money was added to South Korea's generally low taxes and pro-business policies, and, like China ten years afterward, Korea got rich.

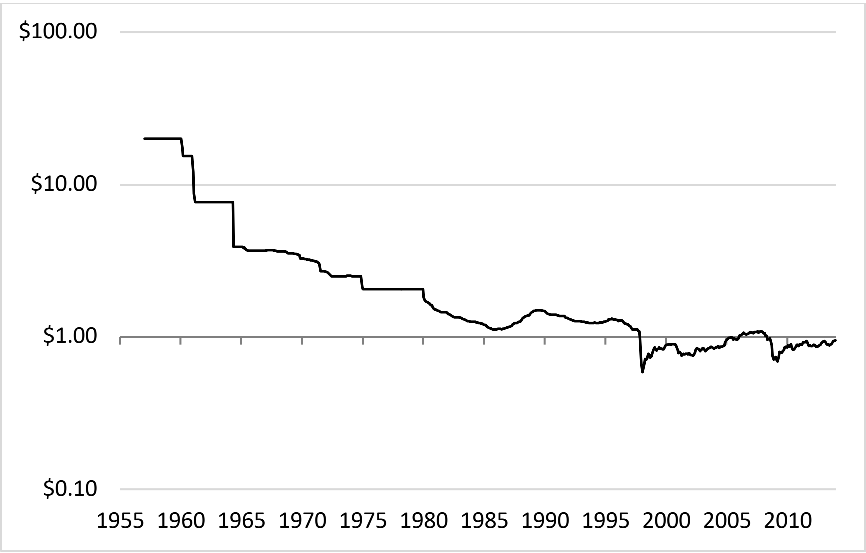

Figure 4.6: South Korea:
Value of 1000 won in U.S. dollars, 1957-2017
Logarithmic scale

One way of gauging South Korea's success is to compare its per-capita GDP (in dollar terms) to that of the United States. During the 1960s, both South Korea and the United States enjoyed a prosperous expansion; but per-capita GDP in South Korea did not advance much compared to the United States. Numerous devaluations of the won during that decade (on top of political instability) crippled South Korea's ability to achieve lasting gains.

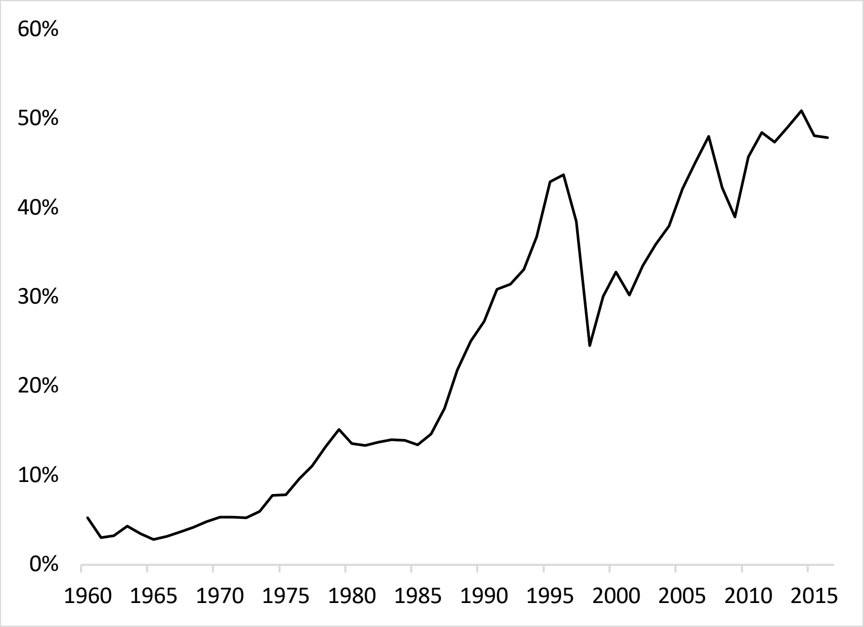

Figure 4.7: South Korea: Per-Capita GDP in U.S. Dollars, As A Percentage Of U.S. Per-Capita GDP, 1957-2017

During the 1970s, both South Korea and the United States suffered the effects of global stagflationary decline. However, South Korea did make substantial advances vs. the United States during this decade, which correspond to brief periods when the won was linked to the U.S. dollar—Stable Money. Another period of won decline from 1980 to 1985 again resulted in a period of stagnation in South Korea vs. the U.S. When the won was stabilized in 1985, a decade of extraordinary prosperity ensued, in which South Korea's per-capita GDP advanced by multiples vs. the United States. This was helped by a major reduction in tax rates: the top income tax rate of 87% in 1979 was cut to 40% by 1996. Alas, this amazing era of growth was brought to an end in the Asia Crisis of 1997-98, when the won collapsed in value.

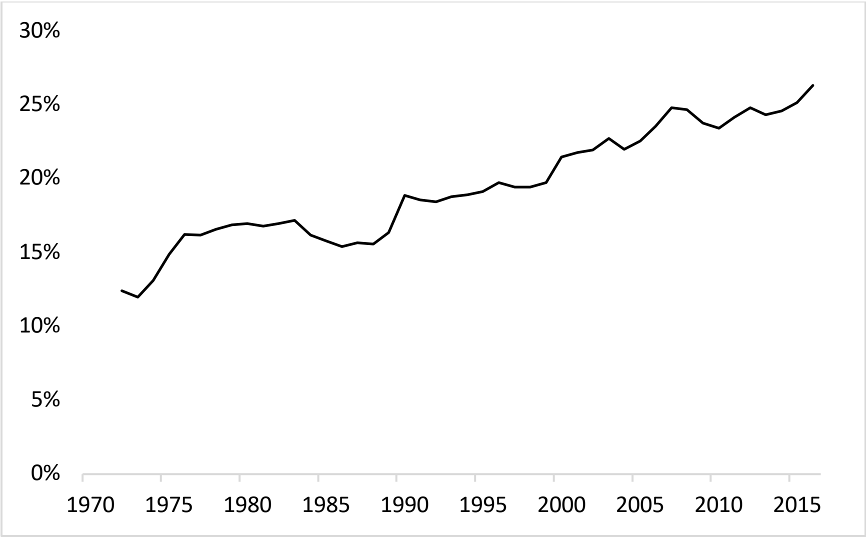

Figure 4.8: South Korea: Total Government Tax Revenue As A Percentage Of GDP, 1972-2016[7]

Another currency collapse in 2008 caused another setback for South Korea. But by this time, taxes had steadily risen in South Korea, rising above 20% of GDP for the first time in 2000. The country remained economically healthy, but its once-stunning growth rates fell to moderate levels.

The other "Asian Tigers" followed a similar strategy. In the mid-1980s, taking advantage of a U.S. dollar that itself was becoming more stable, they stabilized their currencies against the dollar. With tax revenue/GDP ratios typically below 20% and high rates of savings, the economies of Malaysia, Thailand, the Philippines and Indonesia boomed. Between 1987 and 1996, the average rate of economic growth for this group, in terms of nominal U.S. dollars, was 12.9% per annum. The same formula that worked for Japan in the 1950s and 1960s was repeated throughout Asia. Unfortunately, ill-designed "currency pegs" led to currency collapse in 1997-98. Chastened by this failure, these governments did not amend their currency arrangements by instituting a Hong Kong-like currency board. Instead, currencies were allowed to float. Like South Korea, these countries remained prosperous, but unreliable currencies and gradually rising taxes ended their high-growth eras.

South Korea was one of the great “emerging market” success stories of the past century. Yet, it was only “emerging”—that is, advancing relative to the developed countries—when it had both parts of the Magic Formula: Low Taxes, and also, Stable Money.

Britain After 1815

Napoleon’s defeat at Waterloo in 1815 ended a long series of wars between Britain and France that began in 1793. Just a few years before then, in 1775-1783, Britain had fought and lost a difficult war to keep its American colonies. The country was exhausted, and the national debt had increased from £127 million in 1775 to £844 million in 1818, estimated at 178% of GDP. Debt service alone cost £31.3 million that year, 63% of total central government revenue of £59.5 million.

Britain had been successful throughout the eighteenth century with the Magic Formula. While other governments often debased their coinage, the British pound remained unchanged during the century. Upon this foundation of stability was built an amazing structure of banking and finance, particularly the paper money system centered on the Bank of England (founded 1694), and the market in government bonds, which traded at extremely low yields. In 1751, all of the government’s outstanding debt was consolidated into an issuance of Consol Bonds, with infinite maturity. For several years, they traded at a yield below 3.0%. Low interest rates and ready finance also enabled all manner of business ventures. Taxation was based entirely on indirect taxes, mostly excise taxes (sales taxes) on a variety of individual items. Britain had studiously avoided broad-based excise taxes like the Spanish *alcabala*, direct and often arbitrary taxes like the hated French *taille*, or the menagerie of excises at high rates that had crippled the Dutch economy during that century. The central government revenue/GDP ratio in 1775 was around 7%.

From the times of the Greeks and Romans, direct taxes were considered a mark of slavery. The first known income tax in Britain appeared in 1404. It was considered such a monstrosity that all records of its existence were burned, to conceal the possibility of such evil from later generations. Nevertheless, income taxes reappeared several times, mostly as a short-term expedient during wartime. Under the pressures of war, in 1799 a new income tax was introduced, with a graduated (or "progressive") series of rates rising to a top rate of 10%. The tax proved to be quite useful in generating revenue, and historians cite it as one factor that allowed Britain to prevail in its wars on the Continent.

The British pound had also been destabilized in war. Gold conversion was suspended in 1797, but the British pound did not vary much from its prewar gold parity of 3 pounds, 17 shillings and 10 pence (£3.89) per ounce of gold until around 1808. From there, it declined to a nadir around £5 10s (£5.50) per ounce of gold in 1813, and then returned to this level in 1815—a loss of value of roughly 30%.

At the war's conclusion, a quick return to prewar normalcy was expected. Yet, by this time, the British had lived with both the income tax and the floating pound for over fifteen years. Citing the government's enormous debts, and the costs of debt service, many government officials argued that the income tax should continue. But this was rejected. In 1816, Parliament eliminated the hated income tax. Not only that: all tax records were publicly burned. Britain returned to a tax system based on indirect excise taxes, at moderate rates. Government spending collapsed from £113 million in 1814 to £59 million in 1817.

As the war ended, the British pound had been a floating currency for eighteen years. Some argued that this policy had many advantages, and should be continued into peacetime. In an economic downturn in 1816, many in Parliament argued that the government should undertake a program of spending projects to keep the economy afloat. This could even be financed in part with the printing press, thus combining a "fiscal stimulus" with "easy money." In 1817, this was actually attempted. A deficit bond issuance to fund public works projects was approved, and the Bank of England's holdings of government bonds jumped by £10 million. But, the Bank apparently did not think very highly of this strategy. The increase in government bonds was offset by reductions in other assets, leaving its supply of base money largely unchanged.

The British pound's value sank vs. gold and foreign currencies. This alarmed many in Parliament, and an act to formally resume the gold standard at the prewar parity, including gold convertibility, was passed in 1819. This was achieved in 1821, two years ahead of schedule.

The British government had dallied with "fiscal and monetary stimulus," and high peacetime taxes. But this path was rejected. With the elimination of the income tax, and the return to the gold standard, Britain again had the Magic Formula. Over the next century, Britain became the wealthiest country in the world, and the British Empire grew to span the globe. The Industrial Revolution that began in the 1770s roared fully to life, fueled by a financial system that became the example to imitate worldwide. British law, British theories of government, British finance, British currency, British industry, and British example in nearly every aspect of life, became the standard for the world.

The income tax was unpopular enough that it did not return for a generation. However, the menagerie of excise taxes that the government relied upon caused all manner of strange distortions. A per-page tax on newspapers, for example, resulted in the printing of newspapers on very large paper, the "broadsheets" which remain customary even today. This did not sit easily with the rational and scientific nineteenth-century mind. In 1842, in response to a minor government deficit, and also with the idea of a simple, single tax that could replace a profusion of individual excise taxes that were also expensive to administer, the income tax was again introduced in Britain. The tax had a flat rate (no graduated brackets) of three percent. The tax was primarily collected as an indirect tax, at the source, similar to today's payroll taxes. Taxpayers did not have to file a declaration of income or wealth.

The new income tax was only supposed to last for three years, until the budget was expected to be back in surplus. But, it created 50% more revenue than expected, and soon, the government was spending more money. Successive British prime ministers tried to eliminate the income tax, but found that the revenues it generated had become addictive; spending rose to absorb the available revenue. The tax rate varied, but in over seventy years before 1914 never exceeded 6%. One reason for this was that the tax, like today's payroll taxes, applied to the first dollar earned. Everyone felt the effects of a change in tax rates equally, and resistance to tax increases was universally shared. Graduated or "progressive" rates were not introduced until 1910.

This change represented the adoption of socialistic thinking expressed earlier by Karl Marx in the *Communist Manifesto* of 1848. Before 1910, the conventional Enlightenment-era wisdom was that taxes must be "uniform"—that is, affecting all people in equal proportion, with one single tax rate. Article I, Section 8 of the U.S. Constitution reads that "all Duties, Imposts and Excises shall be uniform throughout the United States," reflecting British views throughout the eighteenth and nineteenth centuries. The principle was in part inspired by the experience of France before the Revolution, where the nobility was able to avoid taxes while the peasantry was taxed at extortionate rates. This pattern had been common in monarchies and aristocracies, but democracies had a different tendency. James Madison, the Constitution's primary author, argued in the *Federalist No. 10* that, in a democracy, the majority would over-tax the minority if they were allowed to. The uniformity clause of the Constitution was intended to block that possibility.

> The apportionment of taxes on the various descriptions of property is an act which seems to require the most exact impartiality; yet there is, perhaps, no legislative act in which greater opportunity and temptation are given to a predominant party to trample on the rules of justice. Every shilling with which they overburden the inferior number, is a shilling saved to their own pockets.

In *Taxation and the Funding System* (1845), the British writer J. R. McCullough asserted:

> The moment you abandon the cardinal principle of exacting from all individuals the same proportion of their income or of their profits you are at a sea without a rudder or compass and there is no amount of injustice and folly you may not commit.[8]

In *Pollock vs. Farmer's Loan and Trust Co.* (1895), in which the U.S. income tax of 1894 was found unconstitutional, U.S. Supreme Court Justice Stephen J. Field found:

> If the Court sanctions the power of discriminating taxation and nullifies the uniformity mandate of the Constitution ... it will mark

> the hour when the sure decadence of our government will commence.[9]

On the eve of World War I, Britain's national debt was £707 million—little changed from 1818. But, GDP had grown such that this was only an estimated 29% of GDP. Central government tax revenues in 1913 were an estimated 8.2% of GDP. Except for the lapse during the Napoleonic Wars, the value of the British pound had been unchanged for over three hundred and fifty years.

After 1914, Britain began its long journey contrary to the Magic Formula. It soon lost the empire that it had built over the course of centuries. But until then, while it retained Low Taxes and Stable Money, it led the whole world radiantly into the Industrial Age.

The United States

If Britain was the premier developed economy of the nineteenth century, the United States was the premier emerging market. It was always rich in land, liberty and opportunity; and by the end of the century, it was also rich in money, matching and then exceeding Britain in per-capita GDP. In the first half of the century, Britain was the leader in industry and finance, while the United States remained primarily agricultural as it expanded and digested its Western territories. After 1870, the great inventions and feats of industry came from the United States. British industry continued to expand modestly, but Britain became more of a center of finance and empire.

The American Revolution itself was motivated by the avoidance of British taxes. Britain's requests seem modest to us today—that is how King George III saw it as well—and were intended to offset the cost of the defense of the American colonies from foreign invasion, such as the expensive French and Indian War of 1754-63. But this taxation was imposed without representation of the American colonies in Parliament, or the consent of colonial legislatures. It had been a principle of British government since the Magna Carta of 1215 that kings could not impose taxes without the consent of the taxed. While the British themselves enjoyed low taxes, as did Scotland which had Parliamentary representation, British-controlled Ireland, which did not have Parliamentary representation, had languished under oppressive taxes for centuries.

By refusing them representation in Parliament, the British effectively declared that the American colonists were not British, but a separate, subject people. With this, the American nation was created; an American nation that, having once been British, now had no intention of becoming the next Ireland. In 1766, Benjamin Franklin, acting as the representative of the American Colonies, traveled to London to testify in British Parliament:

> Q. Then no regulation with a tax would be submitted to?
>
> A. Their opinion is that when aids to the Crown are wanted they are to be asked of the several assemblies according to the old-established usage, who will, as they always have done, grant them freely, and that their money ought not to be given away without their consent, by persons at a distance, unacquainted with their circumstances and abilities. The granting of aids to the Crown is the only means they have of recommending themselves to their sovereign, and they think it extremely hard and unjust that a body of men in which they have no representatives should make a merit to itself of giving and granting what is not its own but theirs, and deprive them of a right they esteem of the utmost value and importance, as it is the security of all their other rights.

Britain needed only to ask nicely; and the Americans, considering this reasonable, would likely volunteer themselves to be taxed. It was the way it had been done in Britain for over five hundred years.

Eight years later, in 1774, Franklin was invited to Britain's Privy Council, which directly advised the king. He discovered that the purpose of his visit was public humiliation: For an hour, he was called a liar; a thief; the instigator of insurrection; a traitor; an outcast from the company of all honest men—such an outpouring of slander that no London newspaper would print it. But the audience loved it. The Lords of the Privy Council couldn't disguise their delight. Franklin took it silently, his face betraying neither frown nor grimace, and gave no response. But Franklin—then sixty-eight years old, a master diplomat, one of the most even-handed and generous statesmen that America has ever produced, and the person who, in effect, served as America's representative in London—had been pushed beyond his limits. Franklin was done with Parliament; America was done with Britain. The world's most powerful military went down in defeat.

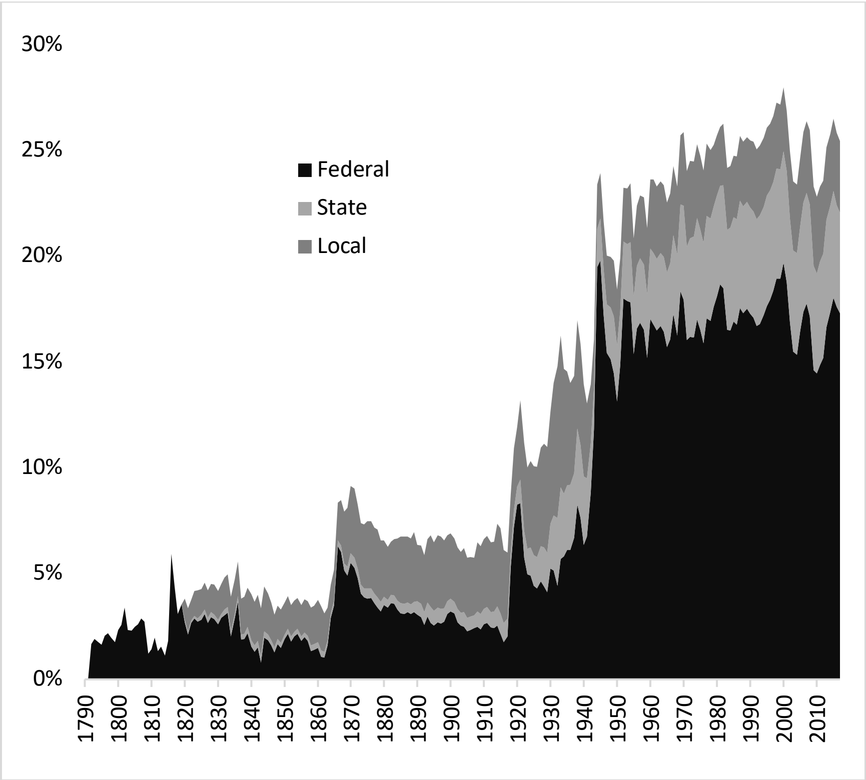

Figure 4.9: U.S.: Tax Revenue/GDP, 1792-2017

The United States began in the most precarious of circumstances. At one point, as the country writhed in anarchy after the surrender of the British in the Revolutionary War, the officers in George Washington's army asserted that Washington should take over the government and declare himself king, just as European kings had done for millennia. King George said that if Washington declined to seize power after this victory, "he will be the greatest man in the world." Washington refused, and went back to his farm. He patiently waited out five more years of fumbling, and dutifully served as the president of the Constitutional Congress, before he became the first President.

The United States' success may seem preordained today, but it didn't have to work out that way. Haiti won independence from France in 1804, and established one of the first republics in the western hemisphere. This was, perhaps, Haiti's high point.

Britain had been the low-tax example of Europe, but the United States went even further. Before 1860, the total U.S. tax burden (including state and local taxes) has been estimated at less than 5% of GDP, with nearly all Federal revenue derived from tariffs. Things might have been different: The Federal government inherited huge debts from the Revolutionary War, and might have tried to tax more aggressively. But, after fighting the British to avoid heavy taxes, the American people wouldn't have it. The Federal government's first attempt to lay taxes on a domestic product generated an armed rebellion, the Whiskey Rebellion, in 1794. George Washington himself headed an army of 13,000 militiamen to put it down. (It didn't help that the tax, designed by Alexander Hamilton, charged large producers at lower rates.)

The Civil War of 1861-1865 brought with it, in the Union, an income tax very much like that of Britain in 1799, with graduated rates and a top rate of 10%. Wartime finance led to the issuance of floating fiat "greenback" Treasury Notes. Just as in Britain in 1815, the United States might have kept the income tax as a means of paying off the large debts of the war; but instead, it was eliminated in 1872, and the dollar returned to its prewar gold parity in 1879.

In the latter half of the nineteenth century, taxes rose somewhat, particularly local taxes due to the spread of publicly-funded education. Excise taxes, especially on alcohol, made up a larger portion of Federal revenue. Nevertheless, direct taxation remained nonexistent. One reason for the passage of the Sixteenth Amendment and the adoption of the income tax in 1913 was to reduce the Federal government's reliance on the excise on alcohol, which produced an estimated one-third of Federal government revenue at the time. Temperance movements had gained influence, and by 1913 nine states had statewide prohibition of alcohol, while thirty-one others had local prohibition. Roughly one-half of all Americans lived in an alcohol-free locality. The Eighteenth Amendment, prohibiting alcohol nationwide, was ratified in 1919. Reliance upon tariffs for revenue had also been problematic throughout the nineteenth century, and was one reason for the horrible Civil War.

Despite Constitutional mandates, the United States' embrace of Stable Money in the form of a reliable gold standard system probably did not seem very likely in 1789. The Colonies had a hundred-year history of paper money abuse—they were pioneers in this practice too—beginning with Massachusetts in 1690. America's fiat currency experiments culminated in the disaster of the Continental dollar, issued by the Continental Congress, which descended into worthlessness in the 1780s. It might have seemed that the Americans would join the Brazilians as one of the world's worst currency abusers. Nevertheless, except for floating episodes during the War of 1812 and the Civil War, during the nineteenth century the U.S. dollar became one of the most reliable currencies in the world.

As is often the case, the Magic Formula did not only make people prosperous at home, but led to the expansion of the state's borders. This commonly has several aspects: a relative absence of domestic strife that leads people to undertake new ambitions; the wealth to begin new commercial ventures, finance military conquest and maintain military control; and, perhaps most important, a moral tone, the conviction that the expansion of the successful state's good governance and benevolent institutions would be better for the world as a whole. "The American flag has not been planted on foreign soil to acquire more territory but for humanity's sake," President William McKinley said in 1900, in reference to the Philippines.

All of these combined in the concept of "Manifest Destiny": that the United States, which began as thirteen colonies east of the Appalachian crest, should expand all the way to the Pacific. By the end of the nineteenth century, American ambitions had burst beyond the continent, encompassing Hawaii, Alaska, Guam, the Philippines, Panama, and Puerto Rico. The Monroe Doctrine, first expressed in 1823, established not only U.S. influence throughout all of Latin America, but the independence of all of the Americas from European monarchical rule, and the creation of constitutional republics throughout in the model of the United States—all of which eventually happened, at least in principle.

The United States' embrace of the Magic Formula enabled it to rise from negligible beginnings to become a world colossus. If the U.S. does not today follow the Magic Formula to the extent that it once did, nevertheless the country maintains a leadership role in part because taxes are lower, the U.S. dollar is more stable—domestic conditions more peaceful, and the administration of justice more tolerable—than nearly any other government has been able to manage. If the United States should one day lose its leadership role, or perhaps break apart altogether as secessionist movements ignite, it would likely be due to policy directly contrary to the Magic Formula, "all the rest being brought about by the natural course of things."

Germany in the 1950s and 1960s

The German government fell to Allied forces in May 1945, and was replaced by an Allied military occupation government. At first, this occupation government printed money and raised taxes. The U.S. government was relatively restrained in its printing of new occupation reichsmarks. However, the printing plates were secretly handed over to the Soviets by Harry Dexter White, a high-ranking official at the Treasury Department and later head of the International Monetary Fund, who had been the U.S.'s chief negotiator at the Bretton Woods monetary convention in 1944. White had been a clandestine Soviet agent. The Soviet occupation government was far less restrained in its printing of occupation reichsmarks, and hyperinflation was the effective result.

German tax rates had risen dramatically during the war, leaving a top rate of 67% on incomes over 18,000 reichsmarks. The average German annual income in 1937 of 1,475 marks would have had a marginal tax rate of 18%. In 1946, the occupation government raised the rate on income over 18,000 reichsmarks to 85%, and to 95% on income over 60,000 reichsmarks. However, because of the dramatic decline in the value of the reichsmark, these high tax rates applied to a greater and greater number of people, an effect known as "bracket creep." The average annual income of 1950, equivalent to 24,000 reichsmarks, would have had a marginal tax rate of 85%.[10]

In June 1948, a currency reform was undertaken in which ten reichsmarks were exchanged for one deutschemark. The deutschemark's official value was $0.30 U.S. dollars per mark, but its free market rate fell as low as $0.042 in Switzerland before recovering back to about $0.20 in mid-1949.[11] (The prewar reichsmark had been worth $0.40.) In September 1949, the deutschemark was stabilized with an official value of 4.20 marks/dollar ($0.2381), a rate that held (with some small adjustments) until the floating fiat era began in 1971. Because the dollar was, at the time, also linked to gold at $35/oz., the deutschemark was effectively linked to gold at 147/oz.

Also in 1948, to prevent the temptation of printing deutschemarks to fund deficits, all deficit financing was prohibited. The government was to spend out of current income only.

In 1948, the tax system was reformed under the occupation government. German proposals for tax reform had been very aggressive in favor of lower taxes—rates were to fall by 50%—but the occupation government balked and settled for a more modest adjustment. The top rate of 95% remained. However, the income level at which that rate applied was raised from 60,000 marks to 250,000 marks—and the rates now applied to deutschemarks, not reichsmarks. The average annual income of 2,400 deutschemarks in 1950 was taxed at a marginal rate of 18%.[12] Corporate taxes, property taxes and inheritance taxes were also reduced.

Not only the rates were changed. Reflecting Germans' desire for lower tax rates than the occupation government had permitted them, the 1948 tax code was blasted full of exemptions and exclusions. Deductions and exemptions were granted for the replacement of household effects lost during the war; undistributed profits of unincorporated businesses; accelerated depreciation; profits of public or private housing organizations; earnings from scientific, literary or artistic sources; and on and on and on. Double exclusions were given to people over 50. Overtime pay was taxed at only 5%. Sunday, holiday and night work were tax-free.

The effect of the tax reform was to increase revenue from 14,311 million marks in 1947-1948 to 15,300 million in 1949. But, the earlier figures were in reichsmarks, and the latter in deutschemarks.[13]

These changes in Allied occupation government economic policy reflected a more generous attitude toward the defeated countries after World War II. As China approached its communist takeover in 1949, and the Soviet domination of Eastern Europe progressed, the U.S. adopted a policy of strengthening West Germany and Japan as a bulwark against communism in both Asia and western Europe. The Marshall Plan resulted in the provision of over $13 billion to war-ravaged governments, but most of this went to Britain and France. Germany got a total of $1.445 billion between 1948 and 1951. Against this, Germany paid well over $1 billion in restitution and reparations payments, plus $2.4 billion per year for the costs of occupation.[14] In 1953 it was decided that Germany would repay $1.1 billion of its Marshall Plan aid, which was completed in 1971.

