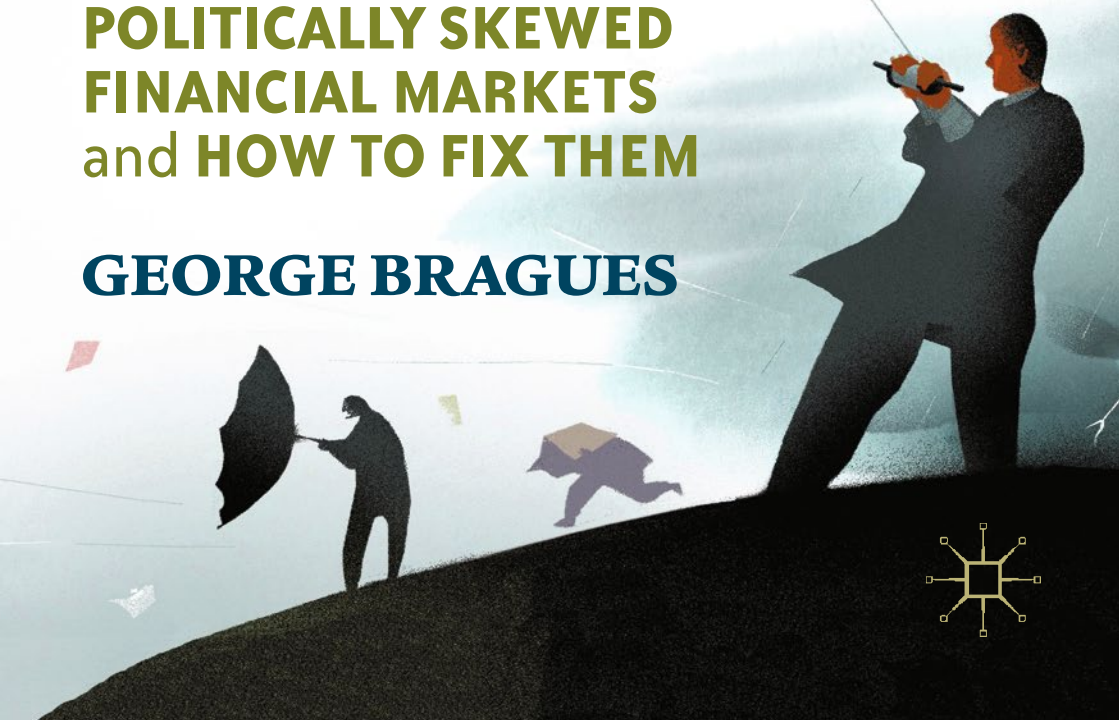
MONEY, MARKETS, and DEMOCRACY

POLITICALLY SKEWED FINANCIAL MARKETS and HOW TO FIX THEM

GEORGE BRAGUES



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Politically Skewed Financial Markets and How to Fix Them

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In Memory of Fernando Bragues (1935–1987)
Deixastes este mundo tragicamente cedo, mas nunca fostes esquecido nos meus pensamentos e trabalhos

For Natalina Nazare dos Santos
For Maria Bragues

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While significant portions of the introduction and a few passages elsewhere are adapted from previously published work of mine, this book is not a republication of earlier articles. That said, I have drawn freely on the following:

"Voters and Debt" *Financial Post* (September 1, 2011)

"The Politics of Financial Markets: An Introductory Discussion", *Global and Business Economics Anthology, Vol 2, Issue 1* (2010): 6–16

"Leverage and Liberal Democracy" in *Lessons from the Financial Crisis*, Edited by Robert W. Kolb, 1–8. Hoboken: NJ, John Wiley and Sons, 2010.

"Freedom to Short", *Financial Post* (April 19, 2006)

"Futile Disclosure", *Financial Post* (July 27, 2004)

"Why Insider Trading Should be Legal", *Financial Post* (February 13, 2002)

"Free the Short Sellers", *Financial Post* (November 19, 1999)

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List of Abbreviations

ABS	Asset-Backed Security
BIS	Bank for International Settlements
CDO	Collateralized Debt Obligation
CDS	Credit default swaps
CFTC	US Commodity Futures Trading Commission
ECB	European Central Bank
EU	European Union
Fed	U.S. Federal Reserve System
IPO	Initial Public Offering
IMF	International Monetary Fund
ISDA	International Swaps and Derivatives Association
LBO	Leveraged Buyout
LIBOR	London Interbank Offered Rate
MBS	Mortgage-Backed Security
Nasdaq	National Association of Securities Dealers Automated quotation
NYSE	New York Stock Exchange
OTC	Over the Counter
SEC	Securities and Exchange Commission
SIFMA	Securities Industry and Financial Markets Association
WFE	World Federation of Exchanges

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CHAPTER 1

Introduction: Why the Markets Must Be Politically Investigated

"Democracy cannot be blackmailed"—so Alexis Tsipras, the Greek Prime Minister, declared triumphantly on the night of an extraordinary referendum. In a vote called just nine days before, the Greek public was asked to issue its verdict on the latest bailout proposal put forth by the country's creditors. This group was owed the gargantuan sum of €323 billion, equivalent to 177 % of Greece's GDP. On July 5, 2015, the Greeks voted against the bailout offer with a resounding NO, rejecting it by a margin of 61 %–39 %. Leading up to the referendum, commentators widely depicted the vote as a climactic moment in a struggle pitting Greece's left-wing government against Europe's more orthodox political and economic establishment, with the fate of the euro currency hanging in the balance. Economic and financial analysts drew the vote as a fight. On one corner of the ring was a small country desperate to end years of austerity, though still wanting to retain the euro; on the opposite corner was a larger set of countries, led by Germany, committed to enforcing the fiscal requirements of a continental currency. Underlying the entire drama, however, was a more fundamental crossing of forces. Tsipras' words alluded to it: the interplay of democracy and financial markets.

At the time of the referendum, this dynamic was obscured by the fact that the confrontation had taken on a predominantly political cast. Aligned against the Greek government were other state actors, the so-called troika made up of the European Commission (EC), the European Central Bank (ECB), and the International Monetary Fund (IMF).

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These now held the bulk of the Greek debt, rather than private investors and commercial banks in the financial markets. Yet back when Greece's predicament first came to a head in the spring of 2010, it was precisely those investors and banks that stood chiefly exposed to the country's debt in the form of Greek government bonds. With the euro then in free fall over concerns that Greece's troubles were spilling over into Spain and Portugal, European Union (EU) leaders worked late into a Sunday night to come up with a rescue plan. Allegedly, the French president at the time, Nicolas Sarkozy, issued a threat to German Chancellor Angela Merkel that France would pull out of the euro unless Germany came onside. The result was an unprecedented €750 billion aid package, of which €110 billion was initially allotted to Greece. This would be the first of a series of measures—including a second bailout of €100 billion in 2012 and the purchase of Greek government bonds by the ECB—by which the debt wound up going from private hands onto the balance sheets of government entities. Paramount in all this was the goal of preventing the markets from forcing the collapse of the euro. "In some ways", as Merkel pointed out early on, "it's a battle of the politicians against the markets … I'm determined to win".[1]

Five years later, Tsipras tried to exploit this battle for his fellow citizens. He was spurred on by his finance minister, Yanis Varoufakis, a self-described "erratic" Marxist. The strategy that Tsipras and Varoufakis adopted involved the threat to unleash chaos in the world's financial markets unless the troika gave Greece more lenient credit terms. But with the debt having been effectively off-loaded onto European taxpayers, the market reaction to the referendum result was relatively muted. Contributing to this, too, was that the other indebted countries under the market's radar, Portugal and Spain, had already gone some way to reforming their economies in return for aid from the troika. Thus, on the day after the vote, Europe's main stock exchanges in Germany, France, and the UK were down between 0.75 % and 2 %—a notable drop, to be sure, but far from a calamity. In the USA, after an initial decline in the morning, stocks ended up little changed for the day. Bond yields of Southern European nations went up merely by 10–20 basis points (0.1 %–0.2 %). As for the damsel in distress of this Greek drama—the euro fell by just 0.5 % versus the US dollar.

[1] Angela Merkel cited by Terence Corcoran, "How to Save Europe", *Financial Post*, (May 20, 2010), FP 11.

No wonder the deal to which Greece ended up agreeing was more stringent than that which its people rejected. It was not simply that the Greek government was forced to cross its own "red lines" and submit to tax increases and pension cuts. It also surrendered to the establishment of an EU monitored fund into which the proceeds would go from the privatization of state firms. Equivalent to a trust fund, this arrangement was meant to ensure that Greek politicians would not redirect the money away from its intended use to repay the debt and shore up the Greek economy.[2] Tsipras' gambit had utterly failed. If democracy was not blackmailed, it was certainly humbled.

Few occasions reveal more starkly the connections between politics and the financial markets. Here was a situation in which a dire predicament faced by a government led it to bet on a market reaction by way of an appeal to the populace. Then, when the market did not respond as hoped, that government's political counterparts were emboldened to stand firm. It was a political game of poker in which the cards that each side was given to play happened to be dealt by the markets—albeit with that deal itself tilted by earlier political moves.

This last twist underlines the thesis of this book: in the interactions between politics and financial markets, politics ultimately controls the relationship. The prices at which financial instruments get traded; the kinds of financial instruments that get traded; the individuals and institutions that get to trade them; not to mention the rules under which they get to trade, these are all matters decisively influenced by an array of political variables—sometimes for the better, but all too often for the worse. Though I risk unsettling many readers, the issue must be squarely faced: the fault for this political skewing of the markets lies chiefly with democracy. That skew can be corrected to some extent, but it is an extent bounded by democracy.

We need not go back too long in time to find another instance outside of Greece in which the confluence of politics and finance was plainly evident. In the fall of 2008, amid the throes of the sub-prime mortgage crisis, a viewer tuning to CNN could have watched a speech by then US president-elect Obama alongside a small, specially placed shot of the Dow Jones Industrial Average (DJIA) ticker live from the New York Stock Exchange (NYSE). Then, too, policymakers sacrificed more than a few weekends

[2] Duncan Robinson and Ferdinando Guigliano. "Asset Plan Shows Extent of Greek Capitulation", *Financial Times,* (July 13, 2015), http://www.ft.com/intl/cms/s/0/9de1efb4-2976-11e5-8613-e7aedbb7bdb7.html#axzz3fpIJIDde

to formulate various rescue strategies—whether it was for Bear Stearns, Fannie Mae and Freddie Mac, American International Group (AIG), or Lehman Brothers—that would meet the Sunday night deadline imposed by the opening of Asian markets. Nor was it hard at the time to discern the link between stock market movements and events in the US Congress. That legislative body was then busy debating the Bush Administration's $700 billion bailout of the financial system known as TARP (Troubled Asset Relief Program). The House of Representatives originally voted down the legislation by the House of Representatives. When the news of that vote reached the stock exchange, the DJIA proceeded to tumble by 778 points, equal to a 7 % drop in the index.

Illustrative of all this is the chart below. It is based on data collected by the Policy Uncertainty Project, a research effort led by a trio of academics at Stanford University and the University of Chicago. Every time there was a minimum 2.5 % daily change in the US stock market, as measured by the Standard & Poor's 500 (S&P 500) index, the next day's market report in *The New York Times* was checked to see if the price movement was attributable to political events. Between 1980 and 2015, there were 298 trading days that fit this definition. And between 2008 and 2015, in particular, the percentage of those days' price changes related to political factors were markedly up (Fig. 1.1).