With Low Taxes and Stable Money in place, there was no need for the price controls and rationing that had dominated the economy. They were eliminated *en masse* beginning in July 1948. When the German public was informed of the elimination of the restrictions on the radio, they were astonished to hear that it would apply the next morning. The German economy surged forward. Industrial production increased by 71% in just ten months, between June 1948 and May 1949.

The economic reforms were led by Ludwig Erhard, who had become the director of economics under the occupation government. In August 1949, the first free German elections were held, and Erhard won in the Baden-Württemberg district. He became the Minister for Economic Affairs, a post he held until 1963.

Erhard slashed away at taxes again in 1950, 1951, 1953, 1954, 1955, and 1958. Much of this was accomplished not by cutting rates, but by raising the income brackets at which rates applied by several multiples. After the first tax reform in 1948, the 50% rate applied to income over 9,000 marks and the top rate was 95%. After 1958, the top rate of 53% applied to income over 110,040 marks. The personal exemption expanded from 750 marks to 1,710. More exemptions were given for savings; interest income was made tax-free; accelerated depreciation applied to corporate investment, along with a wide variety of exemptions for reinvested profits; the tax rate on distributed profits fell from 50% to 15%; and a variety of tax breaks were introduced for housing construction and other targeted priorities.[15]

The economy roared to life. Gross National Product rose from 81.7 billion marks in 1949 to 376.8 billion marks in 1963, an increase of 361%. Income tax revenues rose from 6.6 billion marks in 1949 to 36.3 billion in 1963, an increase of 450%—with all the tax reductions, income tax revenues rose, not only in nominal terms, but also as a percentage of GNP. The total tax revenue/GNP (not including social insurance contributions) was 22.1% in 1950-52 and 24.0% in 1960-62.[16]

Period	Personal Exemption	Income at which marginal rate reaches 50%	Highest marginal tax rate	Income at which reached
1946-1948	600	2,401	95	60,000
1948-1949	750	9,001	95	250,000
1950-52	750	20,001	95	250,000
1953	750	36,001	82.25	220,000
1954	800	45,001	80	220,000
1955-57	900	125,001	63.45	605,001
1958-66	1,710	78,420	53	110,040

Table 4.1: Germany: Income Tax Rates, 1948-1966[17]

As the economy boomed, and taxes continued to fall, there was little temptation to attempt to "stimulate" the economy with "easy money," as many other governments were doing during the 1950s and 1960s. Germany and Japan kept a scrupulous attachment to Stable Money, while Britain, France and others experimented with "monetary stimulus" and ended up devaluing their currencies. The U.S. also experimented with "monetary stimulus," and when this was cranked up in response to a minor recession in 1970, it resulted in the devaluation of the dollar and the demise of the entire Bretton Woods system.

Britain and the United States won World War II, but Germany and Japan won the postwar recovery. This was not because—as some claim—the total wreckage of their physical capital gave them some sort of advantage, Frédéric Bastiat's "broken window fallacy" amplified to galactic absurdity. It was because they had the Magic Formula.

Bulgaria

Bulgaria was not part of the Soviet sphere, but like neighboring Yugoslavia and Albania, adopted communism after World War II, in 1946. In 1990, the ruling Communist Party voluntarily allowed the first free elections since 1931. The Communist Party renamed itself the Socialist Party, won the election, led the creation of a new constitutional republic in 1991, and embraced capitalism.

Though this transition was miraculously peaceful, Bulgaria was not prosperous as a result. The new economic policy framework was based on the high taxes and floating fiat currencies recommended by Western advisors at the time. A moribund economy and high unemployment (over 16% in 1993) was the result, leading eventually to hyperinflation in 1996 and early 1997 in which the monthly inflation rate hit a peak of 242%.[18]

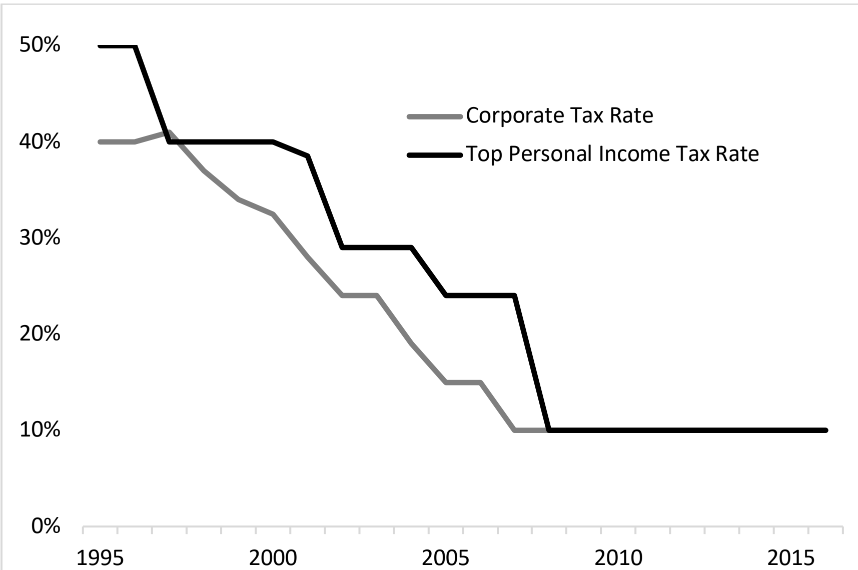

Figure 4.10: Bulgaria:
Top Personal Income and Corporate Tax Rates, 1995-2016[19]

In July 1997, Bulgaria adopted a currency board linked to the German mark, which transferred to the euro in 1999. Stable Money quickly solved the inflation problem, but Bulgaria's high taxes remained. The top personal income tax rate was 50%, and the corporate income tax rate was 40%. Led by the Socialist Party, these came down in a series of steps over the next decade, culminating in the adoption of a 10% Flat Tax for both personal and corporate income in 2008.

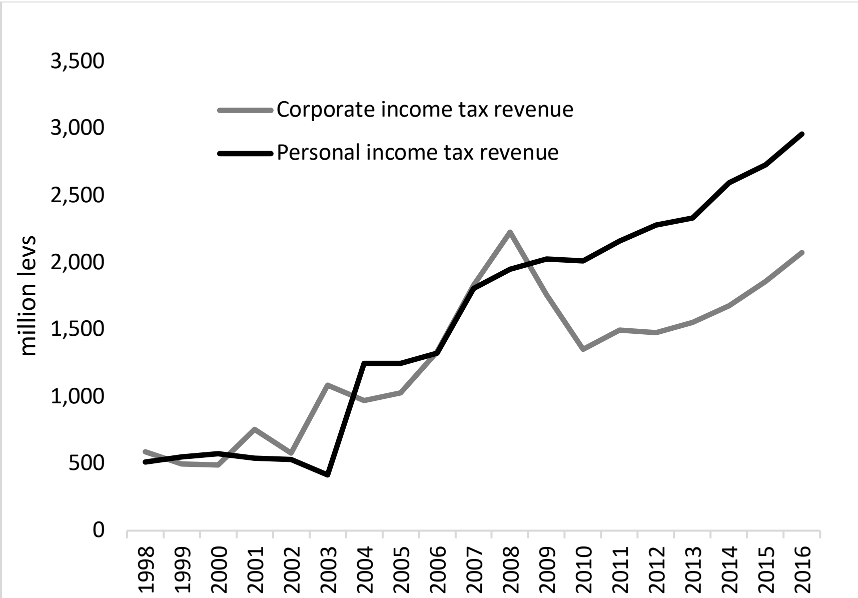

Figure 4.11: Bulgaria: Revenue From Corporate and Personal Income Taxes, 1998-2016[20]

Between 1998 and 2016, nominal GDP (equivalent to euros) increased by 259%. Revenue from the corporate income tax increased by 251%, while revenue from the personal income tax increased by 475%. Income tax revenues not only went up, they went up as a percentage of GDP—even as the top rate fell from 50% to 10%.

Bulgaria still had rather high taxes overall. Revenue/GDP of 29% in 2016 was funded in part by a VAT of 20% and a payroll tax of a combined 31%. Ideally, the government will find a way to bring these rates down as well, and has made some steps in that direction: in 2009, the combined payroll tax rate was reduced from 43.6% to 31.7%.

Revenue from the payroll tax dipped slightly (this was during a worldwide recession in 2009-2010), but in 2011 made a new high. Payroll tax revenues did not even drop as a percentage of GDP. They were 7.71% in 2007, before the tax cut, and 7.90% in 2016. A 2009 study found that an additional reduction in Bulgaria's payroll tax by ten percentage points, to about 21%, would result in only an estimated -0.68%/GDP decline in tax revenue in the first year, with revenues boosted by the effects of shrinkage of the underground economy, an increase in GDP, and higher employment. Gains from additional growth and employment in later years would be pure upside.[21]

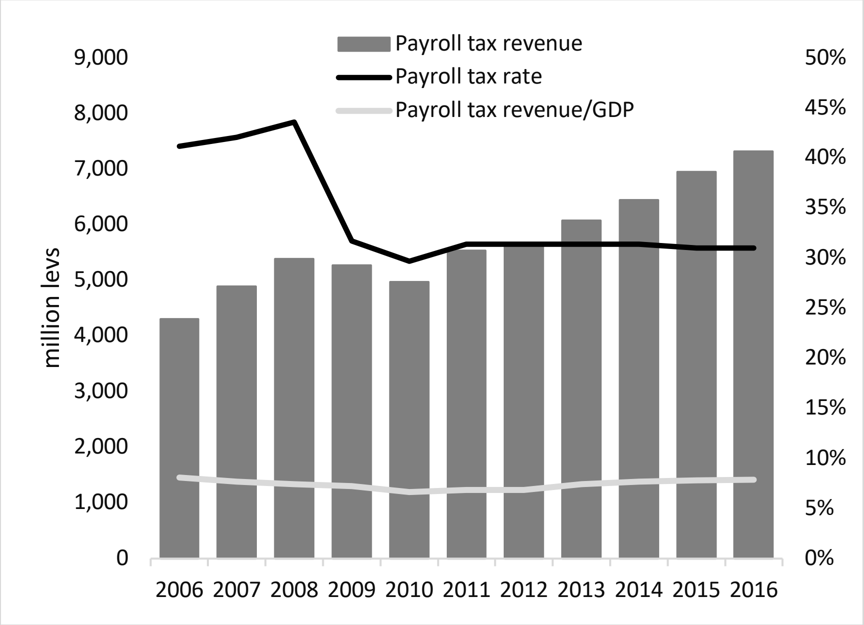

Figure 4.12: Bulgaria: Payroll Tax Revenue And Tax Rate, 2006-2016[22]

The reliance on simple, broad taxes at relatively low rates—the Flat Tax, VAT and payroll taxes—helped to minimize the negative economic effects of the relatively high tax burden. In the process, Bulgaria's government debt/GDP ratio fell from 77.6% in 2001 to a low of 13.2% in 2010.

Chapter 5:
The Spiral of Decline

In time, a government begins to act contrary to the Magic Formula. Taxes rise, and money becomes unstable. From this, new problems erupt; and, as the government responds to these problems, taxes may rise further, monetary instability may intensify, and a series of new regulations, price controls, capital controls, or nationalization of industry may cause additional damage to the workings of the market economy. If this process reaches an advanced stage, the state may be overcome by internal rebellions and secessionist movements, and become ripe for takeover by a foreign power that concludes, quite sensibly, that it would do a better job.

A government may take this path for many reasons, but behind them, the ultimate reason is often that the leaders no longer appreciate the importance of the Magic Formula. When taxes are low, it is because people want them to be low; when money is stable, it is because people want it to be stable. People know why they want these things, what they intend to achieve by them, and what the consequences are if they choose otherwise. But at other times this is forgotten, or passed over for other ambitions.

After a period of prosperity, complacency arises. It seems like the economy can take care of itself. The focus may turn from the general welfare to personal interest. In the past, kings would often overtax their subjects simply to fund personal opulence. They may engage in wars of conquest, almost as a kind of sport. In more modern times, government functionaries siphon off resources at every layer. The lowest employees receive overgenerous compensation and extravagant pension benefits, while the higher-level insiders line their pockets with government contracts at multiples of private-market prices, kickbacks, asset sales and purchases, or raw embezzlement from budgets without oversight.

It seems that the society is so wealthy that nobody need feel privation. Governments that once struggled to keep the roads in repair now fund universities and arts endowments. Punitive tax rates may be imposed, not to raise revenue, but to lessen the apparent disparities of wealth and income. Revenue will be "redistributed," according to proponents; but this never happens. There is no revenue to redistribute—the high tax rates are not paid. What revenue there is gets consumed by the government.

A country emerges from a major war with high tax rates and enormous debts. The high tax rates were less destructive during wartime because people perceived the need for communal action. When people want to contribute to the government war effort, they will pay a high tax rate voluntarily. Thus, they will not change their behavior to avoid or evade it, and the negative economic consequences of the high tax rates are lessened. When the war ends, people are less willing to hand their money to the government, and behavior changes to avoid the tax. Treasury Secretary Andrew Mellon described this phenomenon in 1924:

> The existing tax system is an inheritance from the war. During that time the highest taxes ever levied by any country were borne uncomplainingly by the American people for the purpose of defraying the unusual and ever-increasing expenses incident to the successful conduct of a great war. … For a short time the surtaxes yielded a large revenue. But since the close of the war people have come to look upon them as a business expense and have treated them accordingly by avoiding payment as much as possible. The history of taxation shows that taxes which are inherently excessive are not paid.[1]

Thus, the consequences of a certain tax system can change, sometimes quite abruptly, depending on the perception of whether the taxes are justified or not. Commonly, after a war, a government decides that it must maintain high tax rates to pay off the large debts incurred, but without the perceived necessity of wartime, these high tax rates become far more economically burdensome. There can be more to it than this: many industries have become accustomed to high levels of government demand, and pressure the government to maintain their relationships. A "military-industrial complex" invents threats to justify continued high levels of spending, and even generates new wars. The purpose of the spending may move from munitions to public works, education, public housing or some other avenue, but big government remains big. High taxes remain to fund this expenditure.

An economic recession typically combines a falloff of tax revenue with a surge of new spending demands. Huge deficits appear, and governments react by raising taxes. The economy may recover, but it does not recover as quickly or as heartily as it would have otherwise. Increased welfare-related expenditures become chronic. With the economy already weakened, another recession is more likely.

As it faces all of these challenges, a government may destabilize the currency. Coinage debasement as a means of public finance, especially during wartime, goes back to the beginnings of coinage itself. In 406 B.C., during its wars with Sparta, Athens attempted to pass a silver-plated copper coin as equivalent to silver. In the first century A.D., a pound of gold cost 1,050 Roman denarii; by the mid-fourth century, a pound of gold cost 2.120 billion denarii. By reducing the value of the coinage, a government may also reduce its implied debt burdens—in effect, a sort of quiet default.

Entangled in taxes, debt and welfare obligations, faced with an anemic economy and persistent unemployment, a government soon looks to "monetary stimulus" to solve its increasing problems. Here is a solution that seems to have no cost; does not require laborious parliamentary consensus; whose workings are so obscure that resistance is hard to organize; and whose effects seem immediate and tangible. Interest rates, credit expansion, and the "money supply" all come under intentional manipulation; to accomplish this to a meaningful degree, the currency's value must float. But these disruptions inevitably cause distortion of the system of market prices, interest rates, profit margins and returns on capital that organize all activity in the market economy.

Although currency manipulation and depreciation tend to cripple societies as a whole, certain people may benefit, and certain transient advantages may be obtained. A devaluation of the currency implies a devaluation of wages paid in the currency. Workers thus become poorer, but "more competitive," and employment may rise. Debtors' burdens are lessened, but creditors' capital is destroyed. Over time, those who benefit from currency depreciation become more wealthy and influential, while those that are harmed become weak and lose influence. The political system becomes dominated by devaluationists. Some Latin American countries have spent decades in this condition.

As the economy weakens due to currency manipulation and depreciation, real incomes and real wealth decline even as nominal incomes may rise. Lowballed "inflation" statistics produce an illusion of "real" growth. Persistent poor economic health results in greater demands upon the government, for welfare programs or other spending projects. Deficits become chronic, leading to more taxes, and possibly, more attempts to create a short-term economic lift with further monetary manipulation. Those in government become aware, at a subtle level, that their debts will eventually be paid in a depreciated currency. All budget discipline is lost. "In the long run, we are all dead" becomes their motto, and short-term expediency and personal gain eclipses concern for the long-term consequences.

As taxes rise, and money becomes ever more uncertain, further interventions and controls may be introduced to deal with the problems of the mediocre economy. Price controls, rent and wage controls, labor laws that prevent corporate headcount reductions, "affordable" housing subsidies or public housing, bailouts and nationalization of industries that are deemed too important to fail, protective tariffs, capital controls, and all manner of socialistic impulses are brought to bear to solve the problems of a capitalist economy that is clearly failing.

In this environment, it becomes more and more difficult to conduct an honest business—a business that creates a good or service of genuine value at a competitive market price, and consequently, makes the society as a whole wealthier. The risk of failure rises; the reward of success is taxed away. In even the best of times, business is difficult and uncertain. Competition is intense and unceasing. Enormous sums of capital must be employed, and thousands of employees hired, on unsure outcomes and profit margins that are typically less than ten percent of revenues. That profit can all too easily turn to a loss, and if losses persist, a businessman can see this enormous edifice of production melt away like a sandcastle at high tide.

High taxes, in themselves, introduce the principle of plunder. In time, this principle spreads. The most successful are not those that produce the most, but those that plunder the best. The attention and effort of the ambitious turns away from the business of providing valuable goods and services, and toward siphoning off the resources of others. Plunder becomes a far better business than production. No capital need be employed; no employees need be hired. The risk is negligible; the profits are certain; the profit margin approaches 100%. The ambitious and talented abandon private business and flock toward the government, and bleed it in a thousand different ways. Government courtiers ("lobbyists") provide the highest return on capital; "campaign contributions"—more recently, contributions to charitable foundations linked to politicians—amount to little more than outright bribery. The most successful private businesses tend to be those with some sort of government collusion—finance, education, health care, pharmaceuticals, defense, civil construction. Bailouts, subsidies, cartels, monopolies, and regulation favorable to special interest groups flourish. The restraints that existed against this corruption are unable to cope with the flood of new criminal aspirants. Even to complain about corruption indicates a lack of worldliness, a charming but naive display of moral principle. Legal punishments become a means for more powerful plunderers to squeeze the weaker from their trough, while placating an increasingly angry public.

Society divides between the plunderers and the plundered. As the poor become poorer, and the middle class disintegrates, people sense that many among the wealthy have not received their gains by creating jobs and providing valuable goods and services at competitive prices, but by cronyism, cartelism and theft. This makes the always-uncomfortable distance between rich and poor completely intolerable, leading to calls for punitive taxes, and other such steps, on wealth and high incomes. These attacks mostly hit the hardworking upper middle class. As taxes in general rise, real wealth can usually find a way to avoid taxation. In the past, the nobility and the church were tax-free, while peasants were taxed at high rates. Modern methods are usually less obvious. The tax-exempt wealthy often encourage higher taxes on the upper middle class, to assuage the complaints of the lower half of society, and to provide more government revenue that they may eventually grab their share of.

Politicians' support had been based on general prosperity and excellent statesmanship. As they eliminated waste and reduced taxes, they became more popular. But as the economy declines and governments fall out of favor, politicians attempt to purchase their support with handouts. Welfare benefits, public spending projects, crony contracts, regulation that favors special interest groups, and targeted tax breaks flow forth. Chronic deficits result, and higher taxes follow. From the outside, the State may seem all-powerful, but on the inside, the State is being torn apart by a struggle of interest groups to steal resources, and seems powerless to act otherwise.

Typically, not much can be done about this syndrome of decline while taxes are high and money is unstable. An attempt may be made to reduce spending and corruption in government, but as long as the private economy provides a worse alternative, the ambitious will naturally turn to corruption. Welfare programs can't be rolled back in the face of mass unemployment and destitution. Socialistic solutions seem better than relying on the crumbling private economy. Outright communism becomes a viable threat.

In time, rebellions, revolts, and secessionist movements erupt. Great masses of people conclude, quite reasonably, that they would be better off on their own, or allied with a different government. Governments attempt to keep the state together, but putting down these revolts costs enormous sums of money. Civil unrest depresses the economy and reduces tax revenue. Higher taxes, and currency debasement, naturally follow. People quietly conclude that the government has no legitimacy, and take ever more aggressive steps to avoid taxation. Many may simply leave the country altogether, and the realm is depopulated.

But, it is rare for a state to disappear completely. As the crisis deepens, and as high taxes and unstable money become a daily torment, people again seek out and rediscover the Magic Formula. Their attention turns to all those, throughout history, that have elucidated the principle in some form. The greatest advocates of Stable Money are always those that have experienced a hyperinflation; the greatest advocates of Low Taxes are those that have crossed oceans and taken up arms to free themselves from the oppressive state; the greatest advocates of the market economy and limited government are former communists.[A]

Rome

The last emperor of Rome's Golden Age, Marcus Aurelius (161-180 A.D.) struggled to maintain the low tax and stable money principles of Augustus. Nero had reduced the silver content of the *denarius* from 100% to 90% in 64 A.D.; this may have been in response to expenses following the Great Fire of Rome that year. Trajan (98-117) reduced the denarius to 85% silver, possibly an adjustment to match official bimetallic conversion rates to the market prices of gold and silver. The state treasury had built up a reserve of 675 million denarii (equivalent to 197,000 kilograms of gold) during the peaceful reign of Marcus Aurelius' adoptive father, Antoninus Pius. A series of invasions by German barbarians incited a long war during Marcus' reign that exhausted this sum. In Rome itself, several plagues (possibly smallpox or measles) broke out, causing up to 2,000 deaths a day in the capital. Total deaths have been estimated as high as five million, and the military was devastated. In a time when government debt finance did not exist, this left raising taxes, selling assets and debasing the coinage as ready alternatives. In an effort to avoid raising taxes, Marcus sold even his own personal assets to fund the state. As this avenue was eventually exhausted, he debased the coinage to 75% silver. After eight years encamped on the battlefield, Marcus finally returned to Rome victorious.

By itself, this was not particularly troublesome. But the demands of the time strained the abilities of one of the finest leaders that Rome, or any other country, had ever seen. With every narrator, the story of the Fall of Rome begins with his son and successor, Commodus, who was rotten. "Entirely absorbed in himself, he spent his life in continuous debauchery, and in gratifying his morbid passion for the

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[A] A 2014 poll by the Pew Research Center found that 95% of Vietnamese agreed that "most people are better off in a free market economy, even though some people are rich and some are poor." In China 76% agreed; the U.S., 70%; U.K., 65%; Italy, 57%. Since 2000, the main advocates of "flat tax" income tax systems with low rates have been former communist countries.

gladiator's art," described historian Michael Rostovtzeff.[2] "Administration and military affairs were neglected; he relied entirely upon the praetorian guards, and was hardly at all in touch with the provincial armies." Commodus did not raise official tax rates, but the fiscal difficulties of the state, colored with personal avarice, prompted him to use every pretense to confiscate property. "Though every measure of injustice and extortion had been adopted, which could collect the property of the subject into the coffers of the prince; the rapaciousness of Commodus had been so very inadequate to his extravagance, that, upon his death, no more than eight thousand pounds were found in the exhausted treasury," described historian Edward Gibbon.[3] This produced a strong opposition among Rome's wealthy aristocracy, to which Commodus responded by executing his opponents and confiscating their estates. The assassination of Commodus in 192 began a civil war, the "year of the five emperors," resolved when Septimus Severus, a general in command of an army on the German frontier, marched his army into Rome and seized the throne. For nearly a century afterwards, the empire convulsed as a series of generals or military-appointed emperors came to power via civil war. Between 192 and the reign of Diocletian beginning in 284, Rome had 32 emperors. Many did not last a year, or escape the cursed throne with their lives.

Septimus Severus (193-211) debased the denarius to 50% silver. By 250, it was down to 40%. Then, the denarius collapsed. In 270, the silver content of the denarius had been reduced to 4%, and the price of wheat had risen by twenty times since 200. Further devaluation of the coinage came about by issuing copper coins with larger and larger denominations. By 314, the nominal price of wheat was another 50 times higher than in 270.

The military itself, now dominant in all affairs, naturally attracted new aspirants. It at least doubled in size.[4] In their struggle to obtain and hold power, the emperors installed by the military needed money, and to get this, taxes rose. Eventually, the government refused to accept its own coinage, as did the soldiers themselves, and taxation was paid in kind. As the military became both the foundation of all state power, and also the defense against foreign invaders, sustenance of the military became the primary concern. To accomplish this, the military simply took by force what it wanted and needed from whoever was at hand. Economic activity collapsed, which made the military's demands, in comparison to meager production, all the more burdensome. The borders of the Empire shrank under the pressure of foreign invasion, and whole regions, particularly along the German border in Dacia, were pillaged and lost.

Diocletian (284-305) halted the chaos of Rome's collapse, ruling for twenty-one years and retiring peacefully afterwards to an estate on the Adriatic. The administration of the whole empire was reorganized. Diocletian attempted to reform the coinage and stabilize prices, necessary for a return to a monetary marked-based economy, but this was sadly unsuccessful. In response, he rationalized the system that was effectively already in place, in which taxation was paid in kind to meet the material requirements of the military.

The result resembled the centrally-planned communism of the Soviet Union. The military's needs in terms of grain, cloth, oil, weapons and so forth were calculated, and this requirement was divided among the empire's regions. The overall result was positive: farmers and other producers knew their fixed obligations, and were less subject to arbitrary pillage by armed forces. But this required a huge bureaucracy, which also needed to be supported. (The military and bureaucracy were tax-free.) Michael Rostovtzeff described:

> Compared with the delicate and complicated system of the early Empire, in which stress was laid on the self-government of the cities, ... the system of the late Empire, despite its apparent complexity, was much simpler, much more primitive, and infinitely more brutal. ... [T]he bureaucracy gradually became utterly corrupt and dishonest and at the same time comparatively inefficient. ... Every addition to the army of officials, every addition to the host of supervisors, served to increase the number of those who lived on bribery and corruption.[5]

As private enterprise became difficult or impossible, a popular path to wealth was to become a tax collector, a position that could be abused for private gain. Tax payments were encouraged by public torture; wives and children were made to give evidence against their husbands and fathers; obligations were increased by adding old men and children to the tax rolls. Even before such extortion, the tax collectors' authorized fees amounted to possibly a quarter of all revenue.[6] Emperors declared that abusive tax collectors would be burned alive, but this did not deter them much. In time, to maintain the system and prevent people from fleeing their obligations, people were tied to their land, homes, professions and places of employment, with sons eventually taking the place of their fathers—state serfdom. The coinage continued to be devalued, for anyone who would still take it in trade. In 344, the price of wheat had risen another two hundred times since 314, but this had become largely irrelevant.

"The resources of the farmers were exhausted by the outrageous burdens of all the taxes, the fields were abandoned, and cultivated land reverted to waste," lamented the historian Lactantius (250-325). In the next fifty years, taxation on farmers doubled again.[7] In some regions, a third to a half of all arable land was left uncultivated.[8] Mothers sold their children into slavery, and fathers prostituted their daughters, to pay the taxman. A significant decline in population has been attributed to malnutrition.[9]

If they did not abandon the fields altogether, small farmers would transfer ownership of their fields to large landowners, and continue as tenants or slaves, who paid no taxes. Large landowners, by legal or illegal means, had enough influence to avoid taxes—the tax collector, if he did not accept his bribe, could appear at the fortified villa and make his requests politely to the landowner's armed paramilitary. The self-sufficient manorial estate, manned by hundreds or thousands of serfs, capable of its own self-defense, requiring no money and little outside trade, became the primary economic unit, and remained so throughout the Middle Ages. Effectively free of taxes, they often became quite prosperous, even opulent, while the State was destitute. As the landowning aristocracy avoided taxes, demands fell ever more heavily on those that remained within the state's grip. The cities decayed, and many nearly disappeared. Masses of peasants fled to the lands of the barbarians.