One could counter this graph by observing that the number of large politically induced moves is still small when compared to the total number of trading days. Admittedly, from 1980 to 2015 that proportion is only 0.8 %. Nevertheless, it would be a mistake to infer from this that politics and finance only intersect in exceptional circumstances. The point of this book is to avoid this error. From the remarkable events I just related, it is admittedly tempting to conclude that an equilibrium normally separates the realms of politics and finance until one of them disturbs the balance by perpetrating trouble of some kind—say, by the government running up a colossal debt or by investors losing their minds in a speculative bubble that destabilizes the economy. Media accounts of the recent financial crisis often give this impression whenever they describe the markets as having operated in a laissez-faire zone until the collapse of sub-prime mortgage securities compelled the government to intervene.

Even more complicit in this illusion are the economists, who virtually monopolize the study of financial markets in academia. Their models and equations often bracket political forces, as is evidenced whenever they

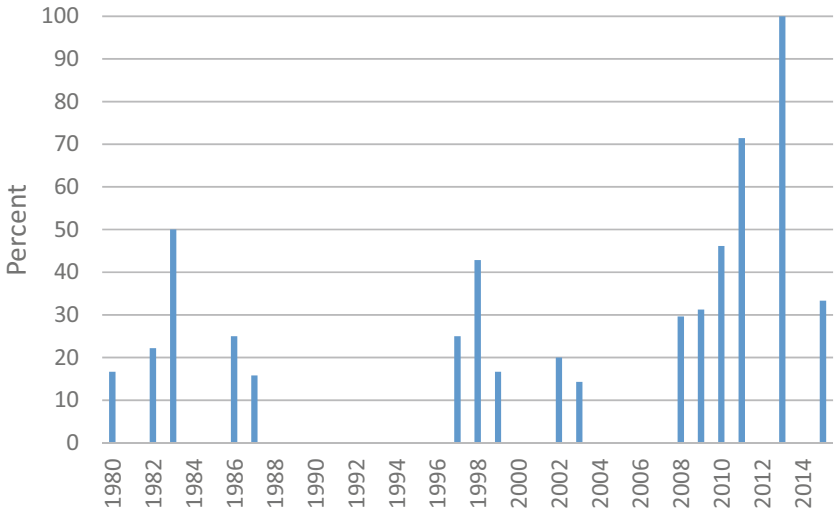

Fig. 1.1 Percentage of Large Moves in S&P 500 Attributable to Political Events, 1980–2015. *Sources*: Economic Policy Uncertainty, 1980–2011; Author's own calculations, 2012–2015[3]

assume zero taxes in their theoretical constructs. In preferring elegant and quantitatively tractable theories, economists have long been addicted to the hope of imitating the success of the natural sciences. As a result, they have promulgated a vision of the markets as a kind of island floating independently within society. On this island, supposedly, individuals and firms compete in seeking to advance their pecuniary interests by trading a myriad of securities whose price changes are fully explicable in terms of the laws of supply and demand.

The more complicated reality, even if lost sight of in calmer and more propitious times, is that the financial markets are always and everywhere intertwined with politics. States and markets have often been set against one another as if they were distinct, autonomous forces opposing

[3] Economic Policy Uncertainty, "S&P 500 Large Moves" (2012), http://www.policyuncertainty.com/sp500_moves.html; Scott R. Baker, Nicholas Bloom, and Steven J. Davis, "Measuring Economic Policy Uncertainty", *National Bureau of Economic Research Working Paper*, No. 21633 (October 2015), http://www.policyuncertainty.com/media/BakerBloomDavis.pdf

each other. Far from being separate, however, the markets are actually subordinate to the state. Though the markets can be a very formidable variable within the polity, and indeed may effectively capture the latter at times, it is nevertheless subject to the exigencies of the state and the wider social concerns it reflects. As such, the financial markets cannot be solely left to the economists. To attain a more complete view of what readers of *The Wall Street Journal* and *The Financial Times* try to grapple with every working day, we must examine the entire constellation of currencies, stocks, bonds, and derivatives under the light of politics.

This is what this book aims to do. As such, my intent here is something that will hopefully be of interest to a wider audience than is typically aimed at in writings that map the workings of high finance. This is not to say that financial economists will find nothing here to add to their understanding of the markets. If I have executed my task rightly, they will come away with a better appreciation of the political forces—both immediate and overarching—that drive security prices and government regulations. More importantly, they will end up with a stronger sense of the moral and social issues that financial markets raise from their being mostly ensconced in democratic polities. Such issues will, I hope, make this book of interest to business ethicists concerned with the moral dilemmas of contemporary finance. Beyond these groups, I have also kept in mind political economists, political scientists, in addition to the growing coterie of scholars from the other social sciences with an intellectual curiosity for things financial. And I very much hope that non-academic readers will find this book useful. Perhaps, they are financial market professionals trying to enhance their understanding of the political phenomena at work in their trade. Or, perhaps they are just thoughtful and publicly minded citizens grappling with the heightened role of financial markets within our democracies.

To compass all these groups, I have provided definitions and summaries of the key financial instruments traded in the markets. Hence, if you are unsure about some of the things to which I have already referred—such as bond yields, foreign exchange (FX) rates, or stock indices—you can be rest assured that I will explain these in the pages ahead. Also included are brief descriptions of the main players and institutions. Much of this, of course, will be familiar to financial economists and market practitioners. So to make it tolerable for this latter group, and simultaneously engaging for the remainder of my intended reading audience, I have tried to weave the explanatory portion into the political analysis, rather than having it laid

out in a series of stand-alone sections. I have also endeavored to write as clearly as possible without sacrificing too much in conveying the real complexities that characterize our financial markets—complexities, alas, that intimidate all too many from even bothering to comprehend the larger significance of those markets.

Defining the Key Terms and Aims

To begin with, let me define some of the key terms and aims of this political analysis of the financial markets. Like any scientific investigation, the overriding goal here is to uncover causal forces. More precisely, the task involves laying bare three elements: (1) the political dynamics that engender financial market events; (2) the market factors that provoke governmental actions; (3) the continual interactive processes by which the two spheres react to one another. Also befitting a scientific approach, Ockham's razor must be applied. That is, all the causal factors will be placed within a more general account that uses the fewest principles necessary to explain the greatest extent of facts.

However, we ought not to restrict ourselves to this kind of positive analysis. The main reason, after all, that financial markets draw attention from policymakers and engaged citizens is owing to their moral and social implications. We cannot ignore the normative side. Not only must we deal with facts but values as well. Hence, in addition to efficient causes—how the political generates financial phenomena and vice versa—we shall have to consider final causes. That means exploring the purposes of markets in addition to how these fit into the proper ends of society. In this way, I shall be in a better position to address the biggest question of all: do the financial markets, in their present configuration and relation to the government, advance the common good?

Now, in order to specify a cause as either political or financial, we obviously require a description of what those words comprehend. The more straightforward of the two to define is the term "financial markets". Breaking this down into its components, a market is an arena in which buyers and sellers come together to exchange goods. Obviously, it follows from this that a financial market is a place where financial goods are exchanged. Yet that begs the question: what is a financial good? This is best understood by distinguishing it from a real good. Anything that directly satisfies a human need or desire is a real good, like food, shelter, and clothing. By contrast, a financial good only satisfies our needs and

desires indirectly. One cannot eat, drink, live in, or wear a stock option. Yet one can cash that option to buy a dinner, some wine, a house, or a suit. As such, financial goods represent claims on real goods.

Money is the most basic of the financial goods. It represents an object that everyone is generally willing to accept in exchanges. Usually, this is limited to a given territory, so that someone is only able to use a Polish zloty to buy a hamburger if he or she happens to be in Poland. Of course, an individual can take money that is widely used in one territory and exchange it for another territory's money. In this way, money becomes an item with foreign exchange value in the currency market. Money, in turn, underlies all the other types of financial goods. Bonds denote obligations to pay their holders pre-defined amounts of money at specified times in the future. Stocks offer the prospect of sharing in the money that a company earns. Derivatives are contracts to either receive or transfer money depending on what happens in the future. To stay consistent with ordinary parlance, we may refer to each of these species of financial goods—currency, bonds, stocks, and derivatives—as financial instruments. The organized trading of these instruments constitutes the financial markets. This includes the players that regularly buy and sell those instruments, along with the institutions supporting that activity. Whatever originates from this space is potentially a financial cause; whatever happens in it due to an external source is a financial effect.

Politics is much more complicated to define. It is a more amorphous affair than financial markets. Political scientists and philosophers continue to contest its features. As I do not want to get bogged down in that perennial debate, I hope I can bypass much of the controversy with the following straightforward conceptions. Thus, I understand government as a group of people with the specialized task of overseeing the community's affairs. They execute this superintendence with a mixture of persuasion and coercion, though certainly with a monopoly on the legitimate use of coercion. As such, politics consists of action that, in one way or another, has this especially empowered group of individuals as its subject or concern. Any manifestation of this power that makes itself felt in the financial markets represents a political cause; anything that influences this power from the financial order represents a political effect.

Without a doubt, the scope for interaction between the two realms has grown. To grasp this, we need only consider the rising share of the finance industry in GDP. In doing so, it is best to adjust GDP for defense spending to avoid a measurement bias from the occurrence of wars. Back

in 1880, finance represented just 2 % of non-defense GDP. By 1932, it had risen to 6 % of GDP before falling prior to World War II. After that, the proportion of the economy represented by finance steadily ascends, the upward trend accelerating after 1980. By 2010, it reached a high of just under 9 % of non-defense GDP.[4] Over the past century and a quarter, the economic weight of finance has more than quadrupled.

The Democratic Regime

To defend, as I will be doing, the proposition that democracy is politically skewing the financial markets is to assume that the prevailing form of government largely dictates what happens in society. It is to side with Aristotle, and indeed every other philosopher who thought about the human condition up until the emergence of sociology and economics in the nineteenth and twentieth centuries. Aristotle gave us a classification of regimes that still enables us to make sense of the variety of states. He distinguished the alternative regimes into three basic kinds: a state may be run by a single individual, an elite few, or many persons.[5] Out of this tripartite division, Aristotle also differentiated the regimes based on whether the ruling element promotes the common good or its own interests. Accordingly, where a single person rules, the regime can be a monarchy or a tyranny; where an elite holds control, an aristocracy or an oligarchy; and where the many run the state, a polity or mobocracy. With a few exceptions, most of the governments within which the world's leading financial markets operate fall under the third category. Even so, at least for definitional purposes, it is best to avoid being snared into the contentious matter about the extent to which popular rule actually maximizes the public interest. Thus, I will follow current practice and simply call that regime democracy in which the many rule. In other words, the political context of high finance today is a system in which the majority ultimately decides, from a menu of competing parties and coalitions vying for their votes, how the greater society is to be governed.

A few qualifications are in order. Nowadays, the many do not directly craft, approve, much less enforce laws and policies. Instead, they

[4] Thomas Philippon, "Has the US Finance Industry Become Less Efficient? On the Theory and Measurement of Financial Intermediation" *American Economic Review*, 105, no. 4 (2015): 1408–1438.

[5] Aristotle, *The Politics*, Bk. III, Chap. 7.

periodically choose representatives to perform these tasks on their behalf. Financial markets exist alongside representative, rather than participatory, democracies. Needless to say, this opens up the possibility that majority preferences will not necessarily get reflected in the government's actions. Indeed, as I shall go on to observe, representative democracies are quite liable to capture by narrow, well-organized interests in numerous policy areas. The regulation of financial markets is no exception. Limiting the majority, too, is that individuals hold a set of rights against the government. Among these rights are property, privacy, equal treatment, and freedom of speech. A greater than 50 % tally cannot override these rights except under special conditions. In other words, contemporary democracies are liberal democracies.

Nothing is more important than this to understanding the political–financial nexus. Alexis Tocqueville—that keen nineteenth-century analyst of the American republic whose magnum opus *Democracy in America* I will occasionally draw upon in this book—observed that the animating principles of democracies are freedom and equality. As Tocqueville well predicted, the inevitable tension between these two values tends to break in favor of equality. This commitment to equality, as we shall see, manifests itself in numerous precincts of the financial markets. For example: the government's prohibition of insider trading; the growth of the sub-prime mortgage sector that spawned the financial crisis of 2007–2009; the growth of welfare states intimately linked to bond markets; as well as the existence of a huge and paternalistic regulatory structure. Democracy also accounts for why the gold standard no longer exists, and why its return is hard to fathom. Democratic governments, as we shall see, have strong incentives to hand discretionary authority over the money supply to a central bank unencumbered by a gold-based constraint. Ever since this handover was consummated in 1971, the upshot has been heightened market volatility—to which we owe, in turn, the incredible, though regrettable, rise of the derivative markets since the 1970s.

Now, in adopting an Aristotelian regime approach in this book, I recognize the necessity of nuance and qualification. The nature of the polity cannot explain everything. People's cultural preferences, historical experience, religious beliefs, and relative wealth are also taken into account here. One factor in particular that I will focus upon is people's status as either taxpayers or tax consumers. Those who receive less in benefits from government than they contribute, we may call taxpayers; whereas those who

receive more in benefits than they contribute, we may call tax consumers.[6] Among the core arguments I make in this book is that the taxpayer versus tax consumer dynamic tends to end up augmenting and privileging the latter group at the expense of the former as governments expand the array of goods and services offered to the public. Taxpayers, however, do not passively accede to demands that they fund this largesse. In order to allay this opposition, democratic politicians find it very convenient to rely on the tandem of central banks and bond markets: whereby the first is empowered to create money at will to pay a portion of the state's expenses and the second is disposed to lend money to the government. Financial markets have often been assailed for limiting the state. The truth is that, at least until the country's debt capacity is finally breached, the markets are very much the adjutants of the state. With respect to the democratic state, the bond markets in particular serve as enablers of that regime's congenital vulnerability to fiscal profligacy.

One cannot end this introduction to the forces at the intersections of politics and finance without referencing the international dimension where governments relate to one another. Once embarked on this scene, one comes across several non-democracies tied into the world's capital markets—China now principally among them—and comes to further appreciate the aforementioned point of how decisive the nature of the existing regime is in shaping the political–financial nexus. By virtue of its authoritarian government, China can do things in the FX markets to control its currency that democracies cannot. The prices set in those markets are the most common points of financial contention among states, affecting as those do the competitiveness of a nation's exports, the threat imports pose to domestic firms, the relative attractiveness of foreign direct investment, and the balance of payments.

Synopsis of What Lies Ahead

In embarking upon an analysis of something so variegated and complex as the modern-day marts of finance, the best place to start is with the simplest elements that make up the securities markets. Hence, my opening chapters deal with the topic of money. The coins and bills we carry in our purses and wallets, the checking and savings accounts we draw upon

[6] John C. Calhoun, *Union and Liberty: The Political Philosophy of John C. Calhoun* (Indianapolis: Liberty Fund, 1992), 17–19.

to make our payments—together these constitute the most fundamental element in the world of finance. So that the relationship of liberal democracy vis-à-vis money can be more firmly grasped, I have divided the discussion of money into two chapters. The first treats the history of money up to the onset of liberal democracy in the late eighteenth century. The second chapter covers the critical monetary events that occurred amid the spread and consolidation of democracy in the nineteenth and twentieth centuries. Once the atom of finance has been explored, the book then proceeds to a series of chapters devoted to the major segments of the financial markets. Thus, Chap. 4 looks at the bond market, Chap. 5 at the stock market, Chap. 6 at the derivatives market, and Chap. 7 at the currency market. In the concluding chapter, I expand on suggested policy reforms broached in earlier chapters, as well as propose several more ideas to fix the political skewing of financial markets. With these proposals, I try to be as realistic as possible, acknowledging the constraints posed by democracy.

As the reader proceeds through the chapters, they will notice a couple of things. One is that the bulk of my discussion refers to the USA. Historical imperatives, the desire of providing a wider perspective when space and relevance permits, along with a particular feature or issue of the market in question will often lead me to hone in on other countries—Britain, in particular. Nevertheless, the fact remains that America's financial markets are the most influential in the world. The USA also happens to have the most powerful central bank on the planet issuing and administering the closest thing we have to a global monetary unit. For these reasons alone, any analysis of the politics of financial markets must devote the greatest amount of attention to identifying the pathways linking Wall Street and Washington. Another thing that the reader will perceive is the lack of adherence to any single methodology. Sometimes, I will make purely logical arguments and then apply these to make sense of the empirical record, while at other times, I will invoke the insights of experienced market professionals. And when I am not otherwise appealing to the wisdom of a great political philosopher on the nature of democracy, I will often refer to the existing scholarly literature with its commitment to statistical–empirical approaches that seek to ape what is done in the natural sciences. While some might deride this amalgam as undisciplined, causality in human affairs is far too intricate and complicated a matter to be captured by any single method. If the recent financial crisis offers any enduring lesson, it is that the

mathematical–scientific methods so in vogue nowadays in the study and practice of finance inevitably miss significant phenomena.[7] To put it in the vernacular of financial markets, one is more likely to gain a more comprehensive view by investing in a diversified portfolio of investigative procedures.

Of course, this is not the first study of the interactions between politics and financial markets. Yet while many books and articles have covered the issues treated in this book, they have tended to focus on particular aspects of the political–financial relationships. There are works specifically exploring how governments regulate financial markets, how they deal with money, and how they oversee the international financial framework. This is not to mention the discussions of how Wall Street influences politicians and regulators, in addition to how governments have historically run into trouble with public credit. To my knowledge at least, relatively little has been published up to now that considers all the major nodes of the political–financial nexus and connects them into a larger story about the causes and social implications of that interactivity. As such, a substantial part of what I do in this book involves integrating the particular strands covered in the existing literature with a view to producing, if I may be so colloquial, a one-stop shop for those interested in the political–financial nexus. Besides this syncretic project, my unique contribution will consist in emphasizing the centrality of democracy as a regime—as a certain distribution of the ruling offices and the types of human characters and values it consequently encourages—for an understanding of the financial world we inhabit.

Less distinctive, though still far from being the consensus opinion, is the normative stance I adopt in this book. To repeat what I have stated before: a politics of financial markets must include not merely an inquiry of the causes that mutually influence those two realms but also a consideration of how they ought to be related to each other. As opposed to the fact–value distinction *de jure* subscribed to by the contemporary social sciences, though often not adhered to *de facto*, my approach is Aristotelian through and through, though executed with a dash of Austrian economics. I do not simply follow the ancient Greek philosopher in deploying a diversity of methodologies—induction, deduction, the consultation of respected authorities—in addition to emphasizing the primacy of the

[7] On this point, see my article, "The financial crisis and the failure of modern social science". *Qualitative Research in Financial Markets* 3, no. 3 (2011): 177–192.

regime in wrestling with the affairs of state. I also obey his dictum that ethical questions cannot be ignored. For politics, as Aristotle taught, is where we endeavor as members of the most comprehensive and authoritative grouping in society to secure justice and the good life for individuals. Where I part with Aristotle is in espousing a classical liberal political philosophy. In this view, the government's role in society should be limited to national defense as well as the administration of justice through the enforcement of laws against murder, assault, and fraud. Beyond this, government has a circumscribed place in providing a few public goods for which there are obviously poor incentives for private individuals to supply on their own. When it comes to the financial markets, the democratic state has gone well beyond these classical liberal boundaries. The fruits of this intervention have been counterproductive in a multitude of ways. Illustrating this in the most elemental fashion is the government's management of money.

Much of this can be attributed to the inherent tendencies of democracy. This hardly means that democracy is to be abandoned. The alternatives to that form of government, realistically speaking, are far worse. Still, just because a particular regime is practically superior to the rest does not mean it is without flaws that demand recognition. Some of these we must live with, but others we can try to ameliorate within the boundaries of democracy so that the financial markets can more effectively benefit society.

CHAPTER 2

Money Before Liberal Democracy

"Follow the money"—ever since Watergate, that is the rule that journalists have been enjoined to follow in trying to unearth political scandals. It is no less valid a rule in trying to explain the politics of financial markets. Money is to the securities traded there what atoms are to the material objects around us—namely, that out of which such things as bonds, stocks, foreign currencies, and derivatives are made of. Go to the pages of any standard textbook in finance and one will see this fundamental reality. It is expressed in all the equations detailing how each of those financial instruments can be theoretically reduced to a series of cash flows over time. Whereas money is normally only on one side of the trade in our everyday dealings, it is effectively on both sides in the financial markets. There, present money is exchanged either against future money or another present money.

Underlining the centrality of money in the politics of financial markets is a historically distinctive feature of our monetary system. In a long process that was only consolidated in the twentieth century, governments nowadays do not merely certify that certain pieces of metal and paper it manufactures constitute money. Their central banks sit at the foundations of credit systems that literally create and destroy the stuff. The resulting fluctuations in the money supply affects the wherewithal that exists to purchase financial assets. Those fluctuations also impact the economy whose direction markets are incessantly seeking to divine. No wonder that central banks are watched closely by a phalanx of analysts parsing every word uttered by the head of the US Fed or the ECB. Indeed, few

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conclusions emerge more clearly from the scholarly literature than the fact that changes in monetary policy—especially those that are unexpected—represent a significant driver of stock, bond, and currency prices.[1]

Recognizing this, portfolio managers widely follow investment strategies based on what the central bank is doing. A common rule of thumb is to hold a higher proportion of stocks relative to cash when the Fed is loosening monetary policy. Conversely, whenever the Fed is tightening, the same rule counsels a shift away from stocks toward cash. Not content to be merely passive observers, however, investors and traders have also been known to urge the Fed to act in times of market stress. The most notorious instance of this occurred when signs of a freeze in the sub-prime mortgage market first began to appear in August 2007. While appearing on CNBC, Jim Cramer, an ex-hedge fund manager and a host on the network, suddenly went into a tirade imploring the Fed to relax monetary policy, screaming that "they know nothing".[2] Central bankers have not always responded to such pleas. But they have not outright ignored them either, always paying special attention to market signals in such circumstances.

As the twentieth century progressed, the predominant view of this relationship between the world's central banks and financial markets came to reflect a Hegelian end-of-history spirit. By the beginning of the twenty-first century, this spirit had crystalized into a monetary version of the thesis that Francis Fukuyama posited for the Western world as a whole.[3] Fukuyama claimed that humanity had reached the apex of political reflection in finally realizing that liberal democracy is the best regime. Similarly, economists reckoned that their discipline had progressed to the point

[1] See, for example, Ben Bernanke and Kenneth N. Kuttner, "What Explains the Stock Market's Reaction to Federal Reserve Policy?" *The Journal of Finance* 60 (2005): 1221–1257; Roberto Rigoban and Brian P. Sack, "The Impact of Monetary Policy on Asset Prices", *Journal of Monetary Economics* 51 (2004): 1553–1575; Thomas Urich and Paul Wachtel, "Market Response to the Weekly Money Supply Announcement in the 1970's", *The Journal of Finance* 36 (1981): 1063–1072; Jeromin Zettelmeyer, "The Impact of Monetary Policy on the Exchange Rate: Evidence from Three Small Economies", *Journal of Monetary Economics* 51 (2004): 635–652.