Rome was invaded by the Visigoths in 410, and by the Vandals in 455—a passel of ruffians that could never have challenged the military in its prime. In 472, Rome was sacked by an unpaid Roman army, itself largely composed of barbarians. When Rome finally fell to the barbarian Odoacer in 476, it was not missed much. As long-term rulers, rather than short-term invaders, the barbarians were far less oppressive than the Roman state. In the vacuum of Roman collapse, new kingdoms emerged. In Gaul, the Merovingian dynasty (481-751) was followed by the Carolingian Empire (751-843), which unified much of Europe in the Holy Roman Empire.

While the Roman empire collapsed in the west, a new empire formed in the east. The emperor Constantine (306-337) established his capital at the ancient Greek city of Byzantium, renamed Constantinople, in 330. He also introduced a new coin, the *solidus*, of 4.5 grams of pure gold. It formed the basis of a new monetary system, which allowed the monetary market economy to revive. When it was introduced, it had a market value of 275,000 denarii. Perhaps the Romans had learned their lesson regarding monetary stability, for this coin continued to be issued from Constantinople, unchanged, for over seven hundred years afterwards. Roman paganism was abandoned, and Christianity became the official state religion. In arts and design, Greek classicism gave way to Persian opulence. High taxes persisted, but governments began to feel their way out of the morass. Julian (361-363) reduced taxes substantially, declaring at one point that he would "rather lose his life" than raise taxes.[10] Anastasius I (491-518) undertook a comprehensive reform of the tax system, and introduced a new, high-quality copper coin, the *follis*, to be used alongside the solidus and replace the small-denomination junk coinage then in use. (The name *follis* originally referred to a sack of coins worth 25,000 denarii.) Not long after the West had disintegrated into barbarism, the Eastern Roman Empire, now known as the Byzantine Empire, was so prosperous that Anastasius ended his reign with an enormous 150,000 kilograms of gold in his treasury. By 565, the Byzantine Empire had reconquered Rome and all of Italy. The Byzantine Empire continued another thousand years after the fall of Rome in the West, and ended with the conquest of Constantinople by the Ottoman Turks in 1453.

The Spanish Empire

When the eighteen-year-old Isabella of Castile married the seventeen-year-old Ferdinand of Aragon in 1469, they were so poor that they had to borrow to meet the expenses of their wedding ceremony. The ceremony was modest; both the bride and groom, centerpieces in the factional politics of the time, traveled to Valladolid in secret, and met for the first time four days before their wedding. But things were already looking up for the pair. When she was younger, Isabella was sometimes in need even of food and clothing.

The wedding effectively united Spain into a single entity, making it a major presence in European affairs. Spain thrived under Ferdinand and Isabella's leadership. Longstanding civil wars ceased; serfdom was abolished; bandits were eradicated; roads were improved; the judicial system was reformed, along with tax administration and many other government institutions. The year 1492 was a double landmark, as Spain's overseas empire began is amazing expansion, and also, the Muslims were driven from Spain for the first time since 711. Soon after, Spain invaded and expanded its realm in Muslim North Africa. Tax revenue of less than 900,000 *reals* in 1474 rose to over 26,000,000 reals in 1504, without the imposition of any new taxes.[11] The gains came from economic expansion and improved tax administration. Isabella died in 1504. Before his death in 1516, Ferdinand considered expanding Spain's holdings to include all of North Africa to Egypt, and eventually, Jerusalem and the Holy Lands. But, he instead contented himself with consolidating Spain with the invasion and acquisition of Navarre, on the border with France.

Inheritances formed the empire of Charles V (1516-1556), the grandson of Ferdinand and Isabella, who ruled Spain in addition to southern Italy, the Netherlands, Austria and, to varying degrees, the Holy Roman Empire—nearly all of Europe between France and Russia. The Spanish Empire in Europe was never a matter of expansion via the typical mode of military conquest or colonization, so much as a federalization, in the person of Charles V himself, of disparate, mostly independently-governed and autonomous existing entities. However, the later contraction of this empire, under the pressure of foreign military advance and domestic secession, was real.

Already by the mid-sixteenth century, while Spain's overseas empire was expanding dramatically, in Spain itself and in Spain's European holdings, a process of economic decay had begun. This strange contrast, between difficulties at home and glittering advances worldwide, appears to have been related to Spain's liberal attitude toward the overseas empire, amounting to benign neglect arising from the sheer difficulty of effectively managing such a realm in that era. Kingdoms had been small and ruled by direct personal interaction. Charles V was an example of the old type of king that personally led his armies into battle. In one anecdote from early in his reign, Charles once asked for a pen and paper, but none could be found in the castle.

Spain's government asked little of its overseas colonies except for a share of silver mining production, and even this imposition was thoroughly evaded. The Spanish eight-*real* coin, later known as the silver dollar, began to be minted in 1497. Later, the enormous flow of silver from the mines of the New World were minted into these silver dollars, which became the premier international currency of the world, a common coinage throughout the Americas and also throughout Asia, where it became the regular silver coinage of China. The Chinese yuan, Japanese yen, Korean won, Philippine peso, Hong Kong dollar, and U.S. dollar were all eventually derived from the Spanish silver dollar, along with various other dollars and pesos throughout the Americas. The value of the Spanish silver dollar was maintained essentially unchanged until it was effectively retired in the early twentieth century. Thus, with Low Taxes and Stable Money, the Spanish Empire expanded abroad, even as Spain itself was taxed and devalued into oblivion. At its peak around 1580-1600, after the union with Portugal in 1580, the overseas Empire spanned the world, including virtually all of Latin America from Mexico south including California and the Caribbean; the Philippines, the Marianas, Micronesia, Guam and Palau; and a network of trading ports along the islands and coastline of West and East Africa, southeastern Arabia, India, Malaya, Macau (China), Bali, and Japan.

From the beginning of his reign, Charles was faced with constant challenges and was forever short of funds. Wars with France in the 1520s, Ottoman Turkey in the 1530s, and revolt in Germany in the 1540s and 1550s, placed a constant strain on finances. Charles borrowed enormous sums from German and Genoese bankers, and also went from realm to realm to try to extract more taxes. At first, Italy and the Netherlands bore the brunt of this revenue-collecting, but that resource was soon exhausted. In time, Charles was refused; these countries considered themselves independently-governed states. They were willing to fight and pay for their own defense, but would not fund any foreign wars. Eventually, Charles turned primarily to Spain, and especially Castile, to raise taxes, and raise them he did.

The centerpiece of this tax system was the *alcabala*, a device that originated during the Muslim rule of Spain. It was a 10% tax on the transfer of all real and personal property. However, unlike a modern retail sales tax or VAT, it applied to all transactions, and could be imposed many times in the process of a product moving to market. In effect, it was a tax on the division of labor itself, and quite destructive of commerce despite its seemingly low rate. Also, it behaved as a tax on all asset transfers. Queen Isabella, in her Last Will, called for the abolition of the tax. Cardinal Jimenez pleaded with Charles V to eliminate it. But it also produced the most revenue among the many taxes of the day, and so it was kept. More taxes were added: The *cruzada* was once an emergency tax levied in times of war, but it became payable every three years by all inhabitants. This single tax brought in nearly as much revenue as all of Spain's overseas empire. The *terces reales* was a one-third tax on all church tithes; the *subsidio* a tax on all clerical rents and incomes; the *excusado* a further tax on church tithes. Additional customs duties (both external and internal) were imposed, along with a tax on sheep and cattle. The *servicio* had been a temporary tax granted during emergency, but it became permanent, and a major revenue source.

The outcome of this barrage of taxes in Castile was an explosion of tax avoidance, evasion and resistance. Peasants who would sometimes murder the tax-gatherers were not afraid of less violent means of avoiding taxes. These taxes did not produce much revenue. By the end of the Charles' reign, and after the imposition of many new taxes, the region of Aragon was paying less in revenue than it did at the beginning. Many of these taxes were administered by tax farmers—then, as ever, vicious, corrupt, and hated everywhere.

The countryside of Spain was depopulated as farmers fled the taxman, or were driven into destitution as their animals and goods were confiscated. One avenue of escape was the New World: with every shipment of silver and trade goods that came to Spain from overseas, thousands of emigrants left on the outbound ships for lands free of the hated taxes. Spain thus exported its best talent, the most ambitious, energetic and adventurous of its people. Another escape was the civil service: government employees were tax-free. Their headcount swelled to enormous numbers. "There are a thousand employees," wrote one, "where forty could suffice if they were kept at work." A third was the nobility: the nobility were free of many taxes. A fourth alternative was to join the gypsies, living in the underground economy, and possibly from outright crime. Prince Philip told his father in 1545: "the common people, who have to pay these *servicios*, are reduced to such utter misery that many of them walk naked."

Merchants and manufacturers closed their businesses, and purchased entry into the ranks of the *hidalgos*, a lower class of the tax-exempt nobility. Their assets were converted into government debt. This also gave them access to the court. Now, instead of being a productive taxpayer, they could engage in directing some of the flow of taxes paid by others out of the government and towards their own pockets. Within the court, a continuous battle waged for the patronage and favors of the king, and with it all manner of monetary rewards. The more intensely the taxes fell upon the lower classes, the more intensely the nobles and wealthy sought ways to avoid being taxed. Attempts were made to introduce tax systems that fell upon all classes proportionally, but the terror of being subject to taxes was so great that these were all refused. After all these efforts, Charles gained about a 50% increase in nominal annual tax revenue over the 37 years of his reign; but agricultural prices also increased by 100% during that time. By 1543, 65% of tax revenue was used to pay interest on the debt. An attempt was made to pay down some of the debt, but the bondholders complained that there was no other investment that would turn a profit.

During this time, the overseas empire was experiencing incredible success. The empires of the Aztecs and Incas fell with astonishing rapidity in the 1520s and 1530s. In the following decades, the Spanish adventurers consolidated their rule throughout the Americas, subduing and often enslaving millions of natives. In 1522, Ferdinand Magellan's fleet accomplished a circumnavigation of the world. In following decades, Spanish and Portuguese traders traveled throughout Asia, transporting silver and luxury goods between Europe and India, Siam, the "spice islands" of the Moluccas, China, the Philippines and Japan. In the 1570s, they established a trading route across the Pacific between China and Spain's colonies in Mexico and South America. Spanish galleons carried silver from mines in Bolivia and Mexico to China, and carried all manner of silks, porcelain, spices and other manufactured goods back to Europe. Before long, Chinese manufacturers were making goods according to European specifications, including clothing in the latest continental fashions. The Spanish government attempted to charge tariffs on this trade, but they were almost universally evaded.

Charles' son Philip II became king in 1556, and had the unfortunate duty of defaulting on the enormous debts his father had amassed. He defaulted in 1557, 1560, 1575 and 1596.

In 1566, a revolt broke out in the Netherlands, then under Spanish rule. Twenty thousand troops were sent under the command of the Duke of Alba to suppress the revolt. The Netherlands had been somewhat autonomous from Spain, and taxes were based on long-standing Dutch norms. To pay for the expense of the troops, Alba imposed a variety of new taxes including the hated *alcabala* at a 10% rate in the Netherlands. Whatever their previous grievances (mostly centered on the Protestantism sweeping Europe at the time), the Dutch now had a new reason to fight. The revolt turned into a disastrous civil war that lasted eighty years, with catastrophic consequences for Spanish finances. The independent Dutch Republic was established in 1581, although battles with Spain continued until 1648. The Netherlands had always been a center for trade, but independence freed the Netherlands from Spanish taxation and created a new competitor for Spain's overseas trade empire. Many of the new Dutch traders were simply the merchants of Spain with a new flag. As the Spanish coinage was later debased, during the seventeenth century, the Netherlands maintained a scrupulous policy of monetary stability. The Netherlands became the wealthiest nation of the seventeenth century, and the finance capital of Europe, before it too succumbed to overtaxation in the eighteenth century and was eclipsed by Britain.

Philip II's empire was harried by both the Dutch and the English, who interfered with shipping especially along the North Atlantic coast. In 1588, Philip decided that he would invade England, and sent off an Armada of 130 ships to accomplish that goal. The Armada was defeated, mostly by terrible weather rather than the overmatched British navy. But, Britain showed that it would fight with all of its resources; and certainly one reason for this was that they would rather be ruled by Elizabeth I than fall under the oppression that Philip II imposed upon his own people. The costs of the Armada and Philip's other imperial ambitions were enormous, and funded by more debt and more taxes. The *milliones* and *sisas* piled heavy new excise taxes upon the existing tax structure.

Philip III became king in 1598, at the age of twenty. At the beginning of his reign, popular discussion erupted around solutions to Spain's difficulties. The main current of thought comes down to us even today, four hundred years later: government expenditure should be slashed; the tax system should be overhauled; immigrants should be encouraged to repopulate Castile; fields should be irrigated, rivers made navigable, agriculture and industry should be protected and fostered. But the kind of person who might undertake such a task was exactly opposite to the kind of person that thrived and flourished in the environment of the previous seventy years. Instead, the young king fell under the influence of a smooth-talking and corrupt nobleman, the Duke of Lerma. Lerma soon replaced all the top posts in the government with his friends and relations. He undertook no reforms; instead, his main goal was to use his position to enrich himself. He was relatively poor when he first gained the king's favor, but soon, in the midst of a barren and troubled land, he was fabulously wealthy. He filled many lower positions with men much like himself. Of his two favorites, one was eventually arrested for embezzlement, and the other was eventually executed.

Lerma's plunder did nothing for Spain's financial problems, so beginning in 1599 he authorized the issuance of a coinage of pure copper, with a face value equivalent to the existing silver coins. In 1603, the coins were returned to the mint to be stamped at double their face value. More copper coins were issued in 1617. A new element of monetary debauchery was added to Spain's many domestic difficulties. (The Spanish silver dollar, by then used externally throughout the Americas and Asia, remained unchanged.) Another debt repudiation took place in 1607.

Lerma managed to get commitments for more taxes from Catalonia and Valencia, but so much was required in the form of bribes and rewards to nobles and officials that little net revenue was produced. Court life became decadent. The king amused himself with festivals and entertainments, while foreign diplomats were left waiting. Aristocrats, many of them also financially hard-pressed, left the direct management of their estates in the country and moved to the Court, to seek favors and rewards of the king. The struggle for position in the Court required ostentatious display, and if their expenses soared, this was offset by the rewards they obtained. To sustain the support of the nobles, the king would grant *mercedes*, or rewards for service, and these grants became a continuous stream of patronage further bleeding the state's finances. As the countryside was depopulated, manufacturing abandoned, the merchant classes crushed, and a flood of emigrants sought their fortune overseas, the population of Madrid grew from 4,000 in 1530 to 37,000 in 1594, and as high as 100,000 in the 1630s. From the servants of the aristocrats, through the lower levels of government bureaucracy, to the highest levels of the Court, careers were built on influence, favor and recommendation. One observer said there were thirty parasites for every one that did a day's work.

Philip IV became king in 1621—not quite age sixteen—and also brought with him a key minister, the Count-Duke of Olivares. If Lerma had been predictably corrupt, Olivares was surprisingly virtuous. Ambitious, capable, dynamic, known for hard work and lack of sleep, by all indications devoted to public service, he intended to enact all the reforms that had been discussed over the past twenty years and return Spain to imperial greatness. In 1623, a reform plan aimed to reduce municipal officers by two-thirds; impose sumptuary laws; prohibit foreign manufactures; and close brothels. Internal resistance was strong, however, and little was accomplished. Instead, spending increased on the military, while new wars erupted with the Netherlands. In 1623, Olivares attempted to abolish an unpopular tax on articles of consumption, which hit the poor the hardest, but the plan was rejected in the face of revenue needs. Instead, the tax was doubled.

Another debt default occurred in 1627. An ambitious plan to eliminate the autonomous, federal structure of the empire and organize an empire-wide army was formed: "one king, one law, one coinage." But the plan was rejected throughout the empire, for the simple reason that nobody wanted to be subject to Castilian law—that is, the tax law, and requirements of military service—or the debased and unreliable Castilian coinage. Still more taxes were imposed in Castile, along with—among the tax-exempt nobility—outright confiscations of wealth exchanged for unwanted government bonds. Interest payments on government bonds were halved, and payments to foreigners ceased entirely. Twenty million ducats' worth of copper coins were issued in 1621 and 1626, swamping Spain in junk coinage. Inflation erupted, and price controls were imposed. After the price controls failed, the coins' face value was halved in 1628, causing a dramatic deflation that bankrupted many.

Olivares rushed from one trouble spot to another, dealing with the never-ending series of crises with exemplary energy, dedication and commitment. Mostly, this meant military action, which cost money, which meant more taxes, which produced new crises. In an effort to fund the military, new taxes were imposed in the Basques. The Basques had no hope of resisting, but they resisted anyway, and had to be bullied into compliance with military force. An attempt to impose excise taxes on food in Sicily and Naples set off revolts, which required the intervention of the Spanish fleet to subdue. Olivares had made many attempts to extract more taxes and military assistance from Catalonia, but these had been rejected. In 1639, France invaded Catalonia, and the Catalans' response was decidedly tepid. The military contribution which Madrid demanded of the Catalans, for defense of their own land, was met with increased hatred of Madrid. Many Catalan soldiers deserted. In 1640, Olivares demanded one of the most odious forms of taxation—the billeting of foreign troops, in support of the conflict with France. In response, Catalonia erupted into a ten-year civil war. In January 1641, the leader of the revolution formally declared the allegiance of Catalonia to the King of France. Soon, the Spanish military was fighting a combined army of Catalans and French just outside of Barcelona.

Portugal had become part of the Spanish empire in 1580, when the Portuguese king died without an heir. Philip II of Spain claimed the throne in the vacuum. In 1634, Olivares installed a new governor of Portugal, which had been largely autonomous before. The governor was assigned to levy new taxes in Portugal and remit them to Madrid. A five percent *alcabala* was imposed in Portugal, contrary to a prior charter between Portugal and Spain. In 1640 a revolution erupted in Portugal, in which the governor was exiled, the tax administrator was hanged, and Portugal declared itself independent of Spain. With this, Olivares and the Spanish monarchy were broken and defeated. After 1640, much of Spain's remaining European holdings—in Italy, Flanders, and on the eastern border of France—were lost, while even in Spain, Aragon, Valencia and Andalusia threatened to follow Portugal into independence. Another issuance of copper coins in 1641 led to inflation; an anti-inflationary reform in 1642 again caused deflationary havoc. Olivares was ousted in 1643, and died in 1645—apparently broke, having spent much of his own wealth in service to the state.[12] No other minister of comparable energy existed to take his place, and the government drifted. More defaults followed in 1647 and 1653; more junk coinage was issued. In 1654, an observer lamented: “On many days the household of the King and Queen lack everything, including bread.” Military defeats in 1663 and 1665 furthered the disintegration of the European empire.

“It would be difficult to describe to its full extent the disorder in the government of Spain,” France’s envoy to Spain, the Marquis de Villars, said in 1668. The government was largely run by a council of twenty-four “without spirit or experience,” exemplified by the Duke of Medina de las Torres, who had “spent all his life in Madrid in total idleness, almost exclusively shared between eating and sleeping.” A coup in Madrid in 1669 nearly succeeded. Sicily revolted in 1674; the same year, France took Burgundy. Much of Spain’s overseas empire fell into the hands of the Dutch.

Spain’s Habsburg monarchy hobbled along for a while longer. This was actually a prosperous time for Spain’s foreign provinces in Italy and the Americas, and also some aristocrats in Spain, who found that Madrid had become so feeble that they were effectively free of any obligations. The value of the copper coinage declined until, in another attempt at reform, it was raised again in 1680, causing destruction both ways. In the cities, barter accompanied riots. The remnants of industry were destroyed; that year, the royal family could not raise the funds for its annual trip to Aranjuez. In 1701, when the Habsburg family failed to produce a successor, control of Spain passed to the Bourbon family of France. The sixteen-year-old Duke of Anjou, born at Versailles and renamed Philip V, did not speak Spanish. Neither did many of the advisors he brought with him, who completely remade the Spanish government in the French model.

Britain After 1918

At the end of World War I, Britain and the United States were the world’s most powerful economies. The United States overshadowed Britain in production and per-capita incomes, but mostly limited its ambitions to within its own borders. France and Germany had been high-growth industrial leaders before 1914, but the war left France battered, and Germany in economic ruin. Japan had risen to the first rank of industrialized countries but was still a tentative newcomer. Russia convulsed in genocidal horror.

The British Empire reached its peak after World War I, when it received, in the Treaty of Versailles of 1919, an additional 4.7 million square kilometers of land area and 13 million subjects from the defeated German, Austro-Hungarian and Ottoman Empires, bringing its total holdings to 35.5 million square kilometers (24% of the Earth's total land area) and around 425 million subjects (23% of world population).

This empire was acquired by force and guile, the Lee-Enfield rifle and the Maxim machinegun, which proved to be particularly effective against Africans armed with spears. Yet, it could be held and expanded because Britain had been, for generations, the most virtuous of any major government, excepting the United States. Britain exemplified the Magic Formula, and enjoyed centuries of prosperity, international ascendancy and domestic tranquility as a result. Its legal system became the model for all others to follow. Britain's universities were unmatched; its arts and letters exemplary; the moral virtues of its society justly admired. Its science and technology were at the leading edge. Its government bonds were the most trusted worldwide. Beginning in 1807, Britain abolished slavery throughout the Empire. Every imperial power tells its soldiers that it is bringing the noble virtues of civilization to benighted people; but the British soldier, and British colonial administrator, could believe it. Even the Hindu masses of India—who, before the British took over, had been ruled since 1526 by a Muslim government of nomadic barbarians that had invaded India from today's Uzbekistan—could believe it. An estimated nine million slaves in India were freed by the British in 1843, more than double the 3.5 million freed in the U.S in 1863. In 1858, the British deposed the last of India's Mughal emperors. Such were the British powers of organization that they could not only rule and administer vast tracts of the Earth; but, in India, Rhodesia or New Zealand, during their leisure hours they would play polo—a game of such extravagance that, at competitive levels, each player requires a "string" of as many as nine horses. One British official, bored with the obligations of empire, built a golf course in Tibet. A century later, they struggled to keep the subways running in London.

Britain after World War I was in much the same situation as after 1815. Enormous wartime debts were left, along with a floating pound whose value had sagged against its prewar parity. The national debt/GDP ratio in 1919 was an estimated 149%—roughly the same as in 1816. But Britain in 1816 was anxious to return to its Enlightenment-era, Adam Smith-ian ideals of Low Taxes, Stable Money, limited government and private enterprise. They had stared their giant debts in the face and repealed the wartime income tax, cheering as they publicly burned the tax records. Britain of 1919 was of a different mind: the rise of socialist ideologies, in the late nineteenth century, had inspired the introduction of the welfare state in a series of steps after 1900, along with steadily increasing taxation and spending to finance it. Along with this came the Marxist idea of a "progressive" tax system, aimed at supposedly mitigating the divide between the wealthy and less-well-off with punitive taxation of higher incomes.

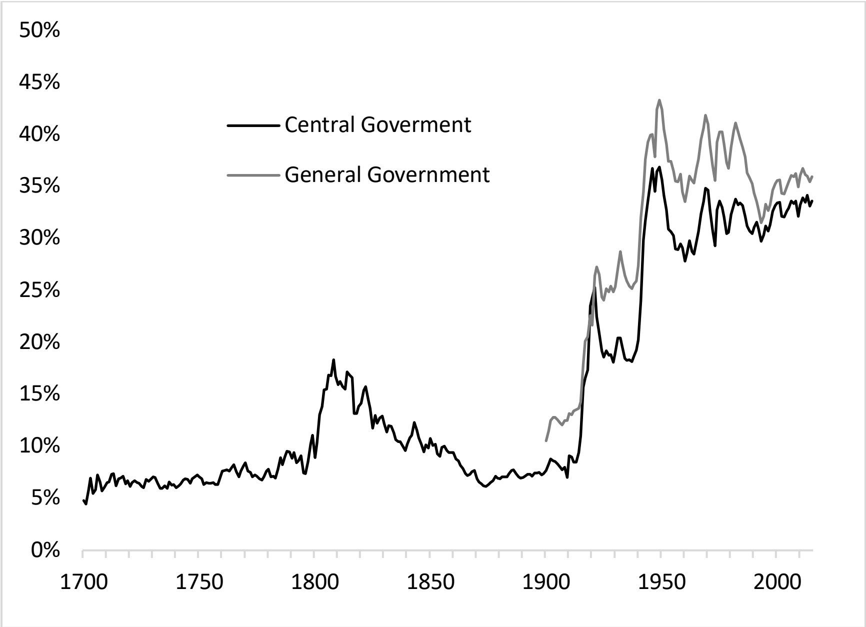

Figure 5.1: Britain: Tax Revenue/GDP, 1700-2015[13]

Britain emerged from World War I with a tax revenue/GDP ratio double what had come before. Much of the revenue went to finance the further expansion of socialist welfare programs after 1920. Poor relief, unemployment insurance, health insurance, old age, widows and war pensions were either instituted during the time or expanded from their prewar origins. Wartime rent controls were maintained afterwards; the resulting housing shortage then led to government-built subsidized housing. "Social expenditure," at both the national and local levels, rose from 5.5% of GDP in 1913 to 10.3% in 1924 and 13.0% in 1938.[14]

Not surprisingly, the British economy stagnated badly during the 1920s, in stark contrast to the United States and France, where postwar tax reductions led to a soaring economic boom known in the U.S. as the "Roaring Twenties." In 1929, the U.S. Federal government's revenue/GDP ratio was 4.1%. For Britain's central government, it was 18.1%. In 1921, the top income tax rate in the U.S. was 73%, but the tax rate on income up to $4,000 was 4.0%. The equivalent income of £823 was taxed at 30% in Britain. In 1928, the top rate in the U.S. had fallen to 25%, and the rate on income up to $4,000 was 1.125%, while Britain retained its high tax rates.

1913-1914		*1920/21*	
Income	*Tax Rate*	*Income*	*Tax Rate*
£0-£160	0%	Personal allowance £135 (£225 married)	0%
£160-£2000	3.8%	£0-£225 after allowances	15%
		£225-£2000	30%
£2000-£3000	5%	£2000-£2500	37.5%
		£2500-£3000	40%
£3000-£5000	5.8%	£3000-£4000	42.5%
£5000+	8.3%	£4000-£30000	Increments of 2.5% up to 57.5%
		£30000+	60%

Table 5.1: Britain: Income Tax Rates, 1913/1914 and 1920/21[15]

The moribund economy in Britain in turn led to greater demand for social services and greater dissatisfaction among the struggling working class with the apparent easy lives of the wealthy. Further calls went up for ever more taxes upon the wealthy, or outright confiscation of their wealth—as was actively discussed in Cabinet meetings throughout the 1920s, as a means to relieve the burden of war debts. But this was not an easy time for the wealthy either, who found it agonizingly difficult to conduct business profitably between the demands of taxes, labor unrest, the anti-business tendencies of government, and the difficulties of economic stagnation. This did not inspire them to make any new investments or expand operations in Britain. The spiral of decline had begun.

The tax revenue/GDP ratio alone does not express the new problems created by Britain's tax system. High revenue/GDP ratios today are largely financed with broad taxes with relatively low rates, such as the retail sales tax, VAT and payroll/"social insurance" taxes. But these were not yet invented. Britain had enjoyed two centuries of low taxes based largely on moderate excise taxes. They were thrown—by wartime expediency, debt service demands and socialistic unrest—into an unplanned and unexpected situation of income taxes at high rates. Nobody had much experience with this. The British did many things wrong; indeed, we today have some idea of what not to do because the British did it wrong, first.

The idea of "taxing all income the same"—taxing dividends, interest income, capital gains, and inheritance at the same rate as employment income—has been suggested and tried many times since 1900, but it has generally been abandoned. The negative economic effects of taxing capital at such high rates are simply too much to bear, and amount to double-taxation when income from capital is already taxed at the corporate level. Germany, Japan and the U.S., after World War II, maintained high rates on very high incomes, but had much lower rates for capital, or excluded it from taxation altogether. Germany and Japan had little or no taxation on interest income and capital gains. Even while revenue/GDP ratios remain high in Europe today, taxation of capital is relatively light. Dividends, interest and capital gains are lightly taxed or tax-exempt, and taxes on corporate profits are moderate.

The British, however, began by embracing the opposite principle: taxes on "unearned income" would be higher than on employment income, a practice first introduced in 1907. In 1919 the minimum "standard rate" of taxation on "unearned income" was 30%, rising beyond that on incomes larger than £2,000. The top income tax rate, on incomes over £10,000, was 52.5% in 1918/1919. Instead of lowering tax rates after the war, Britain actually increased them in 1920. The top rate on personal income was raised to 60%.

An Excess Profits Tax of 60% was imposed, during the War, on corporate income in excess of the prewar 1913-14 levels. This was supposed to be a wartime expedient to be eliminated after the war, but it too was retained. The rate was lowered to 40% in 1919, but raised back to 60% in 1920. In 1924, it was repealed.

In 1925, Winston Churchill, as Chancellor of the Exchequer, attempted a tax reform that reduced taxes. The “standard” rate, felt by many middle incomes, fell to 20%. However, the top “super-tax” rates were maintained, and taxes on inheritances also increased.[16]

The British pound, like all other major currencies, left its gold parity and became a floating currency during World War I. Its value sagged as the government printed money for war finance, but capital controls on foreign exchange and the gold market masked the extent of decline. In 1919, capital controls were lifted, and the U.S. dollar was the first to return to its prewar gold parity, which apparently involved a substantial rise in dollar value. After 1920, the pound/dollar exchange rate reflected the free-market value of the pound vs. the dollar, and consequently, the value of the pound vs. gold. At its nadir in 1920, the pound’s value was about 31% below its prewar parity.

By 1922-24, the pound’s value had recovered somewhat, and floated about 10% below its prewar parity. The decision was made to return the pound to its prewar parity and resume a gold standard policy in 1925. This involved a modest rise in the value of the pound, of about 10%. This rise in the pound’s value, coming atop the rise that had already occurred since 1919, did introduce some additional recessionary influence upon the economy, but not very much—no more than a comparable 10% rise, from $1.25 to $1.38 for example, in the euro today. The reintroduction of currency reliability and stable exchange rates was a definite positive, helping to re-establish London’s primacy in international finance. The U.S. had done a similar thing in 1879, when it returned to a gold standard (at the prewar parity) after a long period of floating begun during the Civil War. But the U.S. had eliminated its wartime income tax in 1873. An economic boom resulted.

The economists of the 1920s had little experience with the new high-tax environment. Their “economic models,” developed during the 1870-1914 period, had an inherent assumption of tax rates that were too low to matter very much. Consequently, they tended to overemphasize monetary effects upon the economy—particularly as France was also returning to a gold standard system around the same time but, after substantial currency depreciation, at a rate about one-fifth of the franc's prewar parity. The complaints about a "high" British pound were reflective of a "low" French franc. This tendency to blame monetary causes for all the economic difficulties of the time had serious consequences. It formed the intellectual basis for the British devaluation of 1931, and for the decades of "soft money" rationalizations and periodic devaluations that followed. An economic model that tended to see monetary causes for all problems was also one that tended to see monetary solutions for all problems.

Unemployment was high throughout the 1920s. Militant unions organized a General Strike in 1926, which crippled the economy that year. The Strike, which ultimately failed, proved to be a high point for the unions, which lost influence thereafter. However, the outcome included increasing concessions toward labor including generous unemployment benefits, another factor in the persistent unemployment of the period.

The reaction of the British government to the initial downturn of the Great Depression, and the consequent decline in tax revenue while unemployment insurance expenditures soared, was to increase taxes still further—"austerity." In 1930, the standard rate increased by 2.5% to 22.5%, while the top rate increased by 10%. Inheritance taxes also increased. The Inland Revenue Service, adamant that direct taxes had reached their limits, calculated that the top tax rate on investment income, including income taxes and inheritance taxes, was 131.67%. In 1931, additional indirect taxes were imposed, the standard rate of income tax was raised to 25%, tax allowances were reduced that made an additional 1.25 million people subject to income tax, and the top tax rate rose another 10% to around 80%.[17] Between 1930 and 1932, the effective income tax liability on a family of five with an upper-middle-class income of £500 was calculated to have increased by 380%.[18] Trade protectionism, in the form of a general tariff, was introduced for the first time in 1931, ending a long tradition of free trade.[19] These tax increases, piled on top of all the already-existing difficulties of the Great Depression, intensified Britain's economic problems. The taxes were soon rolled back somewhat, but the British economy continued to struggle through the remainder of the decade.[20]

In September 1931, the same month that the tax increase was passed, the British pound was devalued. The two were related: a main rationale for the tax increase was the idea that a balanced budget would help maintain the integrity of the currency. In practice, what probably happened is that factions in the Bank of England sensed the negative consequences of the tax increase, and wanted to compensate somewhat by "monetary ease." [21] Investors, perceiving both the economic effects of the tax policy and the likely response of the Bank of England, stampeded for the exits.

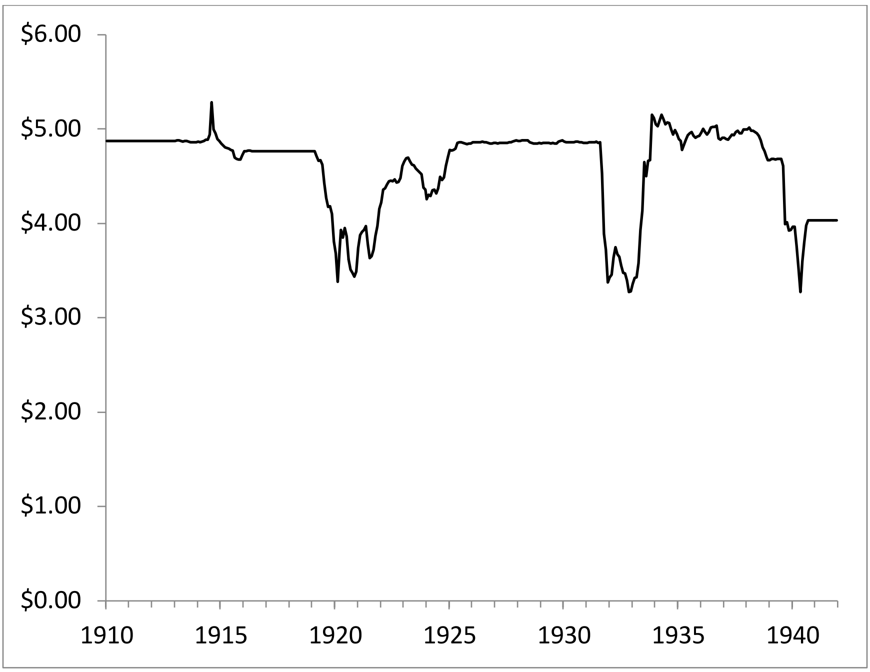

Figure 5.2: Britain: Value of British Pound in U.S. Dollars, 1910-1941

The devaluation of the British pound came as a shock. For nearly four centuries, the British pound had been the world's paragon of currency reliability. It had departed from its gold parity only under the pressures of large-scale war. Even then, the value of the pound depreciated gradually, sinking slowly over a period of years. When the wars were over, the value of the pound had been raised back to its prewar gold parity. British government bonds were considered what today's financial specialists call a "risk-free" investment; and their history over centuries justified this reputation far more than anything available today.

Now, the British pound had undergone a peacetime devaluation, in a period of months, equivalent to what had taken place over all of World War I. Nor was there any question of a return to the prior parity, which had been originally defined in 1717. For the many foreign holders of British government bonds, and British pound-denominated debt of all sorts, it amounted to a partial default. And what was the reason for this? Where was this going? There was no plan. How far would the pound drop? Would there be further intentional devaluations, in response to economic difficulties? Hyperinflation had roared through Germany, Austria and Russia only eight years earlier. Britain had not had a peacetime currency devaluation since the reign of Edward VI, in 1551.

By the end of 1931, twenty-three of the top fifty-five countries worldwide had followed Britain and left the gold standard. Many of these were part of the British Empire, or based their currencies in turn upon the British pound. Others did so due to competitive exchange rate and trade issues. This introduced a new element of monetary turmoil into the already-disastrous and deepening Great Depression. The devaluation brought some relief to Britain. The national debt, and all other pound-denominated debts, were effectively lightened. Wages were effectively slashed—without the kind of labor unrest that led to the General Strike only five years earlier—and unemployment moderated. Exporters became more competitive on world markets. Yet Britain did not rise to greatness with currency debauchery and debt repudiation; nor had any other country in history. Britain had already lost one part of the Magic Formula, Low Taxes. Now it lost the other. The British pound stabilized vs. gold later in the 1930s, but it remained a floating currency. The devaluation of the U.S. dollar in 1933 effectively restored dollar/pound exchange rates to their pre-1931 levels.

After World War II, Britain's policy response was, in many ways, an intensified version of the 1920s. The high taxes of the 1930s got even higher during the war, and again were maintained at high rates afterwards. Tax revenue/GDP took another bump higher. The welfare state expanded to outright nationalization of industry on a wide scale, and socialistic control of industry in myriad ways, including wage and price controls. The British pound was devalued in 1949 and 1967, before floating against the dollar in 1971. While the German and Japanese economies boomed during the 1950s and 1960s, and the U.S. enjoyed steady progress, Britain was a perennial laggard. By 1970, per capita GDP in Britain was less than half that of the U.S. During the inflationary 1970s, when the German mark, Japanese yen and Swiss franc rose against the declining dollar, the British pound slipped yet further, taking the lead position in the global race to the bottom.

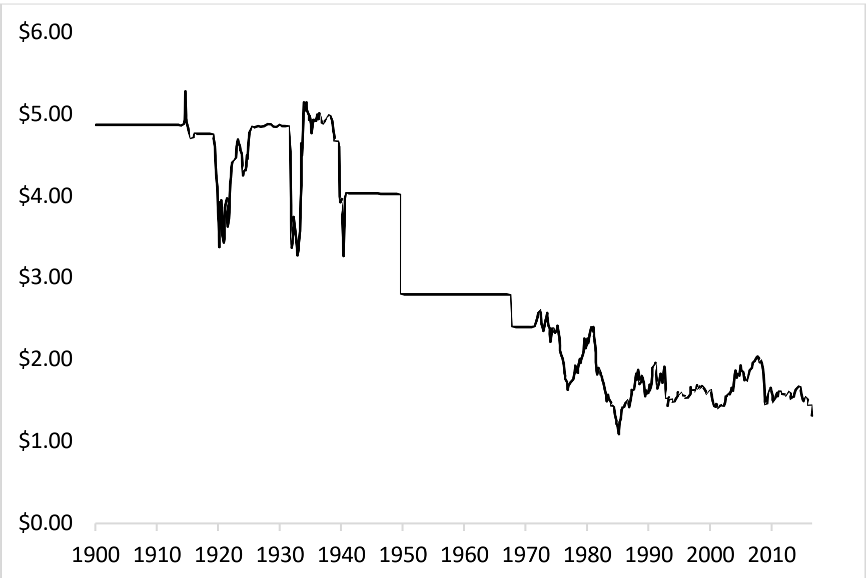

Figure 5.3: Britain: Value of British Pound in U.S. Dollars, 1900-2016

The unreliability of the pound, in 1931 and throughout the remainder of the 1930s and 1940s, the devaluations of 1949 and 1967, and the pound's poor performance after 1971, cemented the transition of world currency leadership to the U.S. and the U.S. dollar.

Figure 5.4: Britain: Official Value of £1000 in equivalent gold oz., 1550-2017
Logarithmic scale

During the 1950s and 1960s, top income tax rates were as high as 98%. "Standard" rates, which fell upon moderate levels of income, were regularly above 40%. Already by the late 1940s, the Treasury, and also the Federation of British Industries, complained that the tax regime hindered the accumulation of capital, and removed incentives toward effort and risk-taking on new enterprises. When Conservatives returned to power in 1951, an intense discussion revolved around encouraging more economic growth with lower tax rates. It was ultimately decided that they would wait for more economic growth and budget surpluses first, which would then allow them to cut taxes. In thirteen years of Conservative government, 1951-1964, little was done.

The inflation and floating currencies of the 1970s just made it all worse. Inflationary "bracket creep," which put more and more people into the higher tax brackets, was already a factor due to the devaluations in 1949 and 1967. It intensified still further. In 1977, it was estimated that 100,000 British executives, middle managers and entrepreneurs had left Britain in the previous three years, mostly due to high taxes. That year, a quarter of business managers surveyed said that it was not worth accepting a promotion due to taxes.

The long decline was halted when Margaret Thatcher took office in 1978 and immediately began to reduce Britain's very high tax rates. In 1978/79, the top income tax rate of 83% affected all income over a very modest hurdle of £24,000 (about $45,000 at the time). An investment surcharge of 15% (Britain was still taxing "unearned income" at a higher rate) created a tax rate of 98% on investment. The corporate tax rate was 52%. By 1988, the top rate had fallen to 40%, the surcharges were gone, and the corporate tax rate was 35%. In 2017, the corporate tax rate had fallen to 19%. Nationalized industries, excessive union influence, and a thicket of socialistic regulations and programs had been cleared away. The revenue/GDP ratio was still very high, but this was financed largely from efficient VAT and payroll taxes at tolerably low rates. Britain was still not an economic success story, and hardly an example to emulate. Per capita GDP in 2015 remained 22% below the U.S. But, it was no longer so obviously sick.

Britain had once ruled the world; after World War I, it could barely manage its own internal affairs. Actually, it still ruled the world: the additional territories gained after World War I brought the British Empire to its peak. But Britain was no longer an example to follow. It no longer brought any promise of benefit to its far-flung subjects, who instead might fear that what the British had done to themselves would be done to them, too. It no longer had the self-confidence that it deserved to rule; it no longer even had the interest, as domestic difficulties consumed all attention. It no longer had the Magic Formula. It is a testament to Anglo-American ideals that Britain did not exhaust itself trying to keep hold of what it could never have possibly maintained by force. Britain mostly sent its Imperial subjects peacefully on their way with its blessing, happy to be free of the responsibility.

Ireland—which had been under British rule since 1168—rose in revolt and achieved its independence in 1921. Egypt gained formal independence in 1922, although it remained a client state until 1954. In 1926-1931, Canada, Australia, New Zealand, South Africa and Newfoundland gained independence from British legislative control. Iraq gained independence in 1932.

India, and the new state of Pakistan that was split from India, gained independence in 1947. (Bangladesh was part of Pakistan until it separated in 1971.) Burma and Sri Lanka went independent in 1948. Sudan gained independence in 1955. In 1956, Egypt unilaterally nationalized the British-held Suez Canal. Cyprus left in 1960; Malta in 1964. An independent Malaysia was formed from eleven sub-states in 1963; Singapore split from Malaysia in 1965. All of Britain's remaining African colonies were given independence between 1951 and 1968, including: Gambia, Sierra Leone, the Gold Coast, Nigeria, Tripolitana and Cyraneica (Libya), Eritrea, British Somaliland and Somalia, Kenya, Uganda, Tanganyika, Zanzibar, Seychelles, Nyasaland, Rhodesia and Northern Rhodesia, Mauritius and remainders of South Africa. Britain's Caribbean holdings gained independence during the 1960s and 1970s, including: Jamaica, Turks and Caicos, Trinidad and Tobago, Barbados, Guyana, Belize, Antigua and Barbuda, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, the Bahamas, and Grenada. In time, Oman, Jordan, Kuwait, Palestine (Israel), Aden, Bahrain, Fiji, Vanuatu, Tuvalu, the Solomon Islands, Papua New Guinea, and eventually Hong Kong, all drifted out of British hands.

During the 1970s, preparations were made to hand the Falkland Islands over to Argentina, but in 1982, as the British economy promised new vigor under Margaret Thatcher's lower taxes, Britain decided it would keep the islands. Britain fought off the Argentine military and then expanded its own military presence in the Falklands. The long disintegration of the British Empire was over. In 2017, fourteen territories remained under British sovereignty, while another fifteen autonomous Commonwealth realms continued to recognize the British monarch as their head of state.

The 1970s

During the 1960s, the more successful countries—Germany, Japan and the United States—had settled on an effective pattern. Top income tax rates were high, but these fell on very high incomes. Most people were taxed at marginal rates around 20%, or lower. Those with high incomes had a welter of exemptions and exclusions, and even semi-official means of tax evasion, that could be used to avoid the high tax rates. Sales taxes/VAT and payroll taxes were low. Overall revenue/GDP ratios were modest. Money kept an unchanging value in relation to gold, within the Bretton Woods system. Exchange rates were fixed. It was a somewhat convoluted, but nevertheless effective, implementation of the Magic Formula.

Beginning in 1971, the dollar's value declined from its Bretton Woods parity at $35/oz. to a nadir at $850/oz. in 1980 before stabilizing around $350/oz. during the 1980s and 1990s—an effective tenfold decline in currency value, compared to gold. Other countries' currencies followed the dollar lower, in large part to avoid dramatic changes in exchange rates that would cause economic havoc. Prices naturally rose as markets adjusted to the new currency values, causing the "inflation" of the time. This simple process was not very well understood. In 1974, inflation had reached crisis proportions. U.S. President Gerald Ford, calling inflation "public enemy number one," proposed to "whip inflation now" with a set of emergency measures that included carpooling, turning down thermostats, and starting vegetable gardens. In the end, not much was done except to issue buttons with the "WIN" logo.

Five years later, in 1979, as continued dollar depreciation continued to grind down the economy, President Jimmy Carter, in a landmark declaration still remembered today as the "malaise speech," blamed the U.S. troubles on a "crisis of confidence." His concrete policy steps amounted to reducing the use of foreign oil. Even then, the U.S.'s leaders did not perceive that the problem was essentially monetary.

The decline in the value of currencies interacted malevolently with the tax systems common at the time. As nominal incomes rose due to inflation, more and more people were pushed into higher tax brackets that had been intended for only a small fraction of the population. (At the time, tax brackets were not adjusted for inflation.) The marginal tax rate for a family of four earning a median income in 1965 was 19%. In 1980, it had risen to 28% due to inflationary bracket creep. A family of four making twice the median faced a marginal tax rate of 22% in 1965, and 48% in 1980.[22] Rising prices threw all sorts of basic accounting into confusion. Corporate depreciation was based on past purchase prices, not current replacement prices. The tax rate on capital gains in the U.S. had been nearly doubled in 1969, to a top rate of nearly 50%. However, these elevated tax rates also applied to inflationary increases in nominal asset prices, which did not represent any real increase in value. In effect, the tax fell not only upon gains, but upon wealth itself. Interest rates soared higher to compensate for inflation. This increased interest income was itself taxed at high rates. Payroll and sales taxes also inched higher throughout the decade.

The effect was a combination of increasing taxes and unstable money—exactly contrary to the Magic Formula. Carter not only had no idea what was causing the inflation that was destroying his presidency, he also wanted to make the tax problems still worse. Although he called the income tax system a "disgrace to the human race," his reform proposals included taxing capital gains as regular income (at rates as high as 70%, and not adjusted for inflation), eliminating tax shelters and deductions, and making the tax system more progressive. These proposals were rejected by Congress.

Congress was already moving in a different direction. In 1978, capital gains tax rates were cut nearly in half to 28%—by a Congress that had a 58% Democratic majority in the Senate and a 66% majority in the House. In 1977, Republican representative Jack Kemp had proposed to cut income tax rates by 30% across the board, an overt imitation of Democrat John F. Kennedy's tax cut plan passed in 1964. In October 1978, Democrat senator Sam Nunn combined this proposal with spending limits to create the Nunn Amendment, which passed both houses of the Democrat-controlled Congress before being killed by the Carter administration.

Nunn's low tax/reduced spending strategy was picked up by Ronald Reagan, who defeated Carter in the 1980 presidential election. The Economic Recovery Tax Act of 1981 passed the Democrat-controlled House by 323-107. The Tax Reform Act of 1986, which lowered the top personal income tax rate to 28%, passed the Senate 97-3.

The period also had some tax increases, in 1982, 1990 and 1993. The tax increases in 1990 and 1993 were accompanied by a recession, and a weak recovery in 1992-1996. Another round of tax reductions in 1997, again with broad bipartisan support, helped accelerate the economy in the last years of the 1990s. Although there was some back-and-forth during the period, taxes in general were far more moderate in 2000 than when the process began in 1978.

Paul Volcker halted the decline of the dollar that had caused the "inflation" of the 1970s. His successor, Alan Greenspan, stabilized the dollar still further around $350/oz. of gold.

The "stagflation" of the 1970s, and the "Great Moderation" of the 1980s and 1990s, were exactly what one would expect according to the Magic Formula.[B] President Reagan and his advisors had precisely that intent in mind. Arthur Laffer described Reagan's first cabinet meeting as President:[23]

> Reagan waited until there was complete silence. You could have heard a pin drop. Then Reagan rose and theatrically waited a few moments to build the anticipation and then finally spoke: "Gentlemen and ladies," he told his team, "I hate inflation; I hate taxes; and I hate the Soviets. Do something about it." Then he exited the room.

Looking back on the decade that followed, Robert Bartley, head of the editorial page of the *Wall Street Journal*, summed up succinctly: "Volcker's tight money killed the inflation; Reagan's tax cuts revived growth."[24]

More was at stake than simply economic prosperity: as the capitalist world crumbled in the 1970s, communist movements gained popularity worldwide. Communism still controlled much of the world. The Soviet Union and the Eastern Bloc, and Communist China, still adhered to the principles of Marx and Lenin, as did Cuba, North Korea, Yugoslavia, Albania, Bulgaria, Mongolia, and Yemen. During the 1970s, a number of African states formally embraced communism, including Burkina Faso, Benin, Mozambique, the Congo, Ethiopia and Angola. Vietnam was effectively unified under communist rule from 1973. A "domino effect" in Asia was feared; Cambodia fell to communist forces in 1975, as did Laos that same year. Afghanistan went communist in 1978. Communist-inspired revolutions erupted in Latin America during the 1970s, embroiling Nicaragua, El Salvador, Guatemala and Honduras in civil war. U.S.-backed military dictators emerged elsewhere in Latin America specifically to repress communist agitation. Augusto Pinochet, who

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[B] For a more detailed description of this period, see *The Way the World Works* (1978), by Jude Wanniski; *The Seven Fat Years* (1992), by Robert Bartley; *Gold: The Once and Future Money* (2007), by Nathan Lewis, *The Growth Experiment Revisited* (2013) by Lawrence Lindsay, and *The End of Prosperity* (2008), by Arthur Laffer, Stephen Moore and Peter Tanous.

came to power in a CIA-assisted coup in Chile in 1973, exemplified the type.

Many governments, though not embracing communism, overtly declared themselves "socialist" during the 1970s. These included: Burma (1974), Bangladesh (1971), India (1976), Portugal (1976), Libya (1977), Madagascar (1975), and numerous others. Communist parties surged in popularity in the developed world. "Eurocommunism" hit a high point in 1977, when the Italian Communist Party, Communist Party of Spain and the French Communist Party agreed to cooperate together. The New Communist Movement in the U.S. included the founding of the Revolutionary Communist Party, USA in 1975 and the Communist Party (Marxist-Leninist) in 1977. Around the world and across the political spectrum, the liberal capitalist world was losing ground to communism and socialism.

As the capitalist West recovered in the 1980s, support for communism disintegrated everywhere. In only a few short years, the Soviet Union itself began to imitate the West. In 1986, General Secretary Mikhail Gorbachev formally adopted *glasnost* ("openness and transparency"; in effect, free speech), *perestroika* ("restructuring"; the incremental embrace of the market economy) and *demokratizatsiya* ("democratization"). Gorbachev and Reagan walked amiably together in Moscow's Red Square. A few years later, the Soviet Union peacefully dissolved. Reagan won the Cold War without major conflict. What might have happened if the West had descended into hyperinflation during the 1980s, accompanied by crushing taxes as inflationary bracket creep intensified? The Cold War may have been won, equally decisively, by the other side—an American president and Soviet leader, walking together in Red Square, united in their conviction that capitalism doesn't work.

Chapter 6: “Austerity” and “Stimulus”

Whenever a policy for government is proposed, one must ask simply: does this follow the Magic Formula, or is it contrary? It is an easy question to ask, and the answer is usually clear and obvious. But, this is rarely done.

A government’s response to a recession or short-term crisis, or to a longer period of difficulty and decline, is commonly a combination of “austerity” and “stimulus.” Exactly those words are always used; and with this repetitive use of language comes a repetitive set of behaviors and thought processes. They are the ketchup and mustard of bad economic policy.

“Austerity” is typically a response to budget deficits. These deficits may arise naturally from cyclical recession, or from more persistent or structural problems. “Austerity” typically means a combination of tax increases and spending reductions. It may, at times, include an unnecessarily destructive “tight” monetary policy.

“Stimulus” is typically a response to poor economic conditions, including high unemployment. It normally includes increased government spending, causing larger deficits; it may even be defined in terms of an increased deficit. It can often include an “easy” monetary policy of some sort, expressed in terms of interest rate targets, monetary quantity statistics, or even outright devaluation.

In other words, “austerity” means Higher Taxes and decreased spending, while “stimulus” means bigger deficits and Unstable Money. Both are contrary to the Magic Formula. Often, a country will careen from one pole to the other, swinging from “austerity” to “stimulus” and back again, or even attempt to combine “austerity” and “stimulus” in a single self-contradictory package. The result, in all cases, is policy contrary to the Magic Formula, continued economic stagnation and deterioration, and often, further attempts to resolve the economic decline with further application of "austerity" and "stimulus."

"Austerity"

Something really must be done about the deficit. Perhaps the government has accumulated so much debt that it fears that it will no longer be able to find willing buyers of its bonds, and faces default. Persistent deficits raise fears that the government will turn to the printing press to finance itself. The disgusting bloat of government corruption and waste has reached intolerable levels. Welfare dependency undermines the foundations of society. Taxes must rise; and spending must fall.

Recessions themselves, from whatever reason (a prior tax increase could be one cause) will tend to cause revenues to decline while expenditures increase. A government reaching for "austerity" will thus increase taxes during a recession. This just makes the recession worse; at best, it makes the following recovery weaker. Expectations of greater revenue, from the tax increase, are disappointed. If the recession deepens, revenue may even decline.

The result of this is twofold. First, there are more people in the private economy in difficulty. This could mean someone on the lowest rung of the pay scale that loses their job; it could mean the CEO of a major multinational corporation facing a deluge of red ink; and all those in between. They all come to the government for aid, in the form of food assistance, government contracts, corporate subsidies and bailouts, jobs in the government bureaucracy, "pork barrel" spending programs, and myriad other forms. Second, all those who are already recipients of government funding in one way or another—government employees, government contractors, public education and healthcare, and many others—can see that the conditions in the private economy are so poor that people are fleeing that sinking ship for the perceived safety of the government trough. They will grasp onto their existing privileges with all their strength. Spending becomes impossible to reform.

Government bureaucracies, and the networks of cronies that surround them, are always rife with waste, corruption and outright theft. A disinterested observer soon concludes that they could provide the same public services, or even superior services, at half, a third, or even a quarter of their present cost. In most times, reform is politically difficult. The environment of crisis presents an opportunity to do something about it.

As economies contract, these bureaucracies never cut the waste first. What the public calls "waste" is their profit margin. Nothing is actually wasted: all the money eventually ends up somewhere, as government employee payroll and benefits, revenues of contractors, or simply as bribes, kickbacks and embezzlement. Not one of these recipients considers this to be "waste." The fundamental costs of the services that the government agencies provide are their expenses. Like any businessman, they aim to cut costs and preserve profit margins. Thus, valuable services are cut first, and the waste remains. This can often take the form of a cosmetic display of "austerity," which has little financial significance. The lawn outside the government offices grows wild due to the reduction in the groundskeeping budget, while inside, thousands of overpaid bureaucrats continue to shuffle papers uselessly while accumulating unpayable pension obligations. Libraries are closed. National Parks are closed; this requires hiring additional staff to prevent people from using the hiking trails.