[2] A video of Cramer's rant can be viewed at: http://www.google.ca/url?sa=t&rct=j&q=cramer%20they%20know%20nothing%20video&source=web&cd=2&cad=rja&ved=0CCIQtwIwAQ&url=http%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DEklCI7D7Rns&ei=1mmZUPreNKec2QWRooDgAw&usg=AFQjCNEcXoEv4SkraKL1P8CbEMNx6gUoOA

[3] Francis Fukuyama, *The End of History and the Last Man* (New York: Free Press, 1992).

of finally figuring out how to optimally address the question of money. Throughout history, societies have been perpetually bedeviled by the opposite evils of too much and too little money. The first evil gives rise to a socially destabilizing inflation, the second to a depression-inducing deflation. But now, supposedly, the historical riddle was solved. The answer: a government-backed monopoly supplier of money, otherwise known as a central bank. So long as its decision-makers are kept independent of the day-to-day political process, a central bank has come to be thought as best advancing the functioning of financial markets. Such a bank can support the conditions under which the public can find solid investment opportunities and deserving firms can obtain capital. In this way, so the argument goes, the state's regulation of money and the operation of the markets combine to promote economic growth in an environment of overall price stability. The apotheosis of this view, its owl of Minerva moment as it were, came with the widespread acceptance of the "great moderation" thesis just before the 2007–2009 financial crisis. According to that thesis, the leading Western economies had finally succeeded in reducing economic volatility while maintaining growth. This was said to be due, in no small part, to the successful implementation of inflation-targeting strategies by independent central banks.[4]

No doubt, real differences of opinion continue to exist about the central bank's role in managing the money supply. As in foreign policy, there are doves and hawks proposing clashing approaches to monetary policy. The doves prefer low interest rates and a greater circulation of money. They think that promotes employment and growth. The hawks, meanwhile, lean toward higher interest rates and a smaller quantity of money. They think that will prevent inflation. But neither party disagrees on the core principle—to wit, that money is the sole prerogative of the state and that, as such, the state is entitled to exercise control over money without hindrance from any power beyond it.

When it comes to money, we have been given a Whig narrative of history. A scientific approach, we have been told, has evolved to conquer the money dilemma. The reality, though, is that the current monetary system reflects the beliefs, power dynamics, and normative imperatives of democracy. The structural framework by which central banks operate

[4] Ben Bernanke, "The Great Moderation", remarks given at the meetings of the Eastern Economics Association, Washington, DC, (February 20, 2004), http://www.federalreserve.gov/boarddocs/speeches/2004/20040220/default.htm

in tandem with financial markets is not so much the pinnacle of economic rationality as it is the sort of arrangement that one would expect in a democracy. This does not mean that there is nothing reasonable in our monetary order. It is merely to say that, like any dominant social and ideological force, democracy can bias thinking, leave key assumptions unexamined, and obscure historically tested alternatives. In this instance, our liberal democracies have encouraged an excess politicization of money.

To better comprehend how modern democracy has exercised this decisive influence, we need to review the story of money up until that form of government began to emerge in the eighteenth century. This will allow us to isolate those monetary factors that persisted and changed with the onset and evolution of democracy. We will then be in a better position to identify how exactly popularly elected regimes impact the medium of exchange. This chapter is devoted to this preparatory task, setting us up for the discussion of liberal democracy's relationship to money in the next chapter.

The Origins and Nature of Money

Usually, the story that is told about the origins of money goes something like this: in the beginning, each individual performed all the tasks necessary to secure the basic necessities of life. Each person prepared their own food, obtained their own drinks, made their own clothing, and built their own shelter. But then, people recognized that they could produce more goods within the same amount of time if they each dedicated themselves to a single task. They figured out that a person becomes more proficient at, say, making a shovel, the more of them that he or she makes. As there are only 24 hours in a day, it is obvious that if one is to going to have the time to repeat the act of constructing shovels, one must forgo other undertakings. The increased productivity that comes from dedication to a task implies specialization in that task. Further encouraging this specialization is that by continually building shovels, one also becomes especially attuned to the technical possibilities of improving both the speed by which a shovel is manufactured as well as its quality. As opposed to someone doing it as an odd job, one is more likely to invent new and improved shovel production processes.

Such specialization, too, takes advantage of individual differences in talent and inclination. Hence, those who are especially adept and passionate about constructing shovels can devote themselves to it, while those more suited to the making of axes can focus on that instead, leaving us with both more and better shovels and axes. Not to mention that specialization economizes on the time that is spent shifting from one task to another.[5]

Yet the division of labor resulting from this brings about a dilemma. Each individual ends up producing an amount of goods which none of them could possibly hope to consume on their own. After a week of creating shovels, a person would find themselves holding far more shovels than they could use. Moreover, they would not have generated any other goods to meet their various needs. What they must do, then, is trade shovels for other goods, whether it be meat, berries, potable water, or shoes. In other words, once a division of labor is established, people must engage in barter—that is, transactions in which goods and services are directly exchanged with each other.

Still, barter involves several inconveniences. Chief among them is that the shovel maker may want to trade for bread, while the baker may not have a desire for shovels. To overcome such difficulties, everyone agreed eventually to accept a particular class of items in all sales.[6] Direct exchange was displaced by indirect exchange. That is, people would now willingly trade for an object that they did not intrinsically desire, but which they were confident could be used in other transactions to obtain what they actually wanted. Thus money was born. For money refers to a class of objects that happen to be widely accepted in payment of all goods and services.

This acceptance was not originally legislated for a community as part of a deliberately thought-out plan. It was not something devised by the community's smartest individual or by a group of its far-seeing leaders. On the contrary, the emergence of money was an example of spontaneous order, of a set of practices arising out of the combined decision-making of individuals co-operating with one another to advance their own par-

[5] Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, Vol. 1 (Liberty Press, Indianapolis, 1981), Bk. I, Chap. i.
[6] Smith, *The Wealth of Nations*, Bk. I, Chap. 4.

ticular interests.[7] As Carl Menger, the founder of the Austrian school of economics, described it:

> As each economizing individual becomes increasingly more aware of his economic interest, he is led by this *interest*, *without any agreement*, *without legislative compulsion*, *and even without regard to the public interest*, to give his commodities in exchange for other, more saleable, commodities, even if he does not need them for any immediate consumption purpose [emphasis his].[8]

Since then, numerous objects have been adopted as money across different societies, culminating in the government certified paper that we use today.

In assessing this canonic account, it must first be recognized that nobody can ever really be sure about all the historical details surrounding the origins of money. For the well over 90 % of human history in which we lived as hunter-gatherers, we only have substantial records of the relatively few tribes that managed to survive into the last several centuries. That said, the consensus view among anthropologists who have studied such groups is that barter is nowhere to be found as the chief mode of transacting goods and services. The idea that it was, according to one anthropologist, ought to be seen as, "the great founding myth of the discipline of economics".[9] Individuals did not haggle over whether five apples is equivalent to two melons. Instead, goods were transferred through gifts.[10] Another practice was for people to accept goods in exchange for incurring a debt to return the favor at some later date.[11] Also prevalent was the adherence to traditional social roles and religious customs, feudalism being the classic example.[12] In numerous

[7] Friedrich A. Hayek, *Law*, *Legislation*, *and Liberty*, Vol. 1 (Chicago: University of Chicago Press, 1973), 36–52.
[8] Menger, Carl. *The Principles of Economics* (Auburn, Alabama: Ludwig von Mises Institute, 2007), 260.
[9] David Graeber, *Debt*: *The First 5,000 Years* (Brooklyn: Melville House Publishing, 2011), 25.
[10] Marcel Mauss, *The Gift*: *The Form and Reason for Exchanges in Archaic Societies*, (Oxon: UK, Routledge Classics, 2005); Marshall D. Sahlins, *Stone Age Economics* (Hawthorne, NY: Aldine de Gruyter, 1972), 149–276.
[11] Graeber, *Debt*, 28–41.
[12] Marc Bloch, *Feudal Society*: *The Growth and Ties of Dependence*, Vol. 1, trans. L.A. Manyon (Chicago: University of Chicago Press, 1961), 123–230.

societies, the fruits of everyone's labor were placed in a common stock, from which it would be distributed by a council following established norms and tending to individual needs.[13]

Before invoking this history to reject the standard economic narrative of money's beginnings, the latter's descriptive function must be properly understood. That story is best viewed as a logical reconstruction of the fundamental influences that led human beings toward the monetary stage of social co-operation. This logical account is derived from a few elementary assumptions about human nature and the natural environment. First off, it is presupposed that resources are both diverse and scarce. Added to this are the assumptions that humans are individually distinct in their abilities, learn from experience, and act to improve their material condition. Based on these premises, an ultimate convergence toward a single, or narrow, class of exchangeable objects can be deductively inferred. We can then employ this theoretical account in confronting the available empirical evidence to see whether it helps clarify what happened. No logical construct of this kind, admittedly, is ever going to capture every detail of the historical record. But no theory can do that without inundating the mind with an unfathomable mass of facts. Any scientific approach is always going to have to abstract from the relevant data in isolating the general forces that elucidate the phenomena in question.

By this measure, the standard explanation continues to offer a compelling picture of money's inception out of barter. That a society in which people regularly negotiated direct exchanges of goods has yet to be identified ought to be no surprise, given the difficulties in executing such transactions. People would have stopped attempting it early on during the vast regions of the past that remain unknown to us. The anthropological challenge also misses the mark in conceiving barter as a necessarily individualistic activity. In this view, each of the parties to an exchange is vying to obtain the best possible deal for themselves. No doubt, this is

[13] Henry Louis Morgan, *The League of the Iroquois*, Vol. *1* (North Dighton, MA: JG Press, 1995), 315. Of the Iroquis, Morgan writes: "They carried the principle of 'living in common' to its full extent. Whatever was taken in the chase, or raised in the fields, or gathered in its natural state by any member of the united families, enured to the benefit of all, for their stores of every description were common". For an economic theory of primitive societies that depicts such practices in rational choice terms as a social insurance scheme adapting to high information costs, see Richard Posner, *The Economics of Justice* (Cambridge, MA: Harvard University Press, 1983), 146–173.

the impression conveyed in Adam Smith's famous elaboration of what he called "the propensity to truck, barter, and exchange".[14] However, when correctly framed, an economic account does not contain any substantive psychological assertions about what motivates people to trade at any given point in time. A correctly framed account merely embraces the formal claim that everyone seeks to make themselves subjectively better off after the transaction than they were before it.[15] If to someone being subjectively better off happens to mean accepting the prospect of a future favor from someone else, then that is just as economic an act as wanting monetary payment in exchange for goods. Any instance, therefore, in which individuals trade for a good or service that both esteem for its use value, rather than its exchange value, comes under the category of barter. It does not matter whether they are both aiming to live up to social expectations, investing in relationships with reciprocal potential, fulfilling their perceived duties to the divine realm, or contributing to a common stock. Wherever direct exchange took place, there was barter. Rightly defining barter in this way, as opposed to restricting it to competitive haggling, the historical evidence does not belie the conventional economic story.

The fact remains that people did eventually accept certain commodities in trades on the expectation that these could be used to acquire other items they specifically desired. As one would expect, the commodities chosen to serve this function consisted of those possessing qualities that tended to obviate the inconveniences of barter. I have already mentioned the situation in which a person cannot easily find someone who has what they want and wants what they have, technically known as the coincidence of wants dilemma. Aside from this, barter's inconveniences include the portability dilemma. Some goods—big rocks and bales of hay, for example—cannot be readily carried to market whenever a purchase needs to be made. Another issue is the perishability dilemma. Many goods, such as foodstuffs, are subject to spoilage, while other non-edible items are vulnerable to wear, tear, and corrosion. This shortens the time in which a person can trade their surplus for goods that they want to immediately consume. It also makes it very difficult for individuals to accumulate savings that can be used to enable future consumption. Then, too, there is the indivisibility dilemma, referring to the fact that some goods are hard to

[14] Adam Smith, *The Wealth of Nations*, Vol. 1, Bk, 1, Chap. 2.
[15] Ludwig von Mises, *Human Action*: *A Treatise on Economics*, 4th rev. ed (San Francisco, Fox & Wilkes, 1963), 13–14.

break down into pieces. This is especially a problem when one is trying to obtain low-value goods. If one has suits of armor to trade and is looking for a plate of corn to have for dinner, one cannot easily cut off 1/10 of the shield to give the cook in order to approximate a fair trade. The suit of armor would lose a great deal of its value for future exchanges.

Furthermore, barter poses the valuation dilemma, the lack of a consistent frame of reference by which to measure the value of goods. Imagine an economy with three goods: nuts, berries, and sling-shots. Let us say Thomas regularly trades nuts for berries at the going ratio of 1 to 4. Wanting to catch some birds so as to have something different to eat, Thomas determines from the berry vendor that sling-shots can be had for 40 berries. To figure out how many of one's nuts will be needed to obtain a sling-shot, Tom will have to make an algebra calculation in deducing the unknown ratio of nuts to sling-shots from the known proportions of 40 berries to one sling-shot and that of four berries to one nut. The answer is ten nuts for one sling-shot. This is not terribly taxing to figure out, but the number of rate pairs that would potentially need to be tracked grows very quickly the more goods that enter into trade. With five goods, there are ten possible sets of prices, while 10 give us 45. In an economy with 100 goods, the figure skyrockets to 4950.[16] However, where one good serves as a common standard for all the rest, the number of possible prices falls to a cognitively more manageable 99. Here is mathematical proof showing why barter, though feasible in a simple economy, must inevitably give way to money once the variety and quantity of production increases.

History reveals a surprising diversity of commodities that individuals have combined to regard as money. Among the earliest, and widespread, was the cowrie shell.[17] Favored by their ornamental and religious significance, these smooth and lustrous shells were additionally recommended by their durability, portability, and non-renewability. Being easy to recognize, the shells were hard to counterfeit.[18] Their different sizes rendered

[16] To calculate this, one must apply the formula to tabulate the number of possible combinations of r objects, in this case 2 to represent the number used in a barter trade, from a set of n objects, consisting of all goods in the economy that can potentially be bartered. The formula is: $C^{nr} = n! ([(n-r)!r!]$. See Clyn Davies, *A History of Money*: *From Ancient Times to the Present Day* (Cardiff: University of Wales Press, 1994), 15n1.

[17] Norman Angell, *The Story of Money* (Garden City, NY: Garden City Publishing Company, 1929) 73–74.

[18] Davies, *A History of Money*, 35.

them effectively divisible, as they were adaptable to disparately priced transactions. Originating most abundantly in the Maldives Islands, cowrie shells found their way into the monetary systems of India, China, Oceania, the Middle East, and Africa. As late as 1942, they were being used in New Guinea.[19] While not used so much as medium of exchange, except in large transactions, cattle historically served money's function as a unit of account and store of value, as is evident from the Biblical and Homeric texts. An indication of its financial legacy is that the words "pecuniary" and "chattel", connoting money and property, respectively, derive from the term cattle.[20] In North America, not long after the Europeans arrived, wampum was among the chief objects adopted to overcome the chronic lack of coins.[21] Consisting of two colored sets of beads, the black being double the value of the white, wampum originated with the native peoples as a form of adornment and a medium of exchange. Drawn to it by the fur trade, the European settlers ended up embracing wampum for their own transactions. Later, as that trade declined, the American colonists turned to other commodities to serve as money, including rice, fish, wood, maize, indigo, sugar, though tobacco was the most predominant.[22] Indeed, until the recent movement to illegalize tobacco in prisons, cigarettes functioned as a medium of exchange among those doing time. Aside from all these monies, the annals of humanity feature the monetary use of salt, whale teeth, beaver fur, yap stones, glass, barley, feathers, and slaves.[23]

Of all the substances that have assumed the role of money, metal has definitely been the most significant throughout history. Over the last ten millennia or so, indeed until only comparatively recently, money was virtually synonymous with metal, especially as societies evolved to comprehend bigger and more sophisticated economies. Iron, tin, bronze, and copper have figured among the metallic currencies, being initially embodied in tools and implements such as spades, chisels, tripods, hoes, axes, and rings.[24] Eventually, these took on a less specific form for monetary

[19] E. Victor Morgan, *A History of Money* (Baltimore: Penguin, 1965), 12.
[20] E. Victor Morgan, *A History of Money*, 11; Norman Angell, *The Story of Money*, 78–79; Glynn Davies, *A History of Money*, 41–44.
[21] Glynn Davies, *A History of Money*, 38–41; Norman Angell, *The Story of Money*, 76–77; Lewis Henry Morgan, *The League of the Iroquis*, Vol. 2, 51–54.
[22] Murray Rothbard, *A History of Money and Banking in the United States: The Colonial Era to World War II* (Auburn: Ludwig von Mises Institute, 2002), 48.
[23] Norman Angell, 74–76; E. Victor Morgan, *A History of Money*, 11–12; Glynn Davies, *A History of Money*, 36–38.
[24] Norman Angell, *The Story of Money*, 80; Glynn Davies, *A History of Money*, 44–45.

purposes as an ingot, with the purity and weight of the metal contained therein evaluated by buyers and sellers in finalizing exchanges. While the baser metals continued to be used in small transactions, the precious metals—gold and silver, of course—eventually came to the fore. Not only can these be readily carried as well as divided up and combined as necessary, silver and gold are highly immune to corrosion, challenging to discover, and costly to mine. The scarcity created by these last two factors gives the precious metals a high value-to-mass ratio, heightening their attractiveness for transport and storage.

As it was time-consuming, however, to weigh and assay chunks of metal in every deal, the idea arose of standardizing the money so that the parties to an exchange could summarily gauge its value. The result was the invention of precious metal coins around the seventh century BCE, a feat usually attributed to Lydia, a kingdom located in territory that today occupies the Western end of Turkey. The source of this claim, since backed up by archeological evidence, is Herodotus, the ancient Greek father of history, who notes that the Lydians, "were the first nation to introduce the use of gold and silver coin".[25] Actually, China can lay claim to having invented coins as such, but its holed metal pieces were made of the baser metals and thus were restricted to low-value exchanges.[26] The precious metal versions inaugurated by the Lydians meant that the greatly reduced costs of trading entailed by coinage could make itself felt throughout a much larger swath of the economy.

Once the usage of gold and silver coins diffused throughout the Eastern Mediterranean, as it quickly did, commercial activity flourished. Besides the encouragement of labor specialization that comes from facilitating exchanges, coined money stimulated economic growth by stoking the acquisitive passions. Wealth now had a practically indestructible form that made it feasible to continually accumulate without the concern that all of one's efforts would end up being in vain due to the spoilage of one's fortune. Many centuries later, John Locke would invoke this forestalling of spoilage to give moral sanction to acquisitiveness, and therewith to free market capitalism.[27] The seventeenth-century English philosopher argued that money's immunity to spoilage meant that large fortunes could be

[25] Herodotus, *Histories* (Hertfordshire, UK: Wordsworth, 1996), Bk, 1, Chap. 94. Glynn Davies discusses the archeological evidence in his *A History of Money*, 63.
[26] Glynn Davies, *A History of Money*, *55.*
[27] John Locke, *Two Treatises of Civil Government* (Cambridge: Cambridge University Press, 1963), 335–344.

built up by individuals without resources going to waste in their hands that could have otherwise been used by others. Locke recognized that this also had the consequence of bringing inequality into the world, as some inevitably showed more ambition and talent in acquiring money than others. But as even those that fared worse in the chase after riches were left materially better off than they were before the development of money, thanks to the prosperity diffused across society by the industry of the moneymakers, the distribution of wealth posed no moral problem for government to correct. Locke's argument, it is worth noting, cannot be brushed aside as the special pleading of an apologist for capitalism. Even against the bar set by John Rawls' difference principle,[28] a criterion of distributive justice widely accepted by contemporary political philosophers, the allocative effects specifically attributable to the introduction of money pass muster: the less advantaged are among those who gain from this seminal event. If money produces inequality, it does so justly by lifting all boats.

So too, the amassing of fortunes that money permits implies the existence of large pools of savings. These can be invested in capital goods—such as tools, equipment, and buildings—allied to which workers can be employed to generate additional goods at a higher rate of productivity. Since coins are accepted over a bigger geographic range than commodities like tobacco and salt reflecting a more localized demand, the extent of the market that businesses are able to serve increases, adding further impetus to the division of labor and enabling larger modes of production that actualize scale economies. For all these reasons, the widespread adoption of Lydia's invention must be assigned a signal part in the prodigious economic development of the ancient Greek city-states from the sixth to fourth century BCE, a development that underlay that civilization's epochal achievements in the arts and sciences.

Money and Government

Lydia's coins were originally introduced by private merchants. Yet in whatever form it happens to be comprised, money is always an enticing object for governments to command and regulate. It became especially so with coinage and even more so several millennia later when paper replaced it. It should be no wonder, then, that Lydia's king at the time, Gyges, seized

[28] John Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971), 60–83.

control of coin production and made it into a state monopoly.[29] With few exceptions, that has since been the approach toward money taken by governments. A commonly stated rationale for this is that leaving it to private individuals and firms would provide incentives to issue false money as a way to increase profits. In the case of coins, an unscrupulous minter could embed a lower mass and purity of metal than the face value, while pocketing the difference. With paper, an institution, usually a bank, will have an interest in maximizing the amount of notes it can issue through its lending activities so as to augment its interest income. That this does not necessarily align with the interests of the community is something that becomes evident where the amount of the note issuance reaches a point at which these cannot all be redeemed for species or the boom created by the excess lending turns into a bust. Another oft-cited justification for the state's regulation of money is that it is uniquely positioned, by virtue of its legitimacy and authority, to certify that certain pieces of metal and paper are actually worth as much as indicated on the currency. Otherwise, transaction costs would be markedly higher, with sellers forced to scrutinize the authenticity of the coins and notes handed to them. The leading argument, though, in favor of government control is that money is a public good, its quantity and circulation impacting the economic environment whose condition and fluctuations all the members of society inescapably share. Like national defense and the administration of justice, money is reckoned to demand an agency capable of superintending it with a view to the public good.

Indeed, there is a school of thought that goes further than saying that money works best under government oversight, declaring it to be a state construct. This is the thesis put forward by Georg Friedrich Knapp, whose *The State Theory of Money* drew thoughtful consideration from Max Weber and influenced Keynes in accepting the position known as chartalism. To students of philosophy, the debate surrounding chartalism is reminiscent of the realism versus nominalism question—that is, whether general terms such as "bird" and "tree" refer to a set of qualities that are discovered by the mind existing independently of human will or rather to phenomena that we, as members of a particular linguistic community, have decided to isolate for our own cognitive convenience in making sense of the world. The first is the realist stance, while the second is the nominalist perspective.

[29] Norman Angell, *A Story of Money*, 83–84.

Chartalists like Knapp apply the nominalist view to the concept of money by observing that the state defines its basis as a unit of account through its power to define the contractual terms of debt and tax payments. By this means, the chartalists seek to explain the mystery of how a certain piece of paper, having virtually no value in itself to meet human wants, is nevertheless treasured as money. Their answer is that the government wills its value through legislation.[30] For even where the money has been defined in terms of a specific weight of metal, history has repeatedly demonstrated that states treat that amount as a nominal matter by subsequently establishing, for example, that a debt specified as a pound of copper shall henceforth be equivalent to a stated amount of another metal. "The state", Knapp writes, "accordingly regards the former unit of payment (a pound of copper) as if it meant only the name of the former unit without attaching any importance to the material of which it was composed".[31] Buttressing this power to determine what counts as money, according to the chartalists, is the government's capacity to stipulate what items it will accept in payment of taxes.