At its most perverse, this bureaucratic obstructionism can move from these mostly harmless displays of false economies to what amounts to direct sabotage. The economy is held hostage to bureaucrats' demands. Instead of shrinking the bloated headcount of non-teaching administrators making large salaries, a public school refuses to provide pencils to students, and for the want of $50 in pencils, the educational system comes to a halt. No money is found to purchase asphalt to fix potholes, so dozens of employees on the payroll of the Public Works Department sit idle. Naturally, all of this causes public distress and further complaints. The public knows well that the amount of waste in these organizations is enormous, and that mammoth amounts of spending could be reduced with no sacrifice of library hours or the pencil budget. But, this rarely finds coherent expression—it seems like the public is complaining about the budget cuts and reduction in services. In all cases, the message sent by the bureaucracy is clear: spending cannot be cut by a single penny, or disasters will ensue.

All of this makes politicians unpopular—and they were already unpopular to begin with, because of the tax increases in the "austerity" budget. Spending reduction goals are abandoned; but this just makes the deficit worse. Politicians may rely further on higher taxes to meet their deficit targets. But the higher taxes also do not produce the revenue gains that were expected. Tax evasion—typically a problem already—intensifies still further. The worsening economic situation, due mostly to the increasing taxes, is instead blamed on the decrease in spending; a decrease that may be very modest, or may not actually exist. The deficit remains, and may even worsen. The hard-nosed advocates of “austerity” see that bureaucracies are resistant to shrinkage, while tax evasion is rising. More pressure, more pain, more punishment is required to force compliance. More “austerity” follows; the economy worsens further. Or, the government may become aware that its strategy isn’t working. “Anti-austerity” demonstrations fill the streets. A new government may be installed after an election. Policy can then turn to “stimulus.”

“Stimulus”

Everyone can see that government spending “creates jobs,” and apparent prosperity. A military base can support the activity of an entire town. What is not seen is that the money that is used to fund these projects, whether from taxes or debt, is money that cannot be spent elsewhere; and probably, to greater benefit.[A] This is distributed throughout the country, and becomes imperceptible. It is easy to find people who can explain how increased government spending can benefit them personally. These people beat a path to politicians’ doors, and shower them in lobbyist cash. Those that are disadvantaged are dispersed and unable to organize.[B]

All politicians learn, early on, that they make many new friends when they spend the government’s money. An entire population of economic courtiers has arisen, over the decades, to give a veneer of

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[A] The classic discussions of the “seen and not-seen” are Henry Hazlitt’s *Economics in One Lesson* (1946), and Frédéric Bastiat’s *That Which is Seen, and That Which is Not Seen* (1850).

[B] This phenomenon is explored in “public choice theory.” An introduction to public choice theory can be found in *Public Choice—A Primer* (2012), by Eamonn Butler. (Available at The Institute of Economic Affairs, iea.org.uk.)

academic justification to this venal impulse. Since politicians tend to be unpopular during any economic downturn, they immediately look for new ways of justifying their existence to their constituents and crony supporters. Spending expands, and with it, larger deficits emerge.

At base, this impulse has some merit. The abandonment of the deficit-shrinking impulse, the "austerity" response, may at least allow the avoidance of further tax increases. Certainly, if the economy is doing poorly, one should do something that is good for the economy, right? But the increase in spending is usually directed toward the most appalling waste. Although a government may embark on many useful and important spending programs, on public works for example, a project of real merit typically requires years of careful planning and has its own inherent schedule. It is not something that can be turned on or off like a faucet, to affect economic statistics in twelve months' time. Administrators complain of a lack of "shovel-ready projects." But, this waste is even a point of pride for some economic advisors. The benefits of deficit spending, they say, come about even if nothing of benefit is created.

Before long, as one "stimulus" program after another is attempted, it becomes clear that they amount to little more than abject waste. It is true that people are employed, and some economic statistics can look better. However, these effects are transient, and cease immediately after the money stops flowing. How is paying people to do nothing of value different than paying them to do nothing at all? The main difference is the avoidance of idleness itself. The debt remains.

These spending projects amount to not only a waste of money, but also a waste of time. A whole political cycle is created, consuming enormities of effort and attention, absorbing all the capability of the legislative process and, consequently, excluding other solutions. A scrum of interest groups scramble to get some of the upcoming burst of cash directed toward themselves. Economic statistics are closely watched, over the next eighteen months, for signs of the project's effectiveness. Some effect is indeed observed, but it is somewhat tepid and disappointing.

Perhaps spending should be even more aggressive. Also, the discussion turns to: what happens when the spending stops? It would seem, using the same logic, that a corresponding economic contraction would take place. This is the “ratchet effect”: according to this logic, a new level of spending, once begun, cannot be withdrawn, at least while the economy is still weak; and, it shows no signs of getting better. One thing leads to another, and another spending program is planned. Again it is an orgy of waste; again, interest groups scramble for their position at the trough. Another series of expert analyses describe the expected effects over the next eighteen months; endless babble about “multipliers” ensues; an enormity of discussion follows as to whether these expectations were achieved. Years, and even decades, can be consumed in this cycle, while the debt is piled ever higher and many problems, including an oppressive tax system that might be one of the fundamental reasons for the difficulties, go unresolved for lack of attention.

In time, people realize that not much is being accomplished by all of this. The debt has risen to frightening levels. Large deficits, at first imagined to be a short-term cyclical response, have become chronic. A whole series of spending efforts has produced little of value. The economy continues to disappoint. Attention turns back to “austerity.” The previous wasteful spending is abandoned, and taxes rise again.

People soon argue that, since it is difficult to find anything worthwhile for the government to spend money on, why not just give money to the people themselves, to spend as they see fit? This often takes the form of a “check in the mail,” which, though commonly labeled a “tax cut,” does not actually affect the tax code in any way and is just another form of government disbursement, no different than a welfare check. Attention is focused on “putting money in people’s pockets,” and discussion revolves around how much of this money is likely to be spent and how much saved. Sometimes the tax code is changed, but commonly, the changes are explicitly temporary—the concept of “stimulus” in itself prioritizes short-term effect over fundamental long-term improvement—and they are often directed at portions of the code likely to have the least positive economic effect. Increased tax breaks for children do not encourage anyone to build a business, hire an employee, invest in a new enterprise; or even, given their temporary nature, have more children.

Politicians come to see that their spending programs are intensely expensive, and may not provide much advantage in the roughly eighteen-month time window that occupies their attention. Legislative battles stretch over months, exhausting everyone.

Attention turns toward the central bank. Here is an entity that can act immediately, is seemingly free of the difficulties of parliamentary decision-making, whose effects might be felt within eighteen months, and which, it appears, has no cost. "Monetary stimulus" is planned to accompany and augment "fiscal stimulus." Or, it might be conceived as an offset to "austerity," to counteract the expected negative economic effects of higher taxes and reduced spending. At times, higher taxes are imposed, not necessarily for revenue needs, but to control "inflation." To offset the expected decline in growth, monetary "stimulus" is added. This is perfectly opposite to the Magic Formula; and though it may seem today that nobody could actually be so confused, it was a popular argument in both the U.S. and Britain during the 1960s.

Interest rates will tend to fall in a recession, even with a gold standard or other fixed-value system. But perhaps interest rates artificially lowered to very low levels would be an advantage. Others will argue along the lines of quantitative measures—the CPI, or nominal GDP, or M2, the unemployment rate, a Taylor Rule or some other indicator supposedly justifies an "easier" stance. Arguments may turn toward foreign exchange rates, trade or current account deficits, competitive advantage or outright devaluation. All of this amounts to "easy money." Often, just as is the case with "fiscal stimulus," some seemingly-positive effects can be felt over perhaps an eighteen-month period. But with this comes many costs. In the case of "fiscal stimulus," these are literal monetary costs, producing a soaring debt load. The costs of "monetary stimulus" are less obvious, although more destructive. It creates a distortion of the operating mechanisms of the market economy, confusing the signals sent by interest rates, market prices, profit margins, exchange rates and returns on capital.

In simple terms, the central bank attempts to induce people to buy, hire and invest when, in the absence of monetary distortion, they would not. In the short term, wages may be artificially depressed, and employment may rise as a result. Lower interest rates may cause increased investment and elevated asset prices. Debt burdens may be inflated away. As this effect fades in time, people find that incomes paid in a devalued currency don't buy as much, investment is directed in wasteful and unproductive channels, international conflict over trade erupts, artificial booms in asset markets collapse in very real busts; and capital becomes wary of being swindled again.

A reaction to "monetary stimulus" can be "monetary austerity." This has become somewhat rare, but in the past, it has taken the form of the belief that measures such as very high interest rates, and a "recession so severe that it will break the back of inflation" is some kind of necessary countermeasure to previous "easy money." People become so enamored of these beliefs that they find some way of creating these scenarios to their satisfaction, as happened in the early 1980s in the U.S. and around the world. It also appeared many times during the 1990s with the belief that crushing central bank interest rate targets, commonly in excess of 15%, were necessary to support weak currencies among the emerging markets. (It didn't work.) But all of this is unnecessary. The adoption of Stable Money is typically met with relief. A dramatic economic boom accompanies collapsing CPI inflation and a return of interest rates to low-single-digit levels. This was the case in Britain in 1821, the U.S. in 1879, Germany in 1949, Argentina in 1991, China in 1994, and Russia in 2000, to take a few of many such examples throughout history. No penitence is necessary for past policy error. Good policies produce good outcomes, right away.

If we are to avoid both "stimulus" and "austerity," what, then, is to be done?

One must simply follow the Magic Formula. Taxes must be Low; Money must be Stable. Wasteful spending should be eliminated; important services should be maintained; government projects of real value should be pursued. Welfare-related payments should probably rise in a recession, to prevent abject destitution; but policies that promote welfare dependency should be avoided. Governments have often had enormous reductions in tax rates, with immediate and dramatic positive economic effects; but this is never called "stimulus." Governments have had enormous reductions in unnecessary spending—particularly after wartime—but this is not called "austerity." Stable Money, by its nature, aims for neutrality; that is, neither "stimulus" nor "austerity." Interest rates are allowed to find their natural market levels. Fundamental merit, not short-term macroeconomic distortion, is the basis of all policy. Governments do not sit on their hands and "do nothing" when real problems exist; they do not succumb to the urge to "do something" when the cure is worse than the disease. Good policy creates good results.

The Great Depression

The Great Depression of the 1930s, we are told, has baffled attempts at economic analysis over a period of generations. But, it can be understood using the Magic Formula—and, specifically, as the successive applications of "austerity" and "stimulus" by governments around the world, in a recognizable spiral of decline.

The initial downturn of the Great Depression appears to have been caused by a worldwide trade war set off by the introduction and eventual passage of the Smoot-Hawley Tariff in the United States. The stock market decline of late 1929 can be traced nearly to the day that the bill gained an apparent majority in the Senate, making its eventual passage much more likely.[1] This was accomplished by making the Tariff apply to a much larger range of industries in Senators' home states, thus making it potentially more destructive. Already by September 1929, twenty-three governments warned that passage of the tariff would be met with retaliatory tariffs worldwide. Investors and businessmen could foresee economic difficulties up ahead, which indeed happened. The aggressive use of margin leverage, and its quick unwind, contributed to the shocking decline in stock prices. The passage of the Tariff in June 1930 was accompanied by similar measures among nearly all major governments.

By itself, the global trade war probably would have caused a recession, but not the disasters of the Great Depression. It took a series of additional blunders—"austerity" and "stimulus"—to create that outcome.

President Herbert Hoover's first impulse was "stimulus." As early as November 1929, he promised increased levels of public spending, as part of a strategy that included agreements from industrialists to maintain wage rates and a variety of price supports and credit arrangements for farmers. An agreement with State governors to coordinate increased levels of public spending was combined with a new program of $400 million of Federal public works spending, which, in December 1929, spurred the creation of a new Division of Public Construction within the Department of Commerce. Total Federal expenditure in fiscal 1930 (ended September 1930) rose to $3,320 million, from $3,127 million in 1929.

In early 1930, the economy had had only a modest downturn, and the stock market was recovering to the levels at which it had started

1929. Hoover was hailed as a master statesman. The Smoot-Hawley Tariff was passed by the Senate in March 1930, but Hoover seemed likely to veto it. In May 1930, over a thousand economists sent Hoover a letter in opposition to the tariff. Henry Ford called it "an economic stupidity," and visited Hoover at the White House to tell him so. Thomas W. Lamont, CEO of J.P. Morgan, said he "almost went down on [his] knees to beg Herbert Hoover to veto the asinine Hawley-Smoot tariff." Hoover himself called the bill "vicious, extortionate, and obnoxious."[2] But, caving in to the pressures of his own Republican party, he signed it.

The U.S. stock market lost 5.8% the next day, the biggest one-day decline of 1930, and headed downward for the remainder of the year. As the economy worsened, Hoover stepped up with more "stimulus." In July 1930, Congress authorized a giant $915 million public works program, which included the construction of Hoover Dam on the Colorado River. Federal spending rose to $3,577 million in fiscal 1931 and then to $4,659 million in fiscal 1932. (Hoover Dam was completed in 1936.)

The focus in 1931 turns beyond the United States, to similar policy reactions taking place elsewhere. Already in late 1929 and 1930, much of Latin America had left the gold standard and had substantial depreciation of currencies, thus throwing all foreign investment in the region into turmoil. Upon this was added a series of sovereign defaults: the government of Ecuador defaulted in 1929; Argentina in 1930; and then, in 1931, defaults by Hungary, Bolivia, Brazil, Chile, the Dominican Republic, Peru and Turkey. But the biggest shock of 1931 was the devaluation of the British pound, and the follow-on devaluations that left twenty-three former gold standard countries with floating and devalued currencies by the end of the year. This also amounted to a kind of sovereign default. Many holders worldwide of British pound-denominated bonds, considered "risk free" at the time, found themselves with terrifying losses, possibly driving them too into insolvency, default and bankruptcy. The devaluations worldwide were bad enough, but most currencies also floated afterwards, and their future was uncertain. Fears swirled that those governments that remained with the gold standard (notably the U.S. and France) would also devalue later—fears which eventually turned out to be true. These new floating currencies could potentially fall even into hyperinflation, which had been common in Europe only a decade earlier. The devaluations of the British pound, and many other currencies, were conceived by many to be a sort of monetary "stimulus" that would relieve unemployment and produce "competitive trade advantages."

In Britain, existing welfare-related programs naturally expanded in the downturn. This modest "stimulus," and the deficits that resulted, were countered by "austerity" in the form of tax increases in 1930 and 1931. Germany followed a similar pattern of "austerity," especially in the aggressive Brüning tax hikes of 1930-31.

Like Britain, taxes were far higher in Germany during the 1920s than had been the case before 1914, mostly to fund socialistic projects, welfare programs, and reparations. Tax revenue/GDP rose from around 13% in 1913 to around 25%.[3] Hyperinflation had ravaged the country in 1919-1923, and the economy continued to be rather weak in the late 1920s. Labor unions had excessive influence, and rigidity in wages and labor agreements may have contributed to the downturn in 1930-1933. The German government had cut taxes in response to a recession in 1925-26, and industrial groups wanted the government to follow that path again. In 1930, the Finance Ministry presented a plan that reduced the top income tax rate from 40% to 35%, along with other tax reductions.[4]

But, concern about deficits led to inaction regarding further tax reductions. Soon, the government, in particular Chancellor Heinrich Brüning, turned toward "austerity" and tax increases instead. A majority in Parliament opposed this path, and substantial pressure across the political spectrum was directed toward tax reductions. But Brüning made use of a provision that allowed presidential "emergency decrees" to sidestep Parliamentary opposition. Brüning imposed his "austerity" decrees in December 1930, June 1931, October 1931, and December 1931.[5] Higher tax rates on upper incomes were imposed in the form of a new surtax, payroll taxes rose, and an "emergency tax" was applied to civil servants and white-collar employees. Spending was reduced, especially for welfare benefits and civil servants' salaries. Indirect taxes increased; among them, most ardently opposed by German business, was an increase in the "turnover tax," a tax on all transactions—similar to the Spanish *alcabala* four centuries earlier. A reduction in this tax in 1925-26 was thought to have been the most important measure in the counter-cyclical strategy of that time. It rose from 0.75% to 2.0%, against many complaints.[6] Taxes at the prefectural and local level also rose.

The German economy toppled into disaster. Unemployment soared, from 1.5 million in 1929 to 5.6 million in 1932. The estimated unemployment rate in 1932, of 43.8%, was the worst of any major economy.[7] Industrial production fell 42% from its 1929 level. The financial system could not withstand such strain, and the failure of Creditanstalt, a major Austrian bank, in May 1931 set off shock waves worldwide.

Given the unpopularity of Brüning's decrees, it is no surprise that his successor Franz von Papen rolled back some of the tax increases in 1932, with substantial tax breaks for corporations and upper incomes.[8] The National Socialist party had been part of the large coalition opposing Brüning's "austerity" plans and won large electoral gains. In 1933, Adolph Hitler presented a plan for major tax reforms. Actual changes after 1933 were much more modest, but generally in the direction of lighter taxes, mostly in the form of exemptions and tax incentives rather than lower overall rates. Companies got tax breaks for hiring more employees, as did farmers. The turnover tax on agriculture was cut in half. "There was nothing socialist about Hitler's economics," wrote Harold James in *The German Slump: Politics and Economics 1924-1936* (1986). "He concluded that eventually there could only be either a liberal [free market] or a socialist solution, that a *via media* was impossible, and that he rejected socialism."

The most dramatic steps were in labor policy: trade unions were dissolved in 1933 and replaced by a national labor council, reducing contention and allowing much more flexibility in hiring and wages. Wages were generally kept low to allow greater employment: nominal wages were 22% lower in 1938 than in 1930.[9] Total government spending increased, from 17.1 billion reichsmarks in 1932 to 26.9 billion in 1937. This was mostly on construction and transportation, including the famous *autobahn* superhighways. Significant military spending did not begin until 1936. However, this increase in government spending was roughly in line with the expansion of the economy in the recovery. Spending was 29.7% of GNP in Brüning's "austerity" of 1932, and 28.9% in 1937.[10] In 1938, a burst of deficit-financed military spending raised the spending/GNP ratio to 35.5%. The government ran deficits, but as GNP expanded, total government debt/GNP fell from 42% in 1932 to 29% in 1938.[11]

Brüning had begun discussions with the Allied powers of World War I for the cessation of reparations payments required by the Treaty of Versailles. The cessation of payments following the Lausanne Conference in 1932 relieved substantial pressure upon the German government's fiscal position, and the foreign drain of resources. Germany was one of the few countries that did not devalue its currency during the 1930s. Although substantial capital controls may have obscured true conditions, nevertheless the German CPI rose at only a 1.2% annualized rate between 1933 and 1939, indicating a high degree of currency reliability. Hjalmar Schacht, the monetary genius who reinstated the gold standard in Germany in the midst of the 1923 hyperinflation, was appointed by Hitler as Reichsbank president in 1933 and then Minister of Economics in 1934-37, specifically for his anti-inflationary convictions.

The recovery after 1933 was one of the strongest of any country worldwide. By 1937 the number of unemployed had fallen from a peak of 5.6 million to 0.9 million, and corporations were reporting labor shortages. Unemployment dropped further to 0.4 million in 1938, and a surge of women entered the workforce to meet the demand for labor.[12] One study that normalized unemployment rates to make them internationally comparable found the unemployment rate in Germany at 3.2% in 1938, and 27.9% in the U.S. that same year.[13] German auto production rose from 100,000 in 1933 to 340,000 in 1938, an increase of 240%; U.S. auto production grew only 25% during that time period. After Germany annexed Austria in 1938, the unemployment rate in Austria fell from 21.7% in 1937 to 3.2% in 1939.[14]

Japan's economy had been rather weak in the late 1920s, especially following a financial crisis in 1927. As the worldwide downturn of 1929-1930 created additional problems, the first reaction of the government was to reduce expenditures. Central government expenditures declined from ¥1.74 billion in 1929 to ¥1.48 billion in 1931.[15] This was accompanied by some minor tax reductions—too small to make much difference, but much better than raising taxes.[16]

During the 1920s, the Japanese yen floated, but it did not float far from its prewar gold parity. After many false starts during the 1920s, the gold standard was reintroduced in January 1930, at the prewar parity. This involved a modest rise in the yen's value, about 5% higher than its average value in the previous five years. By itself, this adjustment was too small to matter very much; against this were all the advantages of a fixed exchange rate. But, it was perceived as contrary to the concerns of the day, coming immediately after the global stock market collapse in late 1929 and an explosion of trade tensions.

The political situation was badly destabilized when Prime Minister Osachi Hamaguchi was injured in an assassination attempt in November 1930, and died in August 1931. Reijiro Wakatsuki became Prime Minister. September 1931 held a double shock: on September 18, the Japanese military invaded Chinese-held Manchuria, without the permission of the civilian government. On September 21, Britain devalued, intensifying expectations for Japan to follow. The political system was thrown into turmoil. A plan for a coup d'état by young army officers was revealed—there had already been an attempted military coup in March 1931. Already, in October and November 1931, the Bank of Japan was financing the government with money-printing, which caused an outflow of gold via conversion: an increase in the fiduciary issue from ¥115 million to ¥435 million between September and November 1931 was matched by reduction in gold reserves from ¥818 million to ¥543 million. Wakatsuki's cabinet suddenly collapsed in December 1931 (some suspected this was organized by large speculators betting on a devaluation), and a new government was formed with Tsuyoshi Inukai as Prime Minister, and a new finance minister, Korekiyo Takahashi.[17]

The yen was devalued in December 1931, immediately after the formation of the new cabinet. The yen collapsed to about a third of its prior value, compared to gold, contributing to the monetary chaos of the time, and constituting an effective default on yen-denominated debt. Prime Minister Inukai was assassinated in May 1932, effectively creating a military government with Takahashi in charge. However, further money-printing by the Bank of Japan was halted. The effective reduction in workers' wages gave a "competitive advantage" to exporters; other countries faced an artificial "competitive disadvantage," worsening their domestic economic conditions. Takahashi embraced "stimulus": under pressure from the military for increased funding, spending increased to ¥1.95 billion in 1932 and ¥2.25 billion in 1933, after which it leveled off around ¥2.2 billion. This increase was nevertheless rather modest, only 29% over the

1929 level, and in a depreciated currency; spending/GNP was 8.9% in 1929 and 9.9% in 1936. More important was the fact that Takahashi overtly rejected tax increases, arguing that they would make the already-bad economic situation worse. Government deficits were allowed, and government debt swelled.[18] Taxes were reduced in the mid-1930s, in an effort to encourage economic expansion. Most statistics show greater expansion during this time in Japan than during the troubled 1920s. The devaluation of 1931 was not repeated. By the end of 1932, the yen was stabilized against the British pound, although the pound itself floated.

France enjoyed a series of tax reductions during the 1920s, and a prosperous economy resulted. As the Great Depression began in the U.S. in 1929 and 1930, France was conspicuously unaffected. Industrial production for 1930 was as high as 1929. Unemployment began to rise in late 1930, but not until the end of 1931 was the economy seriously affected, in particular because of the trade pressures and financial consequences of the wave of devaluations that year.[19] A five-year program of public spending was announced as early as November 1929, but this was entirely a response to the budget surpluses of the previous three years.

Tax revenue exceeded estimates in 1930. Taxes were reduced again that year; against revenues of 55.7 billion francs, tax cuts of 6 billion francs were enacted.[20] Economic weakness led to budget deficits in 1931 and more seriously in 1932, and substantial reductions in spending were undertaken in response. In both years, the deficits were met with debt issuance rather than higher taxes. Even in 1932, one of the worst years of the Depression in Britain, Germany and the U.S., France was relatively unharmed. In elections that year, the worldwide Depression was rarely mentioned.[21] Continued deficits in 1933 resulted in some tax increases, especially on upper incomes. In 1934, direct taxes were reduced, as part of an effort to encourage new investment, but this was matched with an increase in indirect taxes. Reductions in spending continued throughout, along with efforts to gain wage concessions from unions. The worst of the Depression in France was in early 1935; unemployment never rose above 5%.[22]

In May 1936, the Popular Front, an alliance of Socialists and Communists, won an election victory in France. This followed three months after the victory of the Popular Front in Spain, widely thought to have been the result of falsified election results, and which soon amounted to an attempted communist revolution in Spain. Calvo Satelo, a leader of the rightist opposition in the Spanish parliament, said that, between February and June 1936, there had been 113 general strikes; 218 partial strikes; 284 buildings, 171 churches, 69 clubs and 10 newspapers burned; and over 3,300 assassinations. When Satelo himself was assassinated a month later, this prompted general Francisco Franco to step in and put an end to the communist takeover. The military coup of July 1936 began the Spanish Civil War, which was not resolved until 1939. The Soviet Comintern—the central organizing body of communist organizations worldwide—had decided in 1935 that it would use the “popular front” strategy of allying communist parties with other socialist and anti-fascist parties.[23] In November 1936, Germany and Japan formed the Anti-Comintern Pact, specifically to counter the subversive communist threat. Italy and Spain joined in November 1937. Germany invited Britain and Poland to join, but they refused.

The French Popular Front’s policies were inspired by Roosevelt’s New Deal in the U.S., including higher spending, higher taxes and a currency devaluation; communists also favored nationalization of certain industries. In June 1936, immediately after the Popular Front’s victory, the Bank of France made a whopping “advance to the government” of 14.3 billion francs. This was printing-press finance, which hadn’t been seen since the franc’s value collapsed in the early 1920s.[24] Gold poured out due to bullion conversion, and the Bank of France lost 14.4 billion francs’ worth of bullion.[25] The result was capital flight, the suspension of gold conversion and devaluation of the franc in September 1936. The effect of the devaluation was to normalize exchange rates with the U.S. and Britain as part of the Tripartite Agreement. Amidst political resistance little else was done, and the Popular Front gave way to a conservative government in 1938. With this, the economy began to properly recover.

In November 1929, as Hoover began his new spending promises, Treasury Secretary Andrew Mellon recommended a 1% reduction in income tax rates. The top rate fell to 24%. Mellon, the architect of the 1920s tax reductions which brought the top income tax rate from 77% to 25%, had said that he might eventually like to bring it down to 10%. Certainly, he had the room to do so: tax revenues of $3,862 million in 1929 were far in excess of spending of $3,127 million. The previous tax rate reductions had not led to any reduction in revenues, just as Mellon had predicted. Unlike Britain and Germany, the U.S. Federal government did not have any welfare-related programs at the time, creating automatic increases in spending in the downturn. Spending increases were entirely discretionary. What if, in response to the downturn, spending remained stable or even declined, and Mellon's long-term goals had been accelerated to 1931, permanently reducing the top personal income tax rate to 10%? Even if this had resulted in a decline in revenue from the tax by 50% (doubtful), it would have been a far better solution, and the cause of smaller deficits, than Hoover's strategy to increase spending by $1,532 million. (Individual income tax revenues were $1,096 million in 1929 and $427 million in 1932.) Hoover, who never personally supported the Smoot-Hawley Tariff, could have declared "I told you so!" to the protectionist wing of his Republican party, and started undoing the damage to worldwide trade by organizing international agreements to reduce tariffs—as President Franklin Roosevelt and Secretary of State Cordell Hull did beginning in 1933.

But Mellon's non-interventionist, low-tax approach did not appeal to Hoover. Their increasing disagreements led Hoover to kick Mellon out in February 1932. Soon afterwards, in response to the huge deficits created by his own huge spending programs, Hoover embraced "austerity" in a big way by pushing through a huge tax increase in June 1932, undoing all of Mellon's earlier successes. The top income tax rate rose from 25% to 63%, with increases in all brackets, exemptions were reduced, the estate tax rose from 20% to 45%, and corporate tax rates rose while corporate exemptions were reduced. But most of the increased revenue was expected to come from increases in indirect taxes. Hoover considered the possibility of a new Federal sales tax, but instead opted to introduce and increase excises on a wide variety of items. Excise tax revenues rose from $454 million in 1932 to $1,287 million in 1934, accounting for 48% of total revenue that year. The new taxes were grandfathered to the 1932 tax year.