The chartalist argument runs into problems by not directly referencing money's role as a medium of exchange. From the first moment it was invented up to the present day, this has been a defining feature of money. The chartalist is forced to account for this feature by assuming that the government's specification of a given set of objects for the legal fulfillment of tax and debt obligations invariably causes those objects to be used in everyday transactions. But that is not necessarily the case. No doubt, as a sizable player in the economy, the government can markedly influence what gets commonly accepted for payment among buyers and sellers, if only because people will typically find it more convenient to operate in the same currency in which they are required to pay their debts and taxes. Still, individual and firms do sometimes opt for other currencies, with a mind to exchanging it when necessary to meet state-enforced obligations. This could transpire because their industry demands it as a result of

[30] For a subsequent defense of Knapp's position, see Abba P. Lerner, "Money as a Creature of the State", *The American Economic Review*, 37 no. 2 (1947), 312–317. Also see: L. Randall Wray, "Money and Taxes: The Neo-Chartalist Approach", *Jerome Levy Economics Institute Working Paper* (1998), No. 222., http://ssrn.com/abstract=69409 or http://dx.doi.org/10.2139/ssrn.69409

[31] Georg Friedrich Knapp, *The State Theory of Money* (London: MacMillan and Company, 1924), 14–15.

international activity, or because they believe they would be shortchanged in regularly giving up the relevant coins in exchange for goods, or simply because they lack confidence in the local government notes.

Best exemplifying this are the various failures of governments in the past to successfully enforce a bimetallic standard at the legally prescribed rate. The ratio between silver and gold might be established at 15 to 1, but if the market diverges from that ratio, as it inevitably does, Gresham's law—according to which undervalued money will tend to disappear from circulation and be replaced by that which is overvalued—will ensure that only one metal will remain in use. This is precisely what happened in the USA as a result of the 1792 Coinage Act. Once silver prices subsequently fell due to increased production, and the ratio consequently rose above 15 to 1, gold was hoarded and the USA effectively went to a silver standard in the early nineteenth century.[32] A more recent instance in which people have resisted the government's choice of money was in Africa. The governments of Angola, Mozambique, and Ghana sought to cajole firms to use their respective national currencies instead of US dollars. In Zambia, the government went so far as to threaten users of foreign currency with a ten-year prison term.[33] That the state occasionally must go to these lengths indicates that there is more to the essence of money that what the government's will defines as the means of payment for debt and taxes.

Also damaging to the chartalist thesis is that, for much of history, the movement of different monies has not respected the geographic boundaries of states. During the Renaissance, Venice's ducat and Florence's florin both circulated widely throughout Europe, while in colonial North America, the British guinea, French Louis d'or, and the Spanish doubloon, among others, greased the wheels of commerce.[34] What Benjamin J. Cohen calls the Westphalian model of monetary geography, wherein states successfully monopolize currency issuance within their territories, only emerged in the nineteenth century. In part, this was due to the legislation that the chartalists cite, but it was also owing to the monopolization of currency issuance achieved by the establishment of central banks. Indeed, we are currently witnessing the de-territorialization of money, a

[32] Murray Rothbard, *A History of Money and Banking in the United States*, 66–67.
[33] Patrick McGroarty, "Africans Chase Away Almighty Dollar", *The Wall Street Journal*, (August 13, 2012), C1.
[34] Benjamin Cohen, *The Geography of Money* (Ithaca: Cornell University Press, 1998), 30; Murray Rothbard, *A History of Money and Banking in the United States*, 48–49.

dynamic that has acquired momentum over the last several decades of globalization in which a few currencies have emerged dominant in international market share, as manifested in FX trading, export/import invoicing, and financial claims.[35] That the Japanese yen, European Euro, and US dollar have attained this status points to the market's decisive role in deciding the identity of money.

As for the more modest view of government that sees it as facilitating the operation of the monetary system for the common good, we do well to remember that Gyges was probably not so high-minded in taking over Lydia's coinage. This is a man, after all, who gained the throne as a result of killing the previous king, Candaules.[36] The Lydian state's monopolization of money production was imitated by other rulers in the ancient Greek world during the seventh and sixth centuries when the region was dominated by tyrannical regimes. In any reckoning of money's relationship to the state, the fact that the ruling groups use that coercive apparatus to pursue their own interests must never be overlooked. States benefit from having images of their symbols, traditions, leaders, and historical personages embossed on the currency. It continually reminds the people of the state's presence in all our dealings, thereby gently, even if only imperceptibly, touching the fear that all political authorities, to one extent or another, must invoke to elicit obedience. True, since the governors are always outnumbered by the governed, as David Hume famously reminds us, states principally rely on opinion, rather than fear, in securing compliance to their edicts.[37] Yet having the regime's signage on the money reinforces the opinion of its right to exercise authority by conveying its worthiness to exercise a hallowed trust—namely that of authenticating the community's purchasing power. Since, in the popular mind, riches are often simply equated with money, the government's stamp likewise strengthens the opinion that the maintenance of its rule is in everyone's interests, it being in control over the elements of our financial well-being. This is the influence that Jesus, challenged by the Pharisees whether he was

[35] Benjamin Cohen, *The Future of Money* (Princeton: Princeton University Press, 2004), 5–8.
[36] Herotodus, *Histories*, Bk. 1, Chaps. 8–12; in an allusion to this regicide, the ring featured in Plato's *Republic* that allows its users to invisibly commit crimes is called the ring of Gyges. See Plato, *The Republic of Plato*, trans. Allan Bloom (New York: Basic Books, 1968), 359c-361d.
[37] David Hume, "Of the First Principles of Government" in *Essays, Moral, Political, and Literary*, ed. Eugene F. Miller (Indianapolis: Liberty Press, 1985), 32–36.

claiming immunity from having to pay taxes to the Roman state, pointed to in summoning a coin with Caesar's image on it and declaring, "Render therefore to Caesar the things that Caesar's, and to God the things that are God's".[38]

Less subtle, if still obscurely obtained, are the government's gains from seigniorage. Basically, this is income earned by the manufacturer of money on the spread between its actual and face value. Suppose an individual brings a bar of gold to the mint in exchange for coins. Suppose further that the mint takes that exact bar and uses it to make the requested coins. In order to cover its production costs and earn a profit, the mint will end up returning coins with less gold, in terms of both purity and weight, than that contained in the original bar. The profit thereby reaped is seigniorage—though by profit here, we are speaking of it in economic, as opposed to accounting, terms as a return in excess of all costs, including the use of equity capital. Accordingly, where mints find themselves operating in a competitive market—a situation that actually existed for low-value coinage during the late eighteenth and early nineteenth centuries in Britain[39]—seigniorage would tend toward zero, as the battle for customers would drive prices toward marginal costs. Holding a monopoly, though, a government-controlled mint is able to charge a higher price (i.e. offer a lower real gold content in its coins relative to face value) and thus earn seigniorage.

With paper money not backed by any tangible asset, precisely the situation with today's fiat currencies, the seigniorage which the government can garner is much bigger. The costs of producing an additional note, given an existing money press infrastructure, are virtually zero. Seigniorage here effectively equals the face value of the notes created. A government can literally earn an income to finance expenditures on goods and services by simply printing money. Granted, by increasing the money supply relative to goods, the purchasing power of the currency is thereby reduced. But the newly manufactured notes will almost always retain much of their value, as the devaluation affects not just the added stock, but is passed along to all existing holders of money. Nor do prices adjust instantaneously to additions of money. These funds must circulate through many hands in purchasing goods and services before the associated increase in demand raises

[38] Matt. 22.21.

[39] George Selgin, *Good Money: Birmingham Button Makers, the Royal Mint, and the Beginnings of Modern Coinage, 1775–1821* (Ann Arbor: University of Michigan Press, 2008).

the entire price structure. The first to receive the funds, the government and its closest allies, can obtain prices that largely, if not wholly, reflect the prior quantity of money.[40] Not to mention that the price adjustment that eventually does occur lowers the government's real debt burden, affording it extra borrowing capacity to fund its operations.

Even the most cursory overview of the past suffices to demonstrate how often and systematically the seigniorage privilege has been abused by governments. In the sixth century BCE, when Rome was still ruled by kings, the "as" coin was instituted and embedded with one pound of copper. Later during the Republican period, largely to finance the Punic Wars with Carthage as well as Rome's conquests, the copper content was systematically cut down. By 250 BCE, the as was down to 1/12 of a pound, and by 130 BCE that fraction had dropped to 1/24 on its way to becoming a mere token.[41] An analogous, though ultimately more destabilizing, depreciation took place later after Rome had become an empire. That political behemoth had to finance a growing bureaucracy, an extensive system of handouts and entertainments to mollify the populace, persistent trade deficits fueled by the import of luxuries from the East, and, most importantly, a considerable military force to defend its far-flung borders. To pay for all this, the Roman Empire continuously debased its denarii. At the time of Nero in the first century CE, these silver coins were made up of 99 % pure silver. But in 64, Nero lowered it to 93.5 %, beginning a series of debasements that over the next two centuries would see the silver content of Rome's currency reduced to almost nothing (Fig. 2.1).[42]

Inflation thus began to ravage Rome's economy, which arguably played a crucial role in the empire's decline and fall.[43] Subsequently, when a desolated Europe began to revive out of the Dark Ages, currencies with names denoting the weight of precious metals embedded in them were established, such as the English pound and French livre. Well before the widespread adoption of paper currency reduced the commercial relevance

[40] Ludwig von Mises, *Human Action*, 412–413. The key point to recognize here is that an addition to the money supply does not immediately move prices all at once, as assumed in the quantity theory of money, according to which goods multiplied by their price equals the amount of money multiplied by the latter's velocity. Price changes occur over a period of time benefiting some in the community at the expense of others.

[41] Norman Angell, *The Story of Money*, 109–110.

[42] Kenneth W. Harl, "The Later Roman Empire", Course Handout, http://www.tulane.edu/~august/handouts/601cprin.htm

[43] Glynn Davies, *A History of Money*, 93–111; Norman Angell, *The Story of Money*, 112–119.

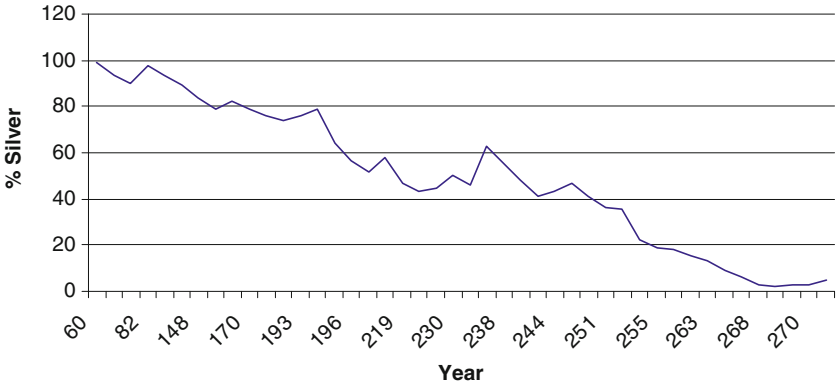

Fig. 2.1 Silver content of Roman coins, 60–274. *Source*: Kenneth W. Harl

of the metal content in coins, these post-Roman monies were eventually stripped and adulterated to the point where we are now—that is, in which the names of those currencies serve merely as a historical reminder of the way money was once supposed to be worth its weight.[44]

Paper Money Troubles

With coins, there is a limit to how much it can be debased. Moreover, there are only so many coins available to debase, especially since suspicious holders of the currency can opt to export or hoard their money. By contrast, nominal claims to the existing stock of goods can be printed at will with paper at, as already mentioned, virtually zero incremental cost. Not surprisingly, then, the history of paper money presents more than a few historical examples that casts the government in an even worse light than its management of coinage. While banknotes go back to seventh-century China and privately issued versions were used during the Renaissance period in Italy, government-issued paper money did not become a force in the Western world until the late seventeenth century in colonial North America. In 1685, the Intendant of New France—now the Canadian province of Quebec—dealt with a shortage of coins by putting

[44] Adam Smith, *The Wealth of Nations*, Bk, I, Chap. 4.

his government's stamp on playing cards, which were redeemable in hard currency once supplies arrived by ship from the mother country.[45]

But the more groundbreaking move toward paper was made in 1690 by the colony of Massachusetts in issuing £40,000 of bills of credit. Its government would occasionally send a military force to New France on self-financing missions to capture booty. After initially enjoying some successful expeditions, however, the Massachusetts soldiers were eventually rebuffed by the French Canadians. Despite this turn of events, the soldiers still demanded to be paid for their efforts. The governor sought to appease them by coming up with the expedient of paying them in paper carrying the promise of eventual redemption in precious metal specie.[46] Justifying it on the grounds that paper issuance facilitated commerce by making up for the lack of coins, Massachusetts continued using paper money, and all the other colonies—Virginia being the latecomer—followed its example. With many of them, Rhode Island in particular, succumbing to the temptation to print money in lavish quantities, rampant inflation ensued. The paper soon traded at a large discount to the redemption value and Gresham's law worked to further reduce the circulation of silver and gold. In Massachusetts, a paper shilling that was equivalent to 1/20th of a silver dollar in 1726 had declined 40 % to 1/50th of the latter's value in 1750. By this same year, the paper shilling in freewheeling Rhode Island had collapsed to 1/150th of the silver dollar, on its way to becoming worthless 20 years later. Responding to pleas from creditors who were losing out in being repaid their loans with devalued money, Britain's Parliament passed legislation in 1764 banning the issuance of paper as legal tender in all of the 13 colonies.[47]

Keynesian revisionists of this history, such as John Kenneth Galbraith, have tended to downplay the inflationary consequences of America's initial experiment with paper money. They argue instead that the injection of liquidity which that novel form of currency provided was critical in fueling the colonies' growth.[48] Among America's founding fathers, all of whom had recently lived through the paper currency regime, the dominant

[45] Richard A. Lester, "Playing-Card Currency of French Canada" in *Money and Banking in Canada*, ed. E.P. Neufeld (Toronto: McLelland & Stewart, 1967), 9–23.
[46] John Kenneth Galbraith, *Money: Whence It Came, Where It Went* (Boston: Houghton Mifflin Company, 1975), 51–52.
[47] Glynn Davies, *A History of Money*, 460–462; Murray Rothbard, *A History of Money and Banking in the United States*, 51–56.
[48] John Kenneth Galbraith, *Money*, 52–55.

assessment was decidedly opposite to that. Their views were echoed by William Gouge, about a generation after America's founding, in his *History of Paper Money and Banking*: "From this account of the provincial paper money … the reader may … learn to estimate properly that provision of the United States Constitution, which forbids any State, 'to emit bills of credit, pass any laws violating the obligation of contracts, or make any thing but gold and silver legal tender in the payment of debts'".[49]

The US constitutional provision to which Gouge is referring is Article 1, Sect. 10. If the reader is wondering how something other than gold and silver is now legal tender in the USA, it was not that the Constitution was subsequently amended. The relevant provision mandating precious metal as currency does not apply to the Federal Government. Nonetheless, that requirement is indicative of the belief, prevalent at the launch of America's republic, that assigning monetary value to mere pieces of paper runs in tension with the principles of democracy. Elucidating the rationale underlying Article 1, Sect. 10 of the Constitution, James Madison wrote of the "pestilent effects of paper money" in No. 44 of *The Federalist Papers*, and how it undermines "the necessary confidence between man and man; on the necessary confidence in the public councils; on the industry and morals of the people, and on the character of Republican Government".[50]

Also influencing people's monetary thinking at the time was the Mississippi scheme of 1716–1720. Indeed, this affair would resonate up until the early twentieth century in providing a cautionary warning against all proposals to institute a paper money regime. The leading character behind the Mississippi scheme was John Law, the Scottish-born author of a notable work on economic and monetary theory, but also a womanizing, bon vivant with a penchant for gambling.[51] Having moved to London from his Scottish

[49] William M. Gouge, *A Short History of Paper Money and Banking in the United States* (Auburn: Ludwig von Mises Institute, 2007), 23.

[50] Madison, James, "Federalist No. 44" in *The Federalist Papers* (Bantam: New York, 1982), 226.

[51] The account given here is based on: Charles Mackay, *Extraordinary Popular Delusions and the Madness of Crowds* (Hertfordshire: Wordworth Edition Ltd., 1995), 1–45; James MacDonald, *A Free Nation Deep in Debt*, (New York: Farrar, Strauss, and Giroux, 2003), 190–205; Niall Ferguson, *The Cash Nexus: Money and Power in the Modern World, 1700–2000* (New York: Basic Books, 2001), 312–316; Larry Neal, *The Rise of Financial Capitalism: International Capital Markets in the Age of Reason* (Cambridge: Cambridge University Press, 1990), 73–77; John Kenneth Galbraith, *Money*, 22–27; Glynn Davies, *A History of Money*, 553–555.

homeland, Law was drawn into a duel with Edward Wilson because of a dalliance with Elizabeth Villiers (the future Countess of Orkney). He killed Wilson and, consequently, was charged with murder—an allegation that was subsequently reduced to manslaughter upon conviction. While Wilson's family appealed the case, Law managed to escape to Holland for a while, then returned to Scotland in an unsuccessful attempt to secure a pardon and convince politicians there to implement his economic ideas, before resuming his sojourn in Continental Europe, where he traveled from one city to another, studying the subject of finance by day and cavorting with Europe's aristocratic elite in casinos by night. Among the individuals he befriended, while in Paris, was the Duke of Orleans, who would go on to assume power as the Regent of France during the minority of King Louis XV. The Duke was left with the herculean task of dealing with a gargantuan public debt bequeathed by Louis XIV, the result of the Sun King's extravagant court and, more so, France's numerous wars. Eager for potential solutions, and previously impressed by the financial expertise of his old gambling companion, the Duke deferred to Law when the latter presented himself at the court to pitch what came to be known as his "system".

As complicated as Law's system eventually turned out to be, the core idea behind it was rather simple: the economy needs more money in circulation than a precious metal standard can typically provide. "Domestick Trade", Law wrote, "depends on the Money. A greater Quantity employes more People than a lesser Quantity. A limited Sum can only set a number of People to Work proportion'd to it, and 'tis with little success Laws are made, for Employing the Poor or Idle in Countries where Money is scarce".[52] If this scarcity is ever to be overcome, money has to consist in something that, at the very least, retained its value over time. Otherwise, Law argued, people would lack confidence in it and it would not circulate sufficiently. Silver, the precious metal which Law focused upon, could not satisfy this requirement, being perpetually subject to increases in production that lowered its unit value. But land, precisely because it has a fixed supply, offers a more solid foundation for maintaining the value of a monetary unit. Obviously, parcels of land cannot be exchanged in ordinary transactions, so something must be employed to represent it—paper money was Law's candidate for this role. No longer constrained by the vagaries of silver mining, paper money stood out to him as a more elastic currency that could be readily increased to meet the needs of the economy.

[52] John Law, *Money and Trade Considered: with a Proposal for Supplying the Nation with Money* (Glasgow: R & A Foulis, 1750), Chap. 2, http://archive.org/details/moneytradeconsid00lawj

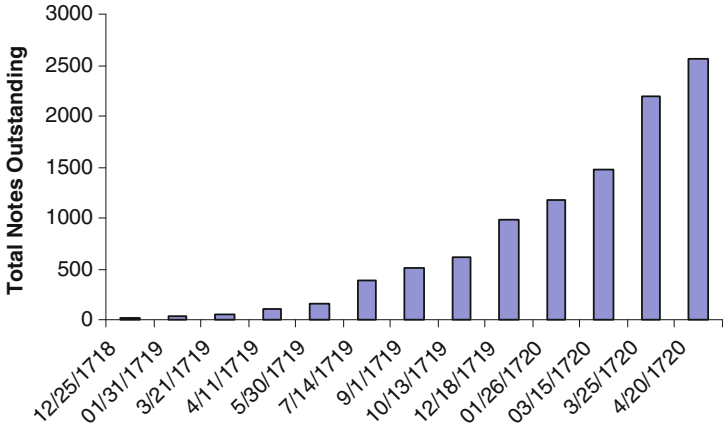

Fig. 2.2 Quantity of notes issued by Banque Royale, 1718–1720. *Source*: Larry Neal

Accordingly, Law's first move in 1716 after winning the support of the Duke of Orleans was to establish the Banque Generale, a financial institution authorized to issue notes backed by the value of French land. The injection of liquidity worked to revive the economy, while furnishing the French government a currency that, by declaring it legal tender, it could borrow from the bank in order to pay its creditors. Law's standing raised by this success, his bank was granted a royal charter in 1718 and suitably renamed as the Banque Royale. This entity soon merged with the *Compagnie des Indes*, or the Mississippi Company as it subsequently came to be called, whose most widely touted line of business consisted in its monopoly over trade in Louisiana. At the time, this was not the middling sized US state that we know today, but rather a French colony stretching down the middle portion of North America all the way from the lower Great Lakes to the Gulf of Mexico. Law was forced to hype Louisiana's commercial promise because the government was treating the Banque Royale as a money-printing machine, heavily borrowing its notes to fund its outlays, in the process raising the supply of those notes well beyond what could be redeemed in specie (Fig. 2.2).[53]

Law's original idea of buttressing paper money with land turned out to be unworkable, it being cumbersome to specify and provide a tract of

[53] Larry Neal, *The Rise of Financial Capitalism*, 69.

land in exchange for notes. His notes ended up being guaranteed by the monarch's pledge to convert them into precious metal. To avoid a wave of such redemptions, confidence in the notes had to be maintained by keeping the Mississippi Company's share price high—very much like a modern bank must pay heed to its share price in order to forestall any anxiety on the part of its bondholders and depositors.

Given Law's reputation as a financial genius, the shares initially boomed, nay exploded upward. Demand was so strong that several share offerings were made without adversely impacting the price. Helping fuel demand was that the manufactured notes borrowed by the government were spent on goods and services, money which was then used by its recipients to buy Mississippi Company shares. The Banque Royale was also offering margin on stock purchases, that is, loans collateralized by the value of the shares.

Law's system began to fall apart in 1720, however, when the Prince de Conti requested three wagons of notes to be exchanged for specie. After a complaint from Law, the Regent compelled the Prince to return two-thirds of the specie he had taken out of the bank. That set a few stock traders thinking that something was awry, leading them to convert their notes into gold and silver coins and to send those abroad. Fomenting doubts, too, was the news trickling in from America that Louisiana's economic prospects were proving far less promising than advertised. As these trends gained momentum, the Mississippi Company shares underwent a spectacular drop, whose implications Law vainly sought to avoid by suspending the redemption rights of his bank's notes, illegalizing the exportation of coins, and even compelling the public to bring all their precious metals to the bank. Eventually, the Banque Royale's notes were officially devalued and Law, now a reviled man, had to slip out of France in December 1720. He eventually made his way to Venice where he died a pauper in 1729.

After its revolution 60 years later, the French would go on to suffer yet another debacle with paper money in the aftermath of its 1789 revolution. Echoing Law's proposal of issuing a currency backed by land, the French National Assembly introduced the assignat, paper bearing a promise to be redeemed by the eventual sale of property which the revolutionary government had confiscated from the church.[54] Being structured as an asset-backed bond, the assignat's tie to land was given a more practicable form

[54] Regarding the discussion of the assignat experiment, I relied upon: Andrew Dickson White, *Fiat Inflation in France: How it Came, What it Brought, and How it Ended* (New York: D. Appleton Century Company, 1933); Niall Ferguson, *The Cash Nexus*, 146–147;

than anything that Law had managed to institute with his Banque Royale notes. The new regime found itself inundated with the giddy expectations that revolutions typically foster. At the same time, it had to manage the national debt bequeathed to it by the old monarchical order, a debt which it had decided against defaulting upon for fear of alienating the bond and money markets. Selling its newly acquired lands all at once to pay off the debt was also out of the question, as that would depress their value. So too, there was the regime uncertainty generated by the revolution and its course, during which the security of property rights was put under question by the confiscations of the very lands buttressing the assignats. In these circumstances, the willingness to buy property with hard currency was less than optimal to execute a successful sale of the lands. Consequently, the revolutionary government took advantage of the fact that the assignats quickly came to be exchanged as money. It seized the chance of adopting a mode of financing that did not require the explicit consent of the people: printing ever more assignats. From an initial run of 400 million livres in 1790, the government over the next five years went on to issue a total of 45.5 billion, the upshot of which is that the French state effectively arrogated an estimated 7 billion livres worth of resources at 1790 prices.[55] Obviously, the assignats depreciated tremendously as a result both against gold and the wider array of goods and services (Fig. 2.3).[56]

This, in turn, ushered a hyperinflationary storm that the revolutionary government sought to quell with price controls and draconian laws requiring people to accept assignats at face value (Fig. 2.4).