Roosevelt continued in much the same pattern as Hoover: "stimulus" in the form of increased spending, and "austerity" in the form of higher taxes. Taxes rose in 1934, 1935, 1936, 1938 and twice in 1940. In addition, the Social Security Act of 1935 introduced a new payroll tax. In 1940, with the U.S. still in peacetime, the top income tax rate was 81%, and the corporate income tax rate had risen from 12% to 22.1% with an "excess profits" tax of 50%. Federal tax revenue/GDP had risen from 4.1% in 1929 to 8.3% in 1938, and Federal expenditure had risen to $9,468 million. But, much of the increase in revenue was from excise taxes, and the new payroll tax. Revenue from the personal income tax in 1939 ($1,029 million) was lower than it was in 1929 ($1,096 million), although reductions in exemptions had increased the total number of taxable returns by 58% since 1929. Revenue from the corporate income tax was also lower in 1939 ($1,156 million) than in 1929 ($1,236 million). Higher rates produced lower revenues—even despite the fact that the dollar itself had been devalued, and was worth 41% less in 1939.

A similar pattern was happening at the State level. The number of States with an income tax rose from thirteen in 1929 to thirty-two in 1940. No States had a general sales tax in 1929; by 1940, twenty-four did. The number of States with a tax on cigarettes rose from seven to twenty-seven, and the number with a tax on liquor rose from zero to twenty-eight. State tax revenue/GDP rose from 1.9% in 1929 to 3.6% in 1938, a near-doubling of this figure.

The devaluation of the dollar by Roosevelt beginning in 1933 was nearly as shocking as the British devaluation of 1931. At least Britain could claim (rather disingenuously) that the devaluation was the inadvertent outcome of a crisis at the Bank of England; but Roosevelt's action was a premeditated exercise in executive privilege, which had little to do with the Federal Reserve. As the value of the dollar drifted downward in 1933, there seemed to be no plan as to where it was going or how far it would go. The eventual outcome was to return dollar/pound exchange rates roughly to where they had been before 1931, thus normalizing trade distortions. Unlike the pound and other devalued currencies which continued to float, the dollar was relinked to gold at $35/oz. in early 1934, making the dollar far more reliable than other major currencies of the time, and reinforcing its role as the premier international currency. The reaction of many governments to the devaluation was still more protectionism, which obstructed Cordell Hull's attempts to negotiate lower tariffs.

The apparent failure of the capitalist economy prompted a number of socialistic interventions by Roosevelt beyond simply taxing and spending. The Tennessee Valley Authority, an electric power generation project, was one of several programs involving nationalized industry, which undercut private-sector corporations. The National Industrial Recovery Act of 1933 imposed a broad swath of regulations regarding wages and prices, generally to destructive effect. After the Supreme Court declared it unconstitutional in 1935, the economy staged a nice recovery.[C]

Around the world, governments had violated the Magic Formula. Taxes rose everywhere, first in the form of tariffs, and then domestic taxes. These new taxes came atop already-high taxes left over from World War I, and already-weak economies in the 1920s particularly in Britain, Germany and Japan. Money became disastrously unstable beginning in 1931. If the devaluations provided some apparent relief—wages were slashed, thus reducing unemployment and improving "competitiveness," and debt burdens were lightened, reducing bankruptcy—they also produced turmoil, as investors faced huge losses on what was effectively a form of debt repudiation, while other countries were left with an artificial "competitive disadvantage" and a flood of cheap imports. Once Britain and numerous other countries had devalued, great pressure was applied to other countries to devalue alongside to normalize exchange rates. Academic economists often cheer these devaluations today, but they were not popular at the time, and governments soon abandoned the practice. Already by the World Economic Conference of June 1933, governments were aiming to restore currency stability, but Roosevelt's devaluation that year undermined any agreements. The apparent failure of capitalist institutions led to a variety of experiments with socialistic central-planning ideologies, including wage and price controls and nationalization of industry. Bankruptcy, bank failure and sovereign default added an element of systemic breakdown to an already problematic stew. By the end of the decade, exhausted governments were again returning to a policy of Stable Money.

"1929 did not cause 1933," Federal Reserve Chairman Alan Greenspan said in 1998, during discussions about how to respond to

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[C] Good accounts of Roosevelt's destructive economic policies can be found in *The Forgotten Man: A New History of the Great Depression* (2007), by Amity Shales, and *FDR's Folly: How Roosevelt and His New Deal Prolonged the Great Depression* (2003), by Jim Powell.

the apparent asset price "bubble" building at that time. "It depends on what you do in 1930 and 1931."[26]

Spain

The worldwide economic downturn of 2008-2009 began largely as a crisis of unpayable debt in the private sector, leading to bank insolvency. The origins of this debt had roots in government policy, including "easy money" in the years previous which saw the dollar's value decline vs. gold from around $300/oz. to $1000/oz., and also various government programs to establish lending quotas for marginal borrowers. As the crisis deepened, an additional monetary factor arose in the form of an abrupt and dramatic rise in the value of the dollar, against both gold and foreign currencies. This rise in the dollar, and also the euro (vs. gold), was accompanied by a widespread breakdown of established pegs and trading bands with the dollar and euro among many smaller countries in their respective currency blocs. Much as was the case in 1931, a monetary element was added to what had previously been a primarily non-monetary event.

The first reaction of most governments was "stimulus," as various bank-bailout actions were combined with expansion of welfare programs and broader spending efforts. Combined with the natural falloff of tax revenue in the recession, this produced large budget deficits among many governments worldwide.

These deficits produced an "austerity" reaction. Britain raised its top income tax rate for the first time since 1988, lifting it from 40% to 50%. Russia raised its payroll tax by ten percentage points, ending a long streak of tax reductions there. France raised its top income tax rate from 45% to 75%, with the result that France's richest man, Bernard Arnault of the luxury group LVMH, took on a Belgian nationality, and the actor Gerard Depardieu, who practically personified the Gallic spirit during his long movie career, eventually became a citizen of Russia. The tax was repealed after only two years. The United States admirably embraced the principle of "don't raise taxes in a recession," although taxes were later raised in 2012 after some recovery had been accomplished.

Many governments worldwide had chronic issues with deficits and rising debt levels since the 1970s. In several cases, sovereign debt expanded dramatically due to bank bailouts after 2008, and deficits were larger than ever. This produced a sovereign debt crisis among some weaker borrowers in Europe, especially Portugal, Italy, Ireland, Greece and Spain. The private market was becoming less and less willing to buy the debt of these governments without substantially higher yields to offset the default risk. The higher yields increased the costs of debt service, making their deficit problems worse, and raising the perceived risk of default. This increased the pressure for "austerity."

As part of "austerity" measures in Spain that began in 2011, income taxes increased with the top income tax rate rising from 43% to 52%, plus local taxes that could raise that to 56%, one of the highest in Europe. The VAT rate rose from 16% to 21%. The top rate of taxes on capital gains rose from 21% to 27%. In an echo from history, a Catalan secessionist movement reignited in 2012, when a snap election produced a pro-independence majority for the first time.

In Portugal, the top income tax rate rose from 35.6% to 50.3%, and the VAT rose from 19% to 23%. In Greece, the corporate tax rate rose from 20% to 29%, income taxes rose with the top rate going from 40% to 54%, and the VAT rose from 19% to 24%. In Ireland, income taxes rose with the top rate rising from 43.5% to 52%, the VAT rose from 21% to 23%, and the payroll tax rate rose from 12.8% to 14.75%. In Italy, the top income tax rate rose from 40.2% to 48.8%, and the VAT rose from 20% to 22%.

Europe's policy response mirrored that of 1930 and 1931. Already there was a downturn due to the crisis of 2008-2009, leading to depressed tax revenues and expanded welfare-type spending. Into this downturn, domestic taxes were raised aggressively across the continent. Many compared the aggravated recession in 2010-2012 to the Great Depression. Again, sovereign default and bank insolvency loomed.

Mass demonstrations erupted in Spain and elsewhere in opposition to the "austerity" programs. Much of the discussion revolved around reductions in spending, but these were rarely very large. Total government spending in Spain fell from €494 billion in 2009 to €465 billion in 2014—a 5.9% reduction spread over five years. (Spending in 2009 rose 7.6% in a single year.) Spending/GDP fell from 45.8% in 2009 to 44.7% in 2014. It was 39% in 2006, before the financial crisis.

In this environment, a discussion intensified regarding "austerity" and "stimulus." A conservative view arose that "austerity" was far less destructive if it focused on spending cuts, rather than tax increases. A broad study of "fiscal adjustments" that emphasized tax increases showed that they failed to reduce the debt and were associated with large recessions.[27] An IMF study of 173 fiscal consolidations showed that those that mostly raised taxes suffered about twice as much as those that mostly cut spending.[28] This had merit—the U.S. had followed the "don't raise taxes in a recession" rule—but the discussion still tended to swirl around the principle of "austerity": that is, spending reductions, possible tax increases, and perhaps some other "growth enhancing" policies like labor market reforms. The idea of combining spending reduction and tax cuts was little mentioned even as the successful examples cited often included them.[D]

Those in favor of "stimulus" generally argued that any reduction in spending had dramatically negative economic effects, on top of

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[D] In Alesina and de Rugy (2014), the authors did not discuss the possibility of spending reductions combined with tax rate reductions, this combination perhaps lying outside of the accepted definition of "austerity." However, they used as examples Germany and Sweden, where, as they described:

> Germany's fiscal adjustment of 2004–2007 provides a good example. First, the country implemented a stimulus by reducing income tax rates. This reduction was part of a series of supply-side reforms implemented between 1999 and 2005, including a wide-ranging overhaul of the income-tax system that was meant to boost potential growth …
>
> Sweden is another example of successful adjustment. The data show that after the 2008 recession, Swedish Finance Minister Anders Borg not only successfully implemented a reduction in welfare spending, but also pursued economic stimulus through a permanent reduction in the country's taxes, including a 20-point reduction in the top marginal income tax rate.

Alesina, Favero and Giavazzi (2018) summarized the discussion around austerity in Europe, again concluding that fiscal adjustments that focus on spending reductions, rather than tax increases, were more successful. Yet discussion continued to focus on a combination of spending reductions and tax increases. The combination of tax reductions and spending reductions was still not considered, even after it had become successful policy in numerous countries.

being politically unpopular. In *Austerity: The History of a Dangerous Idea* (2013), Mark Blyth answered the question of how additional spending would be paid for: bigger deficits today, and more taxes in the future. Various forms of “easy money”—in practical terms, a devaluation—might help. It was Hoover and Roosevelt all over again.

With unemployment soaring among European countries that had imposed tax-hiking “austerity,” many economists looked to monetary “stimulus” to get them out of their predicament. Nobody blamed mismanagement of the euro for the problems, but calls went up to allow hard-hit countries to leave the euro and devalue their currencies. Some directly compared the euro to the gold standard of the early 1930s, and wailed about the inability to deal with these nonmonetary difficulties with a monetary response—a stiff dose of currency distortion.

What if Spain, Greece or other troubled governments had devalued? If existing debts were redenominated in some new *peseta* or *drachma* whose value collapsed against the euro, the effect would have been equivalent to a partial default. Spanish debtors would experience some relief, but enormous sums of Spanish public-sector and private-sector debt held in France, Germany or elsewhere outside Spain would have had huge losses, likely toppling the already-weak banks and rendering pension funds insolvent. But what if existing debts had remained denominated in euros? In that case, there would have been enormous defaults in Spain—including the government—as debtors would see their liabilities soar in terms of devalued *pesetas*. Either option would have resulted in financial chaos. Policymakers no doubt got a good talking to by banks. Analysts were confused by popular movements and demonstrations that were opposed to EU-directed “austerity” programs, but were in support of the euro currency itself, and which rejected any new currency whose sole reason for existence was to be devalued—but this made perfect sense.

Although devaluations were avoided, the European Central Bank was ultimately charged with the duty of getting governments out of their problems. In a pointed statement in July 2012, ECB head Mario Draghi said that the ECB would “do whatever it takes” to save the eurozone’s struggling banks and governments, adding: “believe me, it will be enough.”

The ECB did what it took; it was enough. Officially, the ECB didn’t do much at all, at first. It seemed as if Draghi had been able to turn the tide with little more than moving his mouth in public. Probably, the ECB just didn't want to say what it was doing. Yields on the government bonds of Spain and other troubled countries plummeted. In 2015, the ECB began to buy large amounts of government debt in the open market, artificially driving German ten-year government debt to negative yields in 2016. It appeared that central bank market manipulation had advanced considerably since the 1930s. The market value of the euro, however, remained tolerably stable during this time.

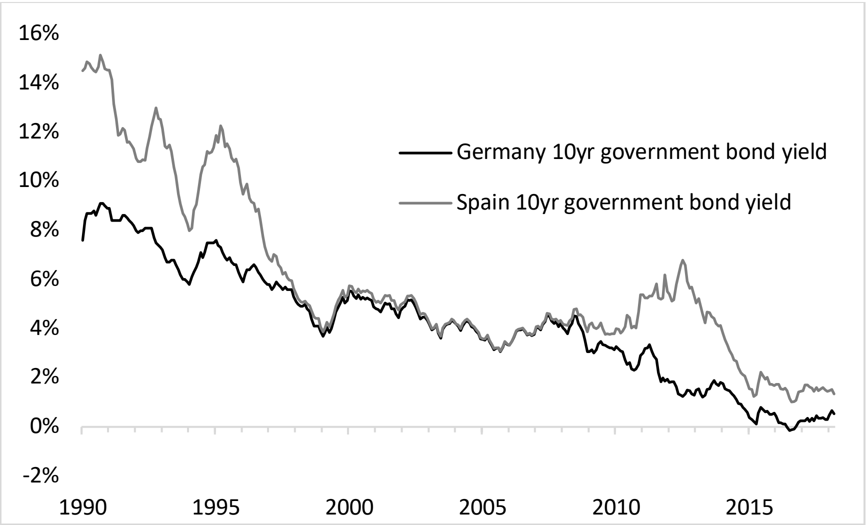

Figure 6.1: Germany and Spain: Yield On 10-Year Government Bond, 1990-2018

Spain took a new course beginning in June 2014. The finance minister, Cristóbal Montoro, said that tax reductions would increase both investment and consumption, increase gross domestic product, and keep the country on track to meeting its deficit targets. The government rejected pressure from the European Union to increase its VAT rate still further. The ECB's Draghi signaled a change in thinking among the formerly pro-austerity eurozone elites when, in August 2014, he called for a "more growth-friendly position of fiscal policies," explicitly including tax reductions.[29]

Spain's top income tax rate fell from 52% to 46% in 2015 and 45% in 2016. The corporate tax rate had already been reduced from 35% to 30% in 2007. In 2015 it fell to 28%, and in 2016 to 25%. The unemployment rate fell from 26.9% in 2013 to 15.3% in 2018. Spending rose after 2014, but it did not rise very much, increasing a total of 1.4% in nominal terms between 2014 and 2016—hardly enough to be responsible for the economic recovery that followed. Aided by expansion in GDP, government spending fell from a peak of 48.1% of GDP in 2012 to 41.0% in 2017. The government's budget deficit fell from 10.5% of GDP in 2012 to 3.1% in 2017.

Europe had been on track to recreate many of the problems of the Great Depression. But around 2014, they turned back, and instead embraced the Magic Formula. Taxes were reduced, and money remained stable. Combined with moderation in spending, the effect of these reductions in taxes was to reduce budget deficits: expanding GDP and rising employment brought increased tax revenues, while welfare and other demands on the government abated.

This left many countries in Europe with long-term rather than short-term problems. Many tax rates remained higher than they were before 2009, while chronically high levels of spending remained largely unreformed. Overall debt/GDP levels were very high, and if market interest rates on government debt normalized to historical levels, the costs of debt service would become quite burdensome. Governments had the opportunity to continue in the direction they have already traveled: further reductions in tax rates, and other growth-friendly policies, would create economic prosperity and expanding GDP; expanding GDP would increase tax revenues, reduce demands upon the state, and reduce debt/GDP levels; a prosperous economic environment would make further spending reductions politically far easier; further spending reductions could allow further tax reductions. A potential spiral of decline could be turned to a spiral of success.

The United States After World War II

By 1938, resistance had built against any more tax increases in the United States. In that year, a proposed Amendment to the U.S. Constitution was introduced in the House to repeal the Sixteenth

Amendment of 1913, which had permitted the Federal income tax. By 1952, twenty-four states petitioned, pursuant to Article V of the Constitution, to hold a constitutional convention to limit top Federal income tax rates to no more than 25%. With World War II over, in 1947 the Republican-dominated Congress passed a bill to reduce all tax rates by 20%, with the example and arguments of Andrew Mellon often cited. It was vetoed by President Harry Truman. The bill was reintroduced, and passed the House and Senate again. Truman again vetoed it. The House successfully voted to override the veto. The Senate also voted to override, but fell five votes short.

A third bill was introduced in 1947; again, Truman vetoed it. This time, the override vote passed both House and Senate.[30] The marginal rate on income of up to $8,000 fell from 33% in 1945 to 19.36% in 1948. The top rate fell from 94% to 82.1275%, while the income at which the top rate applied rose from $200,000 to $400,000.

Against this backdrop, as the costs of World War II subsided, an enormous reduction in Federal spending took place. Expenditures of $92,712 million (41.0% of GDP) in 1945 fell to $29,764 million (11.3%) in 1948, producing an ample surplus that year. Millions of soldiers returned to the private economy, while corporations reorganized for different products and services. Many worried that this would result in a terrible recession and appalling unemployment; in effect, the continuation of the Great Depression. But the economy expanded nicely, with GDP rising from $226.4 billion in 1945 to $262.4 billion in 1948.

Alas, this tax relief was short-lived. The start of the Korean War in 1950 prompted higher wartime tax rates. As hostilities ceased, another bill to reduce tax rates was introduced in 1952. As the first act of the legislative season, Congressional Republicans delivered H.R. 1, which would reduce personal income tax rates by 30%. The effort was blocked by Republican president Dwight Eisenhower, who focused on the large debts left after the wars, and deficits. Treasury Secretary George Humphrey argued that taxes should not be cut as long as the budget was in deficit. (The deficit in 1952 was 0.4% of GDP.) Frustrated tax-cutters in Congress thereafter took to increasing exemptions in the tax code, narrowing the base where they could not cut the rates.

In 1954-1963, the U.S. ended up with a tax system with high top rates but tolerable rates on modest incomes. The 20%-22% marginal tax rates on taxable income below $8,000 were not oppressively burdensome compared to the median family income of $4,400 in 1955, and far better than the 40%+ "standard" income tax rates on moderate incomes imposed in Britain during that time. The top rate of 91% applied to income over $400,000, but this too had many avenues of avoidance. Other taxes remained modest: in 1955, the payroll tax was a combined 4%, compared to 15.3% in 2015. State tax revenue/GDP of 2.7% in 1955 was far below 5.1% in 2015. Further reductions in taxes had to wait until a major tax reform in 1964, which produced substantial benefits.[E]

Stable Money was also part of the U.S.'s postwar policy mix. The U.S. finished the war with the dollar officially still worth the same $35/ounce of gold that had been its parity since 1934. This policy was reinforced at the Bretton Woods Agreement in 1944. In practice, however, the value of the dollar floated somewhat, sagging beneath its parity value. During the war, the Treasury had pressured the Federal Reserve to put a cap on interest rates, much as it had done during World War I. To accomplish this, the Federal Reserve had to expand the monetary base, resulting in dollar weakness. This arrangement continued into the late 1940s, when the dollar sagged to a low of $43/oz., a 19% decline from its $35/oz. parity.

The Bretton Woods Agreement was intended to establish fixed exchange rates. But as governments attempted to "stimulate" their lagging economies with "easy money," the result was a burst of currency devaluations in the late 1940s, especially in 1949. In that year, the British pound fell from $4.03 to $2.80, further reinforcing its impression of unreliability, and by comparison, the superiority of the U.S. dollar. The French franc fell, in a series of steps, from 1.1911/dollar to 3.5/dollar. The Italian lira fell from 225/dollar to 625/dollar. Denmark, Finland, Norway, Belgium, the Netherlands, Mexico, India and many other countries devalued alongside.

In 1951, the dollar sagged again, to $44/oz. This prompted an Accord that year between the Treasury and the Federal Reserve, in which the Treasury agreed to cease its demands that the Federal Reserve control interest rates. This allowed the Federal Reserve to

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[E] A splendid account of the 1964 tax reform was presented in *JFK and the Reagan Revolution: A Secret History of American Prosperity* (2017), by Brian Domitrovic and Lawrence Kudlow.

focus on returning the value of the dollar back to its $35/oz. Bretton Woods gold parity, which was achieved in 1953. (The scale of the adjustment was larger than that of the British pound in 1925.) This move helped re-establish the principle of Stable Money not only in the U.S., but worldwide. The devaluations of the late 1940s in Europe ceased. Germany, Japan and China went from hyperinflation to gold-based money. The Bretton Woods era of prosperity had properly begun.

The United States After 2001

The United States had a long history of "austerity"—that is, higher taxes—in response to recession, and the budget deficits that typically accompany it. Republican Richard Nixon campaigned in 1968 to eliminate Lyndon Johnson's 10% surtax; but in 1969, as the economy sank into recession, Nixon not only extended the surtax by a year to meet his "balanced budget" promises, he increased other taxes, including a doubling of the capital gains tax that brought the top rate nearly to 50%. This made the recession worse. To compensate, he grasped at monetary "stimulus." Even Ronald Reagan agreed to a tax hike in the middle of the 1982 recession. The 1990-91 recession coincided with a basket of tax increases including a rise in the top income tax rate from 28% to 31% by Republican President George H.W. Bush. It was supposed to increase revenue by $20.9 billion in 1992. The degree to which the tax increase caused or worsened the recession is debatable; the result was that tax revenue in 1992 fell $113 billion short of pre-tax increase projections.[31] Another tax increase followed in 1993 under Democratic President Bill Clinton, which certainly contributed to the weak recovery and tepid economy in 1994-1995. Clinton had campaigned on a "middle class tax cut" in 1992. Some thought that Clinton's change of direction had been prompted by Alan Greenspan, a long-time Republican deficit hawk, who was then the Chairman of the Federal Reserve. At the end of it all, Federal tax revenue/GDP was the same in 1995 (17.8%) as it was in 1989 (17.8%); but GDP was probably lower than it would have otherwise been.

Republican President George W. Bush's embrace of tax reductions in 2001 and 2003, in the midst of the recession of 2001-2002, thus represented something of a new strategy. To some degree, it was a fulfillment of campaign promises, rather than a direct response to the recession of the time. Nevertheless, the promises were fulfilled even as the recession depressed tax revenue and expanded deficits. It was the opposite of what his father had done. Economist Larry Lindsey explained:

> [Bush] wanted to know what could be done about a bubble after it burst. The answer came straight out of the economic textbook: After the bubble bursts you do the opposite of what they did in the 1930s. Instead of raising taxes—which they did in the 1930s—you cut them. ... In 1999, Bush asked me to be chief economic adviser in his presidential campaign. At that time I began crafting what ultimately became known as the "Bush tax cuts." ... [T]he purpose of the cuts was to do exactly what Bush and I had discussed back in 1997—provide a cushion for the economy when the bubble burst.[32]

Despite claims from both sides that it was "the largest tax cut in history"—this was either a good thing or a bad thing, depending on your perspective—it was actually rather modest. Income tax rates fell about three percentage points across the board, with the top rate falling from 39.6% to 35%. The top capital gains tax rate fell from 20% to 15%, the rate on dividends was reduced from a top rate of 39.6% to 15%, deductions, depreciation and expensing were made more generous, and the inheritance tax was gradually phased out. Despite little change to overall income tax rates, the focus on capital-related taxes helped deliver substantial economic benefits.

Did it work? "The economy quickly stabilized as soon as the tax cuts hit the economy in July 2001," Lindsey recalled. "With the passage of the 2003 tax cuts, the economy began a trajectory of continuous growth of around 3 percent."[33] Despite a stock market collapse in which the Nasdaq index lost 78.4% of its value—and a terrorist attack in September 2001 after which the stock market shut down completely—the recession was unusually mild, with a cumulative output decline of less than 1% of GDP.

In the recovery between 2003 and 2007, eight million new jobs were created. Federal tax revenue/GDP rose from 15.5% to 17.7% (a little above the 1950-2016 average of 17.3%), while nominal GDP grew 26.1%. The combination produced a 35.8% increase in Federal tax revenue. Among taxpayers with adjusted gross income in excess of $1 million, tax payments increased by 107%; among those in excess of $5 million, they increased by 143%.[34] The Federal deficit shrank from 3.3% of GDP to 1.1%, entirely due to an expansion of tax revenue, since expenditures were 19.1% of GDP in both years. With new wars in Afghanistan and Iraq, Congress eagerly spent all the new money. If increases in expenditures had been limited to increases in the CPI, the budget would have been in surplus.

Probably, a recovery would have happened anyway, without any changes in tax policy. But, the recovery was probably better and stronger due to the tax changes; and, as a result, tax revenues were higher than they would have otherwise been. The Congressional Budget Office predicted that tax revenue in 2007 would be $84 billion lower than its pre-tax-cut projections due to the effects of the 2003 tax cut. In actuality, revenue was $186 billion higher, in large part because nominal GDP was 9.0% higher than originally projected.[35]

Ireland

Ireland had been one of Europe's poorest countries for more than two centuries. It continued as a stagnant underperformer in the 1950s, 1960s and 1970s, stumbling even behind Britain, itself a laggard. Already-high tax rates were exacerbated by inflationary bracket creep in the late 1970s and early 1980s. The poor economy led to chronic budget deficits. In 1979, as Margaret Thatcher surged to victory in Britain, an estimated 750,000 people in Ireland (from a population of 3.4 million) took part in a demonstration in favor of lower taxes. Nevertheless, in the early 1980s, the government attempted to remedy these deficits with still higher taxes—"austerity." Central government tax revenue increased from 27.5% of GDP in 1979 to 34.3% in 1986.[36] Unemployment soared from 7% to 17% alongside, leading to an increase in transfer payments (welfare payments) of over 7% of GDP.[37] (Economists once called these sorts of automatic spending increases a form of "stimulus" known as "automatic stabilizers.") The debt/GDP ratio continued to climb. By 1984, as other governments around the world (including Britain) embarked on major reductions in tax rates, further tax increases were not seen as a viable solution for Ireland's debt and deficit problems.

In 1986, the government's debt/GDP ratio was 116%. The deficit was 10.9% of GDP. The country was close to crisis. Charles Haughey, Ireland's newly-elected prime minister, had a history of big spending—his spending policies while in office 1979-1982 were cited as one cause of the crisis. But in 1987, Haughey began a major program of spending reduction, "dictated by the sheer necessity of economic survival."[38]

In 1987, health expenditures were cut six percent; education seven percent; agricultural spending eighteen percent; roads and housing eleven percent; the military seven percent. An environmental bureau was eliminated, along with the National Social Services Board, the Health Education Bureau, and the Regional Development Organizations. Public sector employment fell by nearly 10,000.

In 1988, government spending saw the biggest reductions in thirty years. Real current spending was reduced by three percent, and capital spending by 16 percent. The primary deficit was eliminated, and the debt/GDP ratio began falling from its 1986 peak. Government spending declined from 49.4% of GDP in 1985 to 39.0% of GDP in 1990. The government's deficit fell to 3.4% of GDP in 1990. In 2000, government spending was 30.3% of GDP, one of the lowest in Europe.

Along with this, taxes were reduced. The top income tax rate of 65% in 1985 fell to 56% in 1989, 46% in 1995, and to 42% in 2001. The standard rate fell from 35% in 1989 to 27% in 1994 and 22% in 2001. The corporate tax rate of 50% in 1987 fell to 48% in 1988, 42% in 1989, 40% in 1991, and 24% in 2000. In 2003, Ireland introduced a 12.5% corporate tax rate, which soon made Ireland a preferred domicile for corporations operating in the European Union. In part because so many corporations chose to domicile there, revenue/GDP from the corporate income tax was three times higher in 2006 (3.62%), with a 12.5% rate, than it was in 1986 (1.21%), with a 50% rate. A combined payroll tax rate of 20% in 1990 fell to 12.8% in 2002. The capital gains tax rate fell from 60% in 1985 to 20% in 1998. The VAT rate fell from 25% in 1985 to 21% in 1993.[39] Tax revenue/GDP fell from 38.1% in 1986 to 29.4% in 2006.