Not until Napoleon took over the French state and instituted a gold-based system was monetary order finally restored to the country—not exactly an outcome by which democracy, then in the midst of making its grand reappearance in the world since its prior incarnation in Ancient Greece and Rome, could give a good first impression of its competence to handle monetary affairs.

Thus, at the dawn of liberal democracy in the eighteenth century, the historical record had sufficiently disclosed the fundamental contours of money's relation to government. While hardly anyone doubted that

John Kenneth Galbraith, *Money*, 64–66; Florin Aftalion, *The French Revolution*: *An Economic Interpretation*, (Cambridge: Cambridge University Press, 1990), 68–85; 181–190.

[55] Florin Aftalion, *The French Revolution*: *An Economic Interpretation*, 187.

[56] Centre for Financial Stability, "Historical Financial Statistics", http://www.centerforfinancialstability.org/hfs_data.php

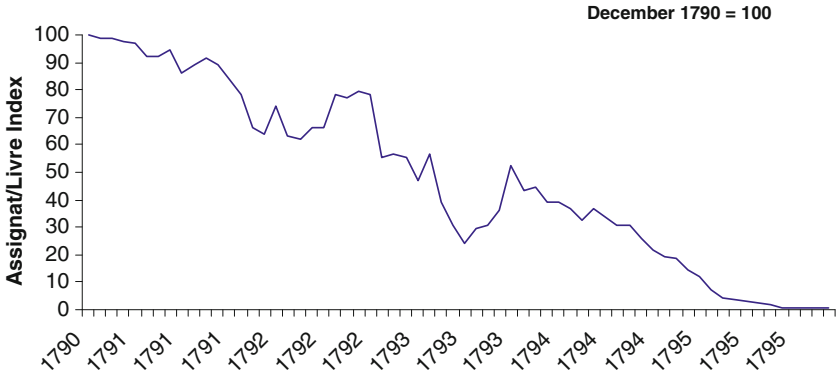

Fig. 2.3 French assignats priced in gold livres, 1790–1796. *Source*: Centre for Financial Stability

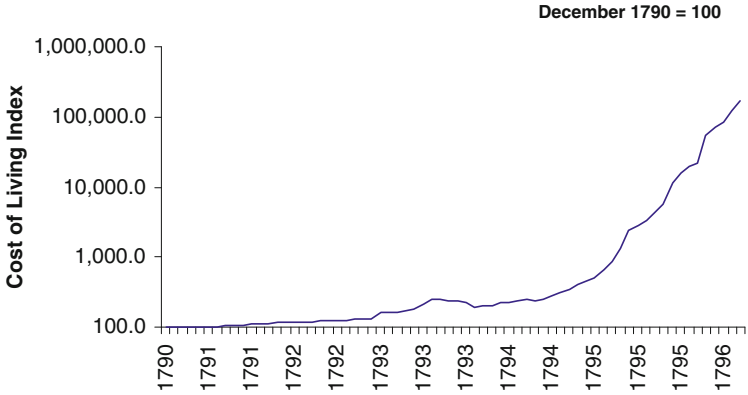

Fig. 2.4 France cost of living index, 1790–1796. *Source*: Centre for Financial Stability

government had a necessary role to play in regulating the currency, the political and economic elites of the period mostly acknowledged the pitfalls and dangers of the state's involvement in the monetary realm. It was widely understood that governments are apt to exploit their monopoly over the definition and creation of money to extract wealth for its own purposes at the expense of the community they are supposed to serve.

Nonetheless, they recognized how the economy could be enlivened by the injection of currency. The Scottish philosopher David Hume, who was widely read at the time, even recommended such injections on a periodic basis as a means of bolstering the economy, foreshadowing Milton Friedman's call for regular annual percentage increases in the money supply.[57] Still, the advantages of ample money were qualified by the awareness that the addition of liquidity could ultimately escalate out of control by fomenting exorbitant inflation and, as Law's scheme so clearly evidenced, asset bubbles in the financial markets.

[57] David Hume, "Of Money" in *Essays*, *Moral*, *Political*, *and Literary*, ed. Eugene F. Miller (Indianapolis: Liberty Press, 1985), 288.

CHAPTER 3

Money in Liberal Democracy

When the Western democracies went on to stray from their monetary roots, they were not merely taking a different path. They were adopting another answer to the question: how is the value of money to be determined? Only two options exist: either the state can take its bearings from a natural standard or it can establish its own criterion. With the first, the state aligns itself to a valuation it finds already made by a separate agency. With the second, the state makes up its own valuation by relying entirely on human reason.

This is similar to the decision that governments face in the administration of justice. The difference here is that the issue revolves around the valuation of human action rather than money. Is justice, in other words, a matter of according with natural law, a set of abiding principles recognized by informed universal consent? Or is justice a purely artificial contrivance which societies must rationally adjust to their evolving circumstances? In monetary policy, the parallel to the natural law position is represented by supporters of the gold standard, whereas the artificial stance is adopted by the advocates of fiat money. Over the past two centuries, natural law has progressively given way to rational moral constructs of one kind or another

G. Bragues, *Money, Markets, and Democracy*,
DOI 10.1057/978-1-137-56940-0_3

(utilitarianism and Kantian ethics chief among them).[1] In the same way, the liberal democracies progressively abandoned the gold standard for a fiat regime overseen by a technocracy.

Democracy has eaten away at the idea of a natural structure for human action. Money has not been immune. Instead, an all-encompassing labyrinth of artificiality, a virtual reality projected by bureaucrats and bankers, has come to surround our money. All this is in the name of a conception of reason brimming with confidence in its ability to realize a more perfect state of affairs. To anyone familiar with democracy's inherent propensities, this development can hardly be a surprise. But that does not make it any less destructive.

The Natural Approach to Money

Whether nature or artifice is at play, the value of money depends on supply and demand. In this respect, it is like any other item. Demand for money is expressed whenever people endeavor to exchange other goods for it. Supply is based on how much money is circulating and ready to exchange for other goods. Governments can more easily influence supply than demand. To affect demand, they would have to get into people's heads and alter their preferences for holding cash. To affect supply, governments need not engage in any psychological persuasion. It has various levers at its disposal to inject additional currency into the economy. Thus, the nature versus artifice question comes down to two opposing methods of regulating the quantity of money.

Let us start with nature, which I've already identified with the gold standard. The gold standard, it must be said right at the outset, is not *the* natural mode of regulating money, but rather *a* natural mode. In principle at least, any other natural object could be substituted for gold. It would simply have

[1] Indicative of the declining appeal of nature as a moral guide is that the use of the phrase "natural law" has trended downwards since the end of World War II, according to Google Ngrams. This web tool can search the incidence of words and phrases across a database containing 5.2 million digitized books published from 1800 to 2000. At the end of World War II, interest in the idea of natural law was at its height in reaction to the horrors of the Holocaust and the signing of the Universal Declaration of Rights at the United Nations. Equally revealing is that the phrase "natural justice" steadily declines in usage from 1800 forward, though with a noticeable upward movement in the decade or so after World War II, followed by a reassertion of the long-term downtrend since the 1960s. Meanwhile, "utilitarianism" exhibits a sustained uptrend, while "deontology" practically skyrockets from the early 1970s forward. See *Google NGram Viewer* at: http://books.google.com/ngrams

to be universally acknowledged as a convenient means of payment and an enduring store of value. Certainly, there were many other items before gold came along which received the endorsement of societies. For all we know, different substances undreamt of now may subsequently emerge to take the place of the yellow metal. At this stage of our history, though, gold continues to embody nature's alternative to the method of leaving money to human contrivance. It is true that some have advocated a basket of commodities and even contemplated bricks as a standard.[2] Even so, gold remains the most widely proposed alternative to fiat money. By nature, too, is not meant a touchstone that completely precludes human choice. This would be to identify the natural with the necessary, which makes sense in sciences like physics and astronomy. But human beings have free will, or at least we can be presumed to have that capacity, in that we are not so predictable as gravity and the planets. When it comes to human behavior, the natural is more appropriately thought of as a normative category designating a set of behavioral limits beyond human redefinition which reason confirms as worthy of heeding. A society that opts for gold can thus be said to follow nature inasmuch as that choice imposes constraints on the capacity of political authorities to add and subtract money as they please. Because no one has the Midas touch, the government is unable to vary the quantity of gold at will. It could, of course, mine for new gold, but that is costly.

One might counter that the gold standard is not a natural system because the room for discretion remains substantial. If nothing else, the state must still fix the rate at which gold is to be set against the local currency. As this can be reset whenever it is deemed advisable by the governing bodies, it can be argued that this freedom to maneuver explodes the nature versus artifice distinction.[3] Thus we are urged to accept that monetary policy is ineluctably a matter of administrative fiat. By acknowledging this, so the argument goes, we can focus on the task of doing it rationally by our own wits, instead of allowing ourselves to be sidetracked by a "barbarous

[2] On the proposal to base money on bricks, see James Buchanan, "Predictability: The Criterion of Monetary Constitutions" in *In Search of a Monetary Constitution*, ed. Leland Yeager (Cambridge: Harvard University Press, 1962), 155–183. On the basket of commodities idea, see Robert L. Greenfield and Leland B. Yeager. "A Laissez-faire Approach to Monetary Stability". *Journal of Money, Credit and Banking*, 15 no. 3, (1983): 302–315.

[3] "The Money Supply: How Fixed Would a Gold Standard Actually Be?" *Buttonwood's Notebook*: *Financial Markets*, http://www.economist.com/blogs/buttonwood/2012/01/money-supply

relic".[4] Yet this is to wrongly suppose that submitting to a natural touchstone is about forswearing the use of reason. Natural law, for example, stipulates that murder is wrong, but it does not specify how a twenty-first-century government should set the penalty for that act. Similarly, the gold standard demands prudence on the part of those charged with managing it—though always with a view to realizing the spirit and aims of that natural measure amid the shifting tides of human affairs.

In a nutshell, this is how a gold standard ideally works: first, the exchange rate must be set between gold and the monetary unit. Say that unit happens to be the US dollar and, say, that it is fixed at $1000 per ounce. Next, each person is granted the right to take their dollars to a designated financial institution and trade them for gold at the established $1000 per ounce price. The equivalent right is given everyone to exchange their gold for dollars. Meanwhile, no restriction is placed on the import and export of gold. Hence, if a foreign holder of dollars wants to exchange their American currency for gold, no encumbrance is put in their way. The same goes for a US resident who is looking to send gold abroad.

The upshot is this: the amount of dollars in circulation will tend to be proportionate to the value in gold held in reserve. Consider what would happen were the suspicion to arise that more dollars have been issued than the value of gold in reserve. In that case, people would have an incentive to immediately exchange their dollars for metal. No one wants to be last to show up at the counter when the gold has run out. Among those issuing the dollars, the threat of such a run would concentrate minds. Note issuers are thus mightily encouraged to constrain their supply of dollars to what they can back up with gold. Now consider the opposite scenario in which the quantity of dollars is less than the dollar