After centuries of stagnation, the Celtic Tiger began to roar. GDP growth rates rose to the four percent range in the late 1980s. By the late 1990s, they were around eight percent, and continued around five percent into the 2000s. In 1991, Germany's per-capita income was twice that of Ireland. By 2004, Ireland surpassed Germany, to become one of the wealthiest countries in Europe. In 2006, government debt/GDP had fallen to 22%.

Ireland’s “declines” in spending/GDP, or tax revenue/GDP, were actually, in nominal terms, increases. In only one year (1988) did nominal spending actually fall, by 1.25%, and that was due to a decline in the capital budget. The current budget grew 1.0% that year. Growing GDP, and growing tax revenues along with it, allowed the government to increase its spending from €13.05 billion in 1986 to €56.15 billion in 2006, even as the spending/GDP ratio fell. Adjusted for inflation, spending rose 98% during this time.

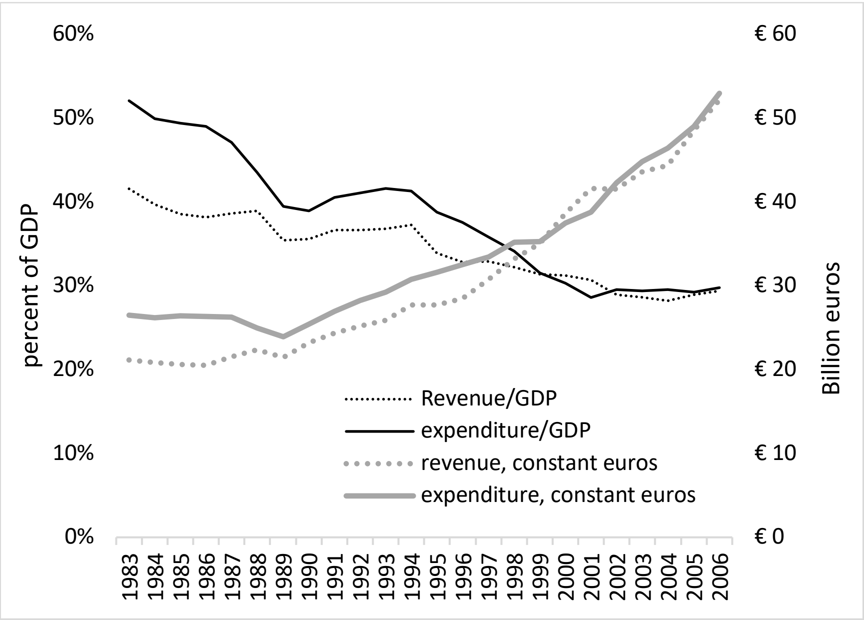

Figure 6.2: Ireland: Government Revenue And Expenditure, 1983-2006

The Irish pound was linked to the British pound until 1979, when Ireland began to participate in the European Monetary System. From 1980 to 1986, under the pressures of high unemployment and a weak economy, the Irish pound declined gradually against the European Currency Unit benchmark. After a last minor devaluation in 1986, the Irish pound remained stable, within the context of the EMS which mandated fixed exchange rates. This closed off currency devaluation or debt monetization as viable alternatives. In this, Ireland showed more discipline than Britain, which left the EMS in a crisis in 1992, devaluing the pound as a result. In 1999, Ireland adopted the euro.

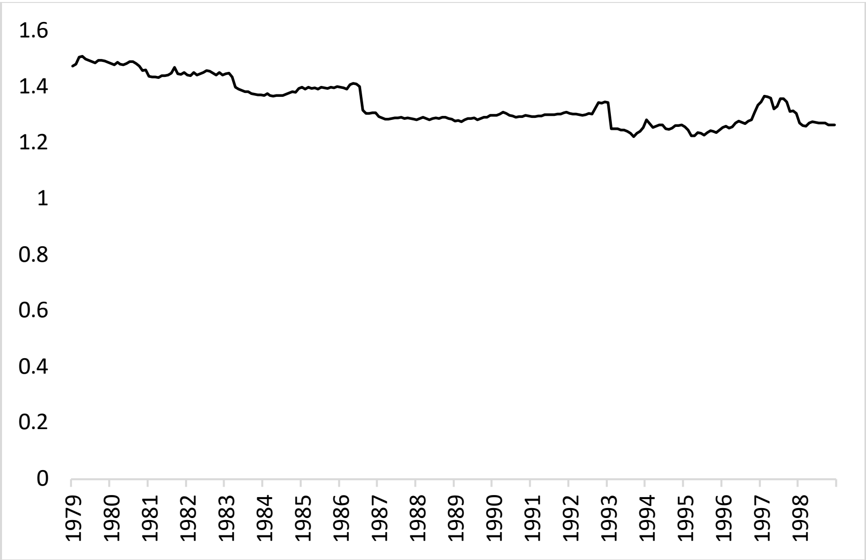

Figure 6.3: Ireland: Irish Pound Vs. ECU benchmark, 1979-1998

Ireland cut spending—ultimately, by an amazing 19% of GDP over fourteen years—cut taxes, and kept the money stable. The Magic Formula turned a generational underachiever and default candidate into a powerhouse.

Chapter 7: What We Learned in the Twentieth Century

The eighteenth century was the age of absolute monarchy. Outside of Britain, taxes were often arbitrary and oppressive, the coinage intermittently debased, and government was big. In the 1770s, French peasants sometimes paid 80% of their income in taxes. Among intellectuals, this produced a reaction—the ideals of Liberalism, expressed by philosophers such as John Locke, Baron de Montesquieu and, in economic policy, Adam Smith. (Today, this would be called "Libertarian.") The Liberal vision was most perfectly expressed by the new United States, which, at its founding, was a strange experiment without precedent in the previous thousand years.

The nineteenth century saw Liberal policies spread everywhere. New states split from their European kings and adopted constitutional republican governments, particularly in Latin America. Monarchies in Europe were moderated by national assemblies. But, it was particularly true in economic policy, where the small government, low tax and stable money ideals of Britain and the United States were widely imitated. And yet, in the midst of this Liberal triumph that was making the whole world rich, Socialism and Communism became ascendant among intellectuals.

The twentieth century saw Communism consume large swathes of the globe, while Liberal constitutional republics became the political model for the remainder. Between 1914 and 1970, monarchy effectively disappeared worldwide, and the European empires of the nineteenth century were disassembled into independent democratic republics in the model of the United States and Britain, no matter how incongruous this may have been compared to those nations' prior political traditions. If Communism was soon found to be a monstrous horror, nevertheless Socialist ideals became common everywhere. World War I, the Great Depression, and World War II re-introduced Big Government on a scale that hadn't been seen since perhaps the days of Louis XVI.

The benevolent non-intervention of *laissez-faire* gave way to a doctrine in which governments would engage in continuous macroeconomic "management." This was actually a revival of eighteenth-century economic principles, sprinkled with mathematics to give it a modernistic look. Economists aspired to manage the economy with the judicious application of "fiscal stimulus." Fascination with monetary manipulation and floating currencies also began with World War I, and culminated in the floating currency environment that began in 1971. Income taxes at high rates, inheritance taxes, and other such measures were imposed with the intention of social engineering, with little regard to their predictable economic consequences. High taxes and often unstable money undermined economies everywhere, reaching a nadir in the 1970s. After 1980, the world moved back toward economic liberalism. Centrally-planned communism was wholly abandoned, and many socialistic programs were rolled back, including nationalized industries, nationalized housing, price controls and labor controls.

Despite this trend toward less-intrusive government since 1980, government revenue/GDP ratios continued to climb to their highest in history. This has been enabled by substantial advances in tax administration, particularly broad taxes at relatively low rates including modern retail sales taxes, the value-added tax and the payroll tax—twentieth-century innovations far superior to the excises and tariffs of the nineteenth century. The income tax remains as an anachronistic anomaly, either to be rationalized in the form of a Flat Tax, or perhaps eliminated entirely in favor of sales and value-added taxes. (Tax technicians note that there is surprisingly little difference between common Flat Tax proposals and a VAT.) To the dismay of fans of smaller government, greater efficiencies in tax administration have been accompanied by greater taxes, and a persistent economic mediocrity.

Today, we are left with the detritus of worn-out ideologies. Many of today's institutions originated in the socialistic ideals of the 1890-1930 era, implemented into policy in the 1930-1970 period—ideals that have since been proven false, and programs that proved to be highly problematic. A hundred years after the Marxist ideal of punitive income taxes with high rates above 50% was first implemented during World War I, this notion has been rejected everywhere. Government tax revenue/GDP ratios are as high as ever, but governments have drifted away from the idea of using tax policy as a tool of social engineering, instead looking at it primarily a revenue-generating mechanism.

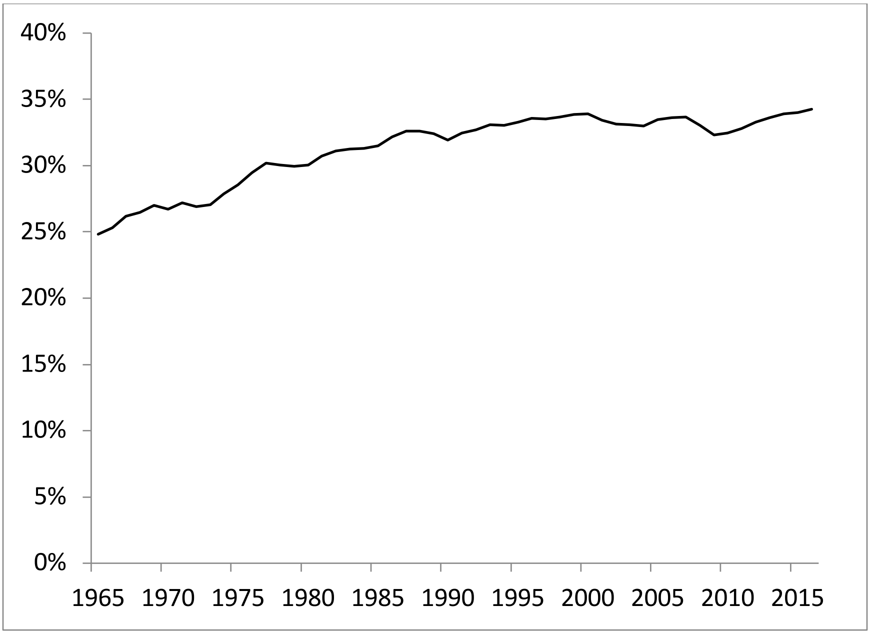

Figure 7.1: OECD Average Tax Revenue/GDP, 1965-2016

A century of Welfare State experiments has produced some programs with broad popularity; others persist only because they have become hard to eliminate. Some have simply metastasized far beyond their original intentions, while the underlying conditions have changed. When the U.S. Social Security Act was passed in 1935, seniors' savings had been decimated by bank failure, debt default and stock market collapse. Many lost homes and farms. Their adult children were unemployed, or had lost their own farms and businesses, and were struggling to feed their own families. A meaningful recovery was nowhere in sight. A new program based on a 1% payroll tax on employers and employees probably seemed reasonable given the situation. In 1945, there were 41.9 workers for each beneficiary; in 2010, the figure was 2.9. In the interim, benefits increased. The ratio is expected to hit 2.0 in 2035.

If this existing system were presented as a fresh policy proposal in the form of a whitepaper, it would be considered absurd and idiotic. It only continues because it seems too difficult to fix. Supposedly, the high ratio of seniors in the population is leading to a terrible crisis, but this is only because of outdated institutions that were designed for completely different conditions. The high ratio of seniors is simply the outcome of longer lifespans, combined with fertility rates near replacement levels—two good things not likely to change much in coming decades. Even shrinking populations are not necessarily a bad thing. Japan has less land area than California, most of it mountainous—only 11.9% of Japan's land area is arable—and three times the population. In 2015, Japan imported 61% of its food on a calorie basis. If Japan's population were to fall by half in fifty years—to the level of 1930—would it matter much, if productivity and per-capita GDP also grew during that time?

In *The Fourth Turning* (1997), William Strauss and Neil Howe described a theory of history based on cycles lasting about eighty years, or one natural human lifetime. Toward the end of the cycle, a period of crisis ensues, as the long-unresolved and gradually intensifying problems that characterize the entire cycle erupt into a breakdown of the existing order. Out of each crisis period, old organizations and institutions are washed away, and new arrangements are established. In U.S. history, these periods of crisis and reorganization include the Revolution and Founding era of the 1780s; the Civil War of the 1860s; and the Great Depression/World War II period of the 1940s. Each of these upheavals had precursors spanning decades; each seemed inconceivable just a few years before they ignited into cataclysm.

Adding another eighty years gets us to the 2020s, and as this time approaches, everywhere we can see the symptoms of post-WWII-era institutions that have become corrupt and degenerate, and no longer represent our ideals, aspirations, current conditions or present state of understanding. Mid-twentieth century big-government socialism, in the form of state pensions (Social Security), state-funded healthcare, and a multiplicity of welfare programs worldwide, is tottering under mountains of unfunded future obligations, combined with problems related to complexity and welfare dependency, and poor economic health that results from the taxes to fund all of this. To this is combined very high and rising government debt/GDP ratios and continuing chronic deficits among developed countries, apparently leading toward an endgame of sovereign default, financial crisis, and monetary debauchery.

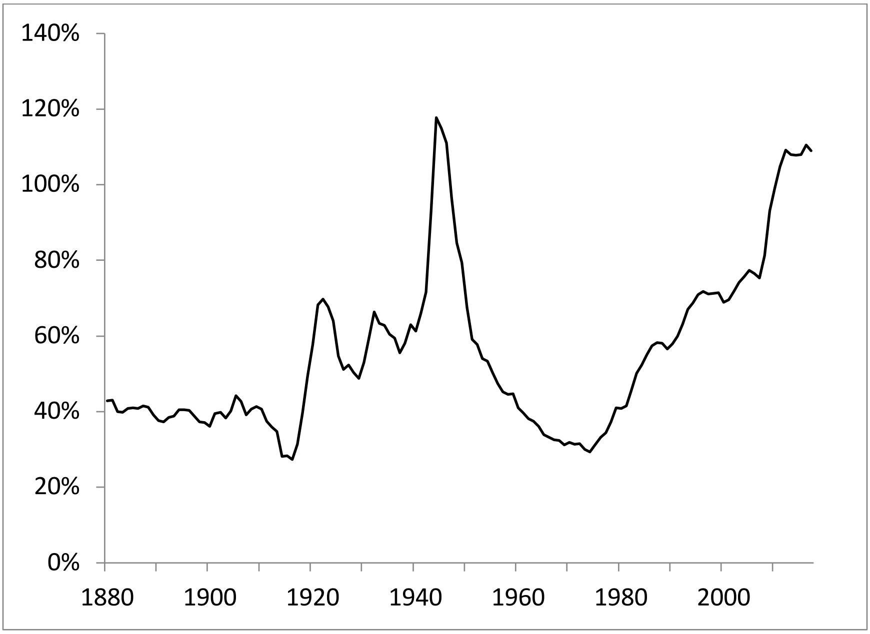

Figure 7.2: Government Debt/GDP
In Advanced Economies, 1880-2017

A wide variety of postwar-era institutions and forms of organization have become rotten, problematic, or simply played-out and exhausted, including: the university system and public education as a whole; the pattern of automobile-dependent suburbia; an overly-complicated and parasitic financial system; the Central Intelligence Agency, International Monetary Fund, North Atlantic Treaty

Organization, and the United Nations; a military-industrial complex that includes roughly 1,000 U.S. military bases on foreign soil; a floating currency environment based on soft-money ideologies; a pharma/healthcare cartel based on drugs and surgery; underfunded private and government pension plans; or low savings rates and debilitating consumer debt.

Part of this is simply a matter of time: without the cleansing and renewing effect of private market competition that corporations experience, any government or government-linked institution (such as universities, healthcare or military contractors) tends toward decay and corruption, even if its basic form and purpose is sound. Salaries, pensions and headcount for even the most basic and necessary government services, such as police and fire, have soared to indefensible levels; and this only in recent years. Unionization of government employees has had something to do with this. After decades of bad experience in these matters, we may decide that public unions are, as President Franklin Roosevelt said: "unthinkable and intolerable."

"The problem with socialism is that eventually you run out of other people's money," British prime minister Margaret Thatcher once said. Britain retained low taxes for centuries because taxation required the consent of the taxed, via Parliamentary representation. Today, every spending program encounters political resistance from those that have to pay for it. But there is one major constituency that lacks Parliamentary or Congressional representation today: children and the unborn. For decades, the Big Government shortfall has been met by taking money from the future unborn—in the form of government debt and rising debt/GDP ratios—who cannot vote against it, or even separate themselves in a Revolutionary War. But even the future unborn runs out of money eventually. The bond market calculates that these unborn, when they come to adulthood, won't be able to pay the bills. If these accumulated problems flare up into a hot crisis only a few years from today—they were already flaring up across Europe in 2012 before intervention by the European Central Bank—it might be at the point when governments are no longer able to paper over their problems with further debt issuance. The logical outcome of this is Higher Taxes and Unstable Money, as governments (unsuccessfully) try to wring more cash out of the population to sustain existing government programs and commitments, or cover the shortfall with the printing press and inflate away their obligations. With this, existing government programs, or other private institutions such as excessively-expensive healthcare or university costs, would simply become insupportable, either because the money can't be paid, or the money that is paid becomes worthless. The old order passes; and a new order must be created, out of simple necessity. Something new must be done.

This is not to say that crisis is inevitable. Ireland solved its seemingly-impossible problems in 1986-2000 in a surprisingly short time, using the Magic Formula, without any great turmoil or hardship. The United States did so in 1980-1990, again using the Magic Formula. Britain in 1816 attacked their debt problem with lower taxes, not higher—and it worked. The U.S. tax reform of 2017, in which the Federal corporate income tax rate was reduced from 35% to 21% against the screams of the deficit hawks on the Right and big-government apologists on the Left, suggests that America still has some potential for greatness. But, sometimes it doesn't go so smoothly, and there is even a sense that it shouldn't, if it would allow today's chronic problems to persist and worsen for another generation.

Spending

Communism and socialism during the twentieth century, and the high taxes and unstable money that accompanied them, were a series of experiments—experiments that produced many failures, but also some successes. There is as yet little urge to return to the pre-1914 Liberal framework of a government kept as small as possible—in practice, a spending/GDP ratio around 10%. We have become accustomed to some degree of socialistic government services, regarding health care, education, welfare, or public pensions (Social Security). In time, we may eventually conclude that this too is dangerous and problematic on any level, and should be left, as much as possible, to the private market, individual responsibility, and voluntary private organizations such as churches and charities. Certainly, something will be learned in the twenty-first century. But, we are not there yet.

Our shared vision of government would likely be larger than it was in the pre-1914 era, but recent examples of success have in common a spending/GDP ratio around 15%-20%. Hong Kong today provides all the services common to developed countries, including public schools and universities, a welfare system, and a universal state-run healthcare system, with a tax revenue/GDP ratio of 13%. This modest revenue requirement is easily achieved with Low Taxes: the top corporate income tax rate is 16.5%, the top personal rate is 15%, and there are no sales taxes, VAT, payroll taxes, inheritance taxes, or taxes on capital gains, interest or dividends. Stable Money is provided by a currency board to the U.S. dollar. To this was added a relatively recent policy implemented in 2000: a mandatory contribution to a privately-owned retirement account, of 5% of employment income with an upper limit. This followed the guidelines of a 1994 World Bank study on senior income, which recommended:[1]

1) A publicly-managed, tax-financed social safety net;
2) A mandatory, privately managed fully funded contribution scheme;
3) Voluntary personal savings and insurance.

More than thirty countries now have similar "provident fund"-type systems, commonly combined with backup provisions if these should prove insufficient.[2] Singapore has a tax revenue/GDP ratio of 14.2%; but to this is added an aggressive provident fund system, which not only covers retirement income, but also healthcare and housing. In 2018, the combined contribution rate was 37%. Mandatory private saving is, in practice, not so much different than voluntary private saving: it establishes the principle of independence and self-reliance, while also giving all citizens a stake in the overall economic success of the society.

But perhaps the most important characteristic is that it generates capital, while tax-funded systems tend to depress capital creation. High rates of domestic capital creation (savings) are a common feature of the most successful societies. High rates of capital investment lead directly to high rates of job creation, increasing productivity, and higher wages. The advantages to seniors are thus twofold: not only do they have assets to draw upon later in life, they also have job opportunities—job opportunities created by their own retirement savings. When investment and job creation is weak, seniors tend to lose out in competition with younger people for limited opportunities. When investment and job creation are strong, employers have to take anyone that meets the minimum requirements to do the job, and possibly entice workers by offering higher wages. Private accounts also remove a constant tendency in democratic systems for retirees to press for more benefits, funded by higher taxes on people of working age. Hong Kong and Singapore's provident fund systems don't cripple their economies with high taxes—they improve the economy with high savings.

If high rates of savings and capital creation are good, it naturally follows that "negative savings" is bad, and this is an appropriate description of government policies designed to foster increased consumer indebtedness. Whether for artificially oversized home mortgages, education, or other matters, government programs to supposedly "improve affordability" have left large populations of debt-burdened citizens unable to accumulate wealth. Government provisions to avoid (rather than promote) excessive personal indebtedness, such as limits on interest rates, have been a part of human society since ancient times. Until 1981, most States in the U.S. had legal upper limits on interest rates below 10%. This had to be abandoned due to the inflationary conditions of the early 1980s, but they were never reinstated afterwards, when inflation rates again returned to sub-5% levels. Limits expressed as a premium to interbank lending rates, instead of a fixed rate, would eliminate conflicts in an inflationary environment. Mexico has no history of government programs to make housing "affordable" with the provision of thirty-year mortgages. The result is that 80% of Mexicans own their own homes, and only 13% of these have mortgages. The homeownership rate in India is 87%.

The cost of Hong Kong's universal government-run healthcare program was an astonishing 2.8% of GDP in 2014. Private healthcare accounted for another 2.9%, for a total expenditure of 5.7% of GDP. Hong Kong had extraordinary success at providing both government-run and private healthcare with high efficiency—that is, low cost and a high level of service—and was not too far off the U.S.'s own healthcare/GDP ratio of 5.0% in 1960 or 6.9% in 1970.

In 2017, that number was 18.2% of GDP in the U.S., a catastrophic figure that tends to bankrupt whoever has to pay for it, whether corporations, private individuals, or the government. In theory, a system that is largely based on private competition and innovation should provide the lowest costs and highest value, even if this comes with some issues regarding distribution and access. In practice, the U.S. system looks like a vast cartel designed to extort as much money out of the population as possible, while maintaining a profit-maximizing condition of chronic ill-health. Even senior-heavy Japan had healthcare expenditures of 10.9% of GDP in 2016; the average for OECD countries that year was 9.0%. But these seemingly-successful examples have also had steadily rising costs and demographic challenges that threaten to undermine healthcare systems that were designed under far different conditions. As these trends only become worse, it would be hard to keep overall spending/GDP under 20%.

Competitive private-market healthcare does work, when it is allowed to: Costa Rica has become a destination for medical tourism because of its high-quality services and low prices. Aggressive competition and soaring efficiencies in India reduced the cost of heart bypass surgery to $1,583 in 2013, compared to an average of $106,385 in the U.S. that year.

If corrupt, inefficient and decades-old government healthcare bureaucracies in Britain, France and Japan can keep the population healthy for around 10% of GDP, an efficient private-sector system should be able to do so for much less. Singapore's free-market-based healthcare system is, ranked by outcomes, among the best in the world. It combines transparent pricing with open competition, universal insurance and subsidies for lower incomes, and costs 4.2% of GDP.[3] The Surgery Center of Oklahoma was established in 1997 on basic principles: payments would be exclusively in cash (no third-party insurance), and all prices for procedures were posted online. “What we’ve discovered is that health care doesn’t really cost that much,” said Dr. Keith Smith, who co-founded the hospital with Dr. Steven Lantier. “When we first started we thought we were about half the price of the hospitals,” explained Lantier. “Then we found out we’re less than half the price. Then we find out we’re a sixth to an eighth of what their prices are.”[4] Even if government does pick up the tab for those most in need, it can pick up a far smaller tab due to the competitive free-market environment. Examples like these prove how far from the free-market ideal the U.S. had drifted.

Perhaps we should begin with a price tag: if we were to provide a government universal healthcare program with a cost of 3% of GDP (half of total healthcare spending of 6% of GDP), appropriate for societies with large numbers of elderly—supplemented by a private market as large as people are willing to pay for—what would it look like? We might decide that the U.S.'s present healthcare priorities are exactly contrary to our goals. Instead of spending large amounts of money on the inevitable effects of aging on those over 65, on people who are not in the labor market, who have no dependents, and who have little to gain in overall lifespan or quality of life, perhaps it would make the most sense to concentrate the government's resources on those in the workforce, who have children to raise, and who have the most remaining potential lifespan: ages 0-65. This could focus on infectious disease and injuries. Those with lifestyle-related disorders including obesity, diabetes or heart disease are given diagnosis and good advice, and left largely to personal responsibility. Pharmaceuticals can be limited to low-cost generics. People who wish to pay for the latest pharmaceutical advances are welcome to do so in the private market.

Healthcare policy of the future should be sensible, and viable. These two conditions alone require it to be very different than healthcare policy today.

Low Taxes

Adam Smith marveled that 1770s Holland could remain relatively prosperous even under a substantial tax burden. But, this apparent short-term sustainability was part of a long-term path of decline. Holland, in the seventeenth century the wealthiest country in Europe, the financial capital of the Western world, a center of industry, and master of the world's largest empire, lost all of these titles to low-tax Britain during the eighteenth century. By the end of the century, Holland, most of its empire gone, had collapsed into bank failure, sovereign default and popular revolution.

Today, many are quick to claim that socialistic developed countries with high taxes and a high revenue/GDP ratio—ironically, the Netherlands is again among them—can nevertheless maintain modest economic progress and a reasonably comfortable lifestyle.

Perhaps they can this year or the next. And yet many of these same countries, in 2018, were again on the apparent path of rising debt, persistent deficits, sovereign default and bank failure, along with a variety of "populist" movements that could erupt into separatism and political turmoil.

Although the insights of the "supply side" economists are still often condemned in the United States, from both the Right and the Left, the fact of the matter is that since 1980 governments worldwide—including the U.S.—have steadily moved toward the "broad base/low rate" approach to taxation, which seems to produce the least economic harm for a given level of revenue. On this there is now quite a lot of consensus across the world and across the political spectrum, as T.R. Reid described in *A Fine Mess: A Global Quest for a Simpler, Fairer, and More Efficient Tax System* (2017). After a century of experimentation with "progressive" income taxes at high rates, we know all we need to know.

In 2001, the incoming Bush appointees at the U.S. Treasury Department found four words of advice scrawled on a whiteboard by the departing Clinton appointees. They were: "broader base, lower rates."[5] The "Flat Tax," the "FairTax," and broad VAT or payroll taxes are all variants on this principle. If spending/GDP ratios can be brought down to the 15%-20% range, taxation could also be reduced alongside, with added economic benefits. A new Spiral of Success may begin.

Stable Money

The Classical Gold Standard era of 1870-1914 was based on the principle of Stable Money—in practical terms, money linked to gold. Currencies that were linked to gold also, by definition, had fixed exchange rates with each other, in effect creating a "gold bloc" similar to today's euro or dollar blocs.

The result was enormously successful. Yet, the idea of macroeconomic manipulation via currency distortion was revived in the late nineteenth century, along with other statist philosophies common to the socialistic movements of the time. Just as World War I introduced income taxes at high rates for the first time, and also state communism in the Russian Revolution of 1917, it also began the twentieth-century experiment in floating currencies managed by monopoly central banks.

Over a hundred years have passed since the Classical Gold Standard dissolved in 1914, and nearly a half-century since the breakup of Bretton Woods in 1971 introduced the floating fiat era, and still no country has become wealthy due to its mastery of currency manipulation and devaluation. The best countries of recent decades—China and South Korea among them—only became rich when they gave up such things, and embraced Stable Money. The most successful countries of the 1950s and 1960s—Japan and Germany—kept their money stable. Most countries stumble endlessly from one problem to another, always "emerging" but never having emerged. Unreliable currencies are a big factor. Mexico's per-capita GDP was 12.8% of the U.S.'s value in 1965. In 2016, it was 14.3%. During that time, the value of the Mexican peso went from 12.5/dollar to 18,667. (Three zeros were removed in the early 1990s.) Many countries fared far worse than this.

In 2018, the U.S. dollar was worth less than a thirtieth of its Bretton Woods value vs. gold. Did forty-plus years of monetary instability and depreciation produce any lasting advantage compared to the gold-based money the United States used for most of the previous two centuries? There is no evidence that it did.

The idea of re-establishing a world gold standard system, as was done at Bretton Woods in 1944, is far out of the mainstream today. And yet, governments have converged on the principle of Stable Money everywhere. The Federal Reserve's infamous "dual mandate"—first expressed in the Employment Act of 1946, and later codified in a 1977 revision to the Federal Reserve Act—specifically demanded that the central bank engage in monetary macroeconomic manipulation to reduce unemployment (among other goals), while also keeping inflation from getting out of hand. It was an expression of mid-twentieth century ambitions. By the creation of the euro and European Central Bank in 1999, new lessons had been learned. The breakdown of Bretton Woods and the stagflationary disasters of the 1970s, and long experience with the difficulties of serving two masters, led to a single mandate for the euro: "price stability," a crude representation of the subtler goal of Stable Money—that is, stability of value, not prices. Intentional macroeconomic manipulation was expressly rejected, codified in black-letter law in the Lisbon Treaty of

2007, Article 127. Economists still yearn to play games with the macroeconomy via monetary distortion, but the grown-ups have told them: not so fast, buddy.

The sheer arbitrariness of central bank policymaking has led to several calls for some sort of formalized "rules-based" system of monetary management. The most common "rules-based" system has been a fixed-value policy: that is, the currency's value is stabilized against some benchmark, whether an international currency or gold. Roughly three-fourths of all countries have some variant of this today. Despite this, most "rules-based" proposals—Taylor rules, nominal GDP targeting, inflation targets, and many other variants on these themes—instead formalize the process of macroeconomic manipulation through currency distortion. The result of these proposals would be a currency whose value is destabilized. That is the mechanism by which they achieve their goals. The real-life consequences of such programs would not likely be pretty, just as the U.S.'s "monetarist experiment" in 1979-1982—it was academics' darling at the time—led to wild swings in dollar value, interest rates, inflation rates and economic output, and was quickly abandoned. Most major central banks today have an informal "inflation target" of some sort; these are mostly discarded whenever other issues seem more pressing. Brazil has had a more formalized inflation-targeting regime since 1999. While this has been a substantial improvement compared to Brazil's long history of hyperinflationary debauchery, the large swings in foreign exchange rates that resulted—from 3.80/dollar in September 2002 to 1.57 in July 2008, and then 4.04 in September 2014—would be intolerable by developed-country standards.

In 2018, the world monetary situation (it can hardly be called a "system") largely consisted of fixed-value currency blocs based around the dollar, euro or some minor currencies. New monetary developments are trending still further toward the Stable Money ideal. One is a tendency toward centralization: a single world currency bloc that would eliminate all the frustrations of floating exchange rates. This was the normal state of the world until 1971. And yet, such a world currency bloc must produce a value for its currency by some method; and recent suggestions include something like a global central bank in the model of the ECB, or perhaps a "currency basket" of major existing international currencies such as the SDR proposal of the IMF. The traditional solution, of course, was gold.

The other trend is toward decentralization, in the form of "free banking" or "currency choice" (a multiplicity of currency issuers), popularized by Friedrich Hayek in the 1970s and recently energized by the profusion of cryptocurrencies that have emerged since Bitcoin was introduced in 2009. Hayek lamented the inherent corruptibility of centralized money masters. But variety is only the first step in the process: money is best when it is stable and uniform. As Hayek described, the next step would be to winnow the many options into a few, or perhaps one, that had proven itself superior. Whether via centralization or decentralization, the end goal is the same—Stable Money. "Free banking" has been common throughout history. There were over 1,500 currency issuers in the United States in 1850. They shared a universal standard of value—gold and silver, closely linked in the bimetallic systems of that time.

Stable Money works—and gold works, as a means to achieve Stable Money. The accomplishments of the Classical Gold Standard period, or even the flawed Bretton Woods period, were just the most recent examples of a longer history stretching centuries. Today, people are a little nervous about the idea of tying their fortunes to gold. We cannot say, with certainty, what such a future might hold. And yet, gold-based money has an extraordinary track record of success; central bank bureaucrat-managed floating fiat money has a track record equally extraordinary, uniformly characterized by mediocrity and failure. Go with what works.

If these topics are not paramount today, it might be because the dollar maintained a peculiar stability vs. gold in 2013-2018—the "Yellen gold standard"—a stability so conspicuous and persistent that it can hardly be believed to be the product of happenstance. Maybe the monetary authorities have already learned more than they let on.

The United States

These issues have a special significance for the United States. As conceived in 1789, the U.S. Federal government was to be limited to certain explicitly defined powers: essentially, they were related to foreign affairs, including the military, foreign policy, foreign trade, immigration and naturalization, acquisition of new territory, taxes to pay for these functions, and related debt issuance and debt service costs. All other functions of government would be left to State governments, which might in turn devolve them to counties and municipalities. In general, the principle was that government functions should be addressed at the most local level possible.

This basic model served throughout the nineteenth century, but the twentieth involved a series of new experiments. The Federal government exploded in influence with the introduction of both the income tax and the Federal Reserve in 1913, soon followed by the demands of World War I. Nevertheless, it still restrained itself primarily to its original Constitutional functions until the New Deal beginning in 1933. Spending soared, along with taxes. Economic regulations multiplied; this required a highly creative reading of the Constitution's "commerce clause" that amounted to outright mendacity. World War II intensified all of these trends.

State and Local governments had been responsible for welfare-related programs. By 1926, forty States had established some type of relief program for mothers of dependent children. Beginning in 1932 under Herbert Hoover, the Federal Government made loans to States to finance State-level aid programs. In 1933, under Roosevelt, these loans became grants. The New Deal era's Federal spending programs had a strong element of welfare, but they were still structured as spending on useful goods and services. The Civilian Conservation Corps or the Works Progress Administration paid people to work, not because they were not working. The Social Security program, begun in 1935, was something of an exception, but that too was structured as a state-run retirement annuity without means-testing. The Social Security Act also included the Aid to Families with Dependent Children, but this was initially minor. It wasn't until the 1960s that the welfare state bloomed at the Federal level, as dozens of programs involving medical care, housing, food, education, heating, unemployment insurance and many other functions were introduced, often combined with State mandates. By one count, in 2011 there were 185 means-tested Federal welfare programs. In 2017, "safety net" programs accounted for 9% of Federal spending; education 2%; Medicare and other healthcare-related 26%; and Social Security, 24%. The remainder, corresponding to the Federal government's original Constitutional role, amounted to 38% of spending: this included defense (16%), debt service (6%), benefits for Federal retirees and veterans (8%), and everything else (8%). Even this, with time and prudent administration, could eventually be cut in half.

The multiplicity of new endeavors, and concentration of so many functions at the Federal level, has threatened the democratic process itself. The Congress envisioned by James Madison, with all of its laborious procedures, checks and balances, could function because it did not have much on its agenda. As Friedrich Hayek argued at the dawn of this big-government era in *The Road to Serfdom* (1944), the natural outcome of having to make so many decisions about so many things is that it would have to be left to unelected "administrators." Exactly this has happened, as thousands upon thousands of new laws and regulations are emitted by tens of thousands of administrative busybodies at various departments and agencies, largely without Congressional oversight. The European Union does much the same thing. It amounts to a petty dictatorship.

If we are imagining what we want for the United States, as opposed to what we have, it should certainly include a smaller Federal government in the original Constitutional model. Whole swathes of Federal-level responsibilities should be devolved down to the States, where they were originally intended.

This could include the entirety of all social and welfare programs introduced since 1930. All Federal health, welfare, housing and education programs could be made responsibilities of the States, to do as they see fit. This does not mean that there is no government healthcare in the U.S.; but rather, that government healthcare is entirely a matter of State policy. States themselves are already active in all of these spheres. Some States—California and Massachusetts—would be free to introduce whatever version of universal single-payer healthcare they feel is best, and to impose taxes appropriately to pay for it. Other States, such as Texas or Utah, might have free-market-based solutions for healthcare, introduce school choice, and leave welfare entirely to private charity such as churches. States would be free to follow their own inspiration, rather than being constrained by the need to coordinate with Federal programs. The result would be experimentation and competition: the most successful solutions could be imitated, mistakes learned from, and those that would rather live under a different regime could easily move to States where other like-minded people have converged. It is hard to imagine how any single

Federal-level solution, no matter how brilliantly conceived, could be better than this outcome. That is probably why the Framers of the Constitution designed it that way.

Social Security does not lend itself easily to State-level administration, but if it is eventually replaced by a provident fund system, that might not matter.

The result of all this would be to reduce the Federal government's spending/GDP to about 7%, easily funded by a single, broad tax such as a "flat" income tax or perhaps a sales tax or VAT, at a low rate. A Constitutional amendment to limit the Federal government's taxation powers, and possibly modify or repeal the Sixteenth Amendment as it presently exists, might be a good idea.

Stable Money was another part of the Framers' constitutional vision, emerging out of the hyperinflationary disaster of the Continental dollar in the 1780s. The Constitutional mandate for gold-based money is often ignored, but has never been amended. The Federal Reserve Act of 1913 explicitly required the Federal Reserve to adhere to existing gold parities; and it mostly did so for the next fifty-eight years. The last forty-seven years of a floating fiat dollar have been an anomaly not only in U.S. history, but even in the history of the Federal Reserve. The 124 years of United States history preceding the Federal Reserve were not exactly a disaster, either. The United States was the most economically successful country in the world.

Such proposals may seem politically impossible, but if these worsening problems are not dealt with before they reach the crisis stage, they will have to be dealt with afterwards. One way or another, we should decide on what we want, because then we might get it.

Another Three Centuries of Success for the West

Sir John Glubb became commander of the Arab Legion in 1939. After retiring in 1956, he wrote twenty-one books. One of them was *The Fate of Empires and Search for Survival* (1978). Glubb studied the rise and fall of eleven empires, including: Assyria, Persia, Greece, the Roman Republic, the Roman Empire, the Arab caliphates, the Mameluke empire, the Ottoman empire, Spain, Russia and Britain. He found extraordinary similarities between them, including a natural lifespan of rise and decline stretching about 250 years (or roughly three 80-year cycles according to Strauss and Howe). Yet, an empire could be reborn; the Roman Republic gave way to the Roman Empire and then the Byzantine Empire, each with shorter periods of rise and fall, all together stretching roughly two millennia. China has a longer history than this, and has remained recognizably China throughout.

Glubb found that this 250-year cycle could be subdivided into an Age of Pioneers, an Age of Conquests, an Age of Commerce, an Age of Affluence, an Age of Intellect, and finally an Age of Decadence. From the titles alone, the similarities to U.S. history, or parallel European history since the 1770s, are obvious.

The Age of Decadence, according to Glubb, was characterized by: Pessimism, Materialism, Frivolity, an influx of foreigners, the Welfare State, and a weakening of religion—these characteristics again common among historical eras and peoples as seemingly different as the Romans and the Arabs.

> The historians commented bitterly on the extraordinary influence acquired by popular singers over young people, resulting in a decline in sexual morality. The 'pop' singers of Baghdad accompanied their erotic songs on the lute, an instrument resembling the modern guitar. In the second half of the tenth century, as a result, much obscene sexual language came increasingly into use, such as would not have been tolerated in an earlier age. Several khalifs issued orders banning 'pop' singers from the capital, but within a few years they always returned.
>
> An increase in the influence of women in public life has often been associated with national decline. The later Romans complained that, although Rome ruled the world, women ruled Rome. In the tenth century, a similar tendency was observable in the Arab Empire, the women demanding admission to the professions hitherto monopolised by men. …
>
> When I first read these contemporary descriptions of tenth-century Baghdad, I could scarcely believe my eyes. I told myself that this must be a joke! The descriptions might have been taken out of *The Times* today.[6]

Glubb's observations on the university and welfare state pertained more directly to public policy:

> During the reign of Malik Shah, the building of universities and colleges became a passion. Whereas a small number of universities in the great cities had sufficed the years of Arab glory, now a university sprung up in every town. … Thus we see that the cultivation of the human intellect seems to be a magnificent ideal, but only on condition that it does not weaken unselfishness and human dedication to service. … The brilliant but cynical intellectual appears at the opposite end of the spectrum from the emotional self-sacrifice of the hero or martyr.[7]

> When the welfare state was first introduced in Britain, it was hailed as a new high-water mark in the history of human development.
>
> History, however, seems to suggest that the age of decline of a great nation is often a period which shows a tendency to philanthropy and to sympathy for other races. …
>
> The Arab Empire of Baghdad was equally, perhaps even more, generous. … University students received government grants to cover their expenses while they were receiving higher education. The State likewise offered free medical treatment to the poor. … Free public hospitals sprung up all over the Arab world from Spain to what is now Pakistan.
>
> The impression that it will always be automatically rich causes the declining empire to spend lavishly on its own benevolence, until such time as the economy collapses, the universities are closed and the hospitals fall into ruin.[8]

Glubb had little to say regarding taxes or money. And yet, if we really are today in a period of Winter Crisis (Strauss and Howe) or Decadence (Glubb), there may come a time when governments are engulfed in turmoil. Great cacophonies of debate and argument would arise, in the media, among the "experts," and in cabinet meetings. Much of the talk would be about protecting existing interests and existing institutions, and gaining personal advantage in an environment of shrinking resources. Those who devote themselves to the good of the people would be scarce. But it is not enough merely to be good—think of the Count-Duke of Olivares, President Jimmy Carter, or the countless other statesmen who did all the wrong things for all the right reasons. The Magic Formula has only four words. That is so it is easy to remember, at that moment of crisis when everyone else has lost their minds.

Even if these are just needlessly pessimistic daydreams, and things really aren't that bad, the path to another era of prosperity and freedom is the same. We've learned enough over the past two centuries to know that it works. The remaining question is whether we have the vigor to implement it.

Suggested Further Reading About the Magic Formula:

The Way the World Works (1978), by Jude Wanniski
Reaganomics (1981), by Bruce Bartlett
The Flat Tax (1985), by Robert Hall and Alvin Rabushka
The Seven Fat Years (1992), by Robert Bartley
For Good and Evil: The Impact of Taxes on the Course of Civilization (1993), by Charles Adams
The Flat Tax Revolution (2005), by Steve Forbes
The FairTax Book (2005), by Neal Boortz and John Linder
Gold: The Once and Future Money (2007), by Nathan Lewis
The End of Prosperity (2008), by Arthur Laffer, Stephen Moore and Peter Tanous
The Forgotten Man: A New History of the Great Depression (2008), by Amity Shlaes
Econoclasts (2009), by Brian Domitrovic
The Return to Prosperity (2010), by Arthur Laffer and Stephen Moore
End the Fed (2010), by Ron Paul
Fixing the Dollar Now (2011), by Judy Shelton
Gold: The Monetary Polaris (2013), by Nathan Lewis
The Growth Experiment Revisited (2013), by Lawrence Lindsey
Money: How the Destruction of the Dollar Threatens the World Economy, and What We Can Do About It (2014), by Steve Forbes and Elizabeth Ames
An Inquiry Into the Nature and Causes of the Wealth of States (2014), by Arthur Laffer, Stephen Moore, Rex A. Sinquefield and Travis H. Brown
Reviving America (2015), by Steve Forbes and Elizabeth Ames
The Forgotten Depression (2015), by James Grant
JFK and the Reagan Revolution (2016), by Brian Domitrovic and Lawrence Kudlow
The Scandal of Money (2016), by George Gilder
Who Needs the Fed? (2016), by John Tamny
Gold: The Final Standard (2017), by Nathan Lewis

Notes

Chapter 1: The Magic Formula

[1] White and Schuler (2009).
[2] Ricardo (1816).
[3] Laffer and Moore (2010), p. 9.
[4] Kondracke and Barnes (2015).
[5] "Paul Ryan: Economic Growth," January 6, 2011. Jack Kemp Foundation. Jackkempfoundation.org.
[6] Grim (2009).
[7] "Twelve Economic Concepts Everyone Should Know," August 25, 2017. Foundation for Economic Education. Fee.org.
[8] Von Mises (1996), p. 741.
[9] "Eugene von Böhm-Bawerk," Ludwig von Mises Institute. Mises.org.
[10] A longer exposition of this period in Japan is found in *Gold: the Once and Future Money* (Lewis, 2007).
[11] Coffield (1970), pp. 20-42.
[12] In Adams (2001), p. 246.
[13] Laffer, Moore and Tanous (2008), p. 12.
[14] Source: OECD.

Chapter 2: Low Taxes

[1] Hazlitt (2010), p. 11.
[2] Smith (1991), p. 363.
[3] "Avoiding Fiscal Armageddon," by Steven Moore and Louis Woodhill, *Washington Times*, November 18. 2018..
[4] Source: Stephen Moore and Louis Woodhull
[5] Lewis (2011).
[6] Greenberg (2017)

[7] An extensive discussion of why an optimal tax rate is much lower than the so-called "revenue-maximizing rate" is found in Lindsay (2013).
[8] Prescott (2005).
[9] Dubois et. al. (2016).
[10] Hodge (2016).
[11] Hall and Rabushka (2007), p. 64
[12] Mellon (1924), pp. 9-16.
[13] Adams (2001), p. 433.
[14] The top income tax rates were:

income		*rate*	
married filing jointly	*single*	*pre-1964 reform*	*post-1964 reform*
$100,000	$50,000	75%	62%
$120,000	$60,000	78%	64%
$140,000	$70,000	81%	66%
$160,000	$80,000	84%	68%
$180,000	$90,000	87%	69%
$200,000	$100,000	89%	70%
$300,000	$150,000	90%	
$400,000	$200,000	91%	

"Federal Individual Income Tax Rates History," Tax Foundation. taxfoundation.org.

[15] Hall and Rabushka (2007), p. 66.
[16] Laffer and Moore (2010), p. 303.
[17] Hall and Rabushka (2007), p. 68
[18] Hall and Rabushka (2007), p. 25.
[19] Laffer, Moore, Sinquefield and Brown (2014), p. 3.
[20] Hall and Rabushka (2007), p. 28.
[21] Source: Bank of England.

Chapter 3: Stable Money

[1] Issawi, trans. (1950), p. 77.
[2] White, ed. (2000), Vol. II, p. 87.

[3] It can be illustrative to imagine a situation where gold coins are the only "legal tender," and only legitimate form of payment. (We will ignore for now the problem of producing small-denomination gold coins.) There are no banknotes, and no bank reserves at the central bank. There is no central bank, or other currency issuer, only a mint. Gold coinage alone is declared to be legal tender; no other payment is legally recognized as legitimate. It is easy to see that purchases could be made in coinage rather than banknotes. Also, banks could pay one another using coinage. Presumably, they would gather together in a payment clearinghouse to simplify this process. All of the financial complexity that exists today would still exist. Bank deposits, money-market funds, credit and debit cards, all manner of bills and bonds, structured debt instruments, derivatives, and every other sort of credit instrument or contractual agreement that today exists, could also exist in this world, where monetary payment took place with gold coinage alone.

[4] Source: International Monetary Fund (2016).

[5] Copernicus (1517).

[6] Keynes (1923), p. v.

[7] Gilder (2016), p. 59.

[8] Laffer and Moore (2010), pp. 229-230.

[9] "Greenspan: Deep Cover Radical for Capitalism?" by R.W. Bradford. *Liberty Magazine*, November 1997.

[10] "Gold: The Ultimate Insurance Policy," by Alan Greenspan. *Gold Investor*, February 2017. World Gold Council. Gold.org.

[11] Alan Greenspan in a speech to the Council on Foreign Relations, September 15, 2010.

[12] "Greenspan's Stunning Admission: 'Gold is Currency; no fiat currency, including the dollar, can match it,'" November 11, 2014. ZeroHedge. Zerohedge.com.

[13] Source: Robert Schiller, http://www.econ.yale.edu/~shiller/data.htm

[14] Lipsky (2017).

[15] "Janet Yellen Meets The Right," by Ralph Benko. March 2, 2015. Forbes Online. Forbes.com

[16] Source: Robert Schiller, http://www.econ.yale.edu/~shiller/data.htm

[17] Source: Jastram (1977).

[18] An extended discussion of common "interpretations" of the Great Depression can be found in *Gold: the Final Standard* (Lewis, 2017).

[19] A related claim is made that there was extraordinary "hoarding" of gold by private parties, which also demonstrably did not exist. See for example: "The Midas Paradox #4: Much Ado About Nothing." August 11, 2017. Newworldeconomics.com.

[20] Steuart, James Denham. 1767. *An Inquiry Into The Principles of Political Economy*.

[21] In White, ed. (2000), p. 23-24.

[22] Mundell and Friedman (2001).

[23] "Erdogan Can Save The Turkish Lira," by Steve Hanke. *Wall Street Journal*, August 12, 2018.

Chapter 4: The Spiral of Success

[1] Adams (2001), p. 134.

[2] See Adams (2001), p. 133.

[3] Al Turtushi (1974), in Adams (2001), pp. 138-139.

[4] Adams (2001), p. 140-141.

[5] "Two Whatevers," Wikipedia.org.

[6] Source: Chinese State Administration of Taxation; "Taxation in China," Wikipedia.org.

[7] Source: OECD.

[8] In Adams (2001), p. 368.

[9] In Adams (2001), p. 368.

[10] Henderson (2007).

[11] Heller (1949).

[12] Heller (1949).

[13] Heller (1949).

[14] Henderson (2007).

[15] Hauser (1966).

[16] Hauser (1966).

[17] Hauser (1966).

[18] "Bulgaria: Fifteen Years Later," by Steve Hanke. *Manager Magazine* (Bulgaria), October 2012. Available at: Cato.org.

[19] Source: tradingeconomics.com.

[20] Source: Bulgaria Ministry of Finance.

[21] Angelov and Djankov (2009).

[22] Source: Bulgaria Ministry of Finance.

Chapter 5: The Spiral of Decline

[1] Mellon (1924), p. 12.
[2] Rostovtzeff (1960), p. 266.
[3] In Bartlett (1994).
[4] Rostovtzeff (1960), p. 282.
[5] Rostovtzeff (1957), p. 512-513.
[6] Jones (1974), p. 132.
[7] Bartlett (1994).
[8] Jones (1974), p. 84-86. Jones estimated that the average tax rate was 25%-33% of agricultural production. Many farmers were also tenants, and paid rents on their land in addition to taxes. Unlike earlier methods where taxation was in proportion to actual annual produce, later taxes were at a fixed amount, in good and bad harvests. A bad harvest, a raid by barbarian invaders, or abusive tax collectors, could quickly render a farmer destitute. During the Roman Republic, the common tax on farmers was the *decumae*, a 10% tax on actual harvests.
[9] Jones (1974), p. 88.
[10] Adams (2001), p. 124.
[11] Elliot (1963), p. 92.
[12] Elliott (1986), p. 672.
[13] Source: Bank of England.
[14] Pollard (1962), p. 204.
[15] Daunton (2002), p. 47 and p. 138.
[16] A full understanding of the economy of interwar Britain is impaired by an incomplete record of tax policy during that time.
[17] Hood and Himaz (2017), p. 71.
[18] Daunton (2002), p. 159.
[19] Glynn and Oxborrow (1976), p. 137.
[20] Whiting (2000), p. 47. Sabine (1966), p. 184.
[21] The devaluation was essentially voluntary, caused by a refusal of the Bank of England to take the steps necessary to support the pound's value at its gold parity. An extended discussion is in Lewis (2017).
[22] Lindsey (2013), pp. 40-41.
[23] Laffer, Moore and Tanous (2008), p. 90-91.
[24] Bartley (1992), p. 165.

Chapter 6: "Austerity" And "Stimulus"

[1] The 1929 decline may have been exacerbated by arguments from Carter Glass to add a rider to the Tariff bill that imposed an excise tax of 5% on the sale of stock held less than sixty days. For example: "Glass's 5% Tax Plan Stirs Wall Street," *New York Times*, June 6, 1929. "Senator Carter Glass's announcement that he intended to introduce an amendment to the tariff bill to impose a 5 per cent tax on transfers of stock held less than sixty days was discussed with amazement in Wall Street yesterday."

[2] "Smoot-Hawley Tariff Act," Wikipedia.org.

[3] Borchardt (1990).

[4] James (1986), p. 58.

[5] Balderston (2002), p. 91.

[6] James (1986), p. 66. Despite its low rate, this tax appears to have generated as much revenue as the personal income tax. James (1986), p. 373.

[7] Eichengreen and Hatton (1988).

[8] Hardach (1980), p. 47.

[9] Overy (1982), p. 32.

[10] Overy (1982), p. 48, 24.

[11] James (1986), p. 375. Overy (1982), p. 24.

[12] Overy (1982), p. 24.

[13] Eichengreen and Hatton (1988).

[14] Weber (2012). Bukey (2000), p. 72.

[15] Nakamura (1988).

[16] Revelant (2013). See also Revelant (2015).

[17] Nakamura (1999).

[18] Allen (1981), p. 141.

[19] Kuisel (1981), p. 93.

[20] Jackson (1985), p. 26.

[21] Jackson (1985), p. 54.

[22] For some reason, this relatively pleasant outcome seems to bother historians today, who accuse France of failing to adopt the interventionist policies of Franklin Roosevelt, for whom unemployment was never below 10%. See Nord (2010). Eichengreen and Hatton (1988) normalized unemployment rates to make them

internationally comparable. They found an unemployment rate of 14.5% in France in 1935, which was still among the lowest in the world in their study.

[23] "Popular Front," Wikipedia.org. A "Popular Front" alliance also formed in Britain in 1936, composed of the Labour Party, the Liberal Party, the Independent Labour Party and the Communist Party. In the 1936 presidential election, the Communist Party of the United States of America sought a joint communist-socialist ticket with the Socialist Party of America, but this was rejected by the Socialists.

[24] Mises (1980), writing in 1952, said: "[Popular Front prime minster Léon] Blum, in imposing upon the French employers the so-called Matignon agreements, ordered the Bank of France to lend freely the sums businesses needed for complying with the dictates of the unions." (pp. 483-484.)

[25] The gold conversion outflows were likely due to the automatic processes of the gold standard system, which would naturally offset increases in credit assets with decreases in gold assets, producing an unchanged monetary base. The monetary base was 93.174 billion in March 1936 and 92.089 billion in September 1936, essentially unchanged.

[26] Lindsey (2013), p. 218.

[27] A description of discussion of that time is in Blyth (2013).

[28] Alesina and de Rugy (2014).

[29] An excellent summary of "austerity" measures in Europe, and also arguments that deficit-reduction plans should focus on spending rather than tax increases, is found in Furth (2014).

[30] A good account of these debates is in Bartlett (1981).

[31] Congressional Budget Office (2015).

[32] Lindsey (2013), pp. xii-xiii.

[33] Lindsey (2013), pp. 227-228.

[34] Laffer, Moore and Tanous (2008), p. 146.

[35] Congressional Budget Office (2003a and 2003b).

[36] Callan and Nolan (1999).

[37] Honohan (1999). Walsh (1999).

[38] Powell (2003).

[39] Ruane and O'Toole (1995).

Chapter 7: What We Learned In The Twentieth Century

[1] World Bank (1994).

[2] Kritzer (2005).

[3] Flynn (2019).

[4] "How One Oklahoma Hospital Is Driving Down The Cost of Health Care By Thousands Of Dollars," by Tara Culp-Ressler. July 10, 2013. ThinkProgress. Thinkprogress.org.

[5] Lindsey (2013), p. 248.

[6] Glubb (1978), p. 15.

[7] Glubb (1978), p. 10-12.

[8] Glubb (1978), p. 17-18.

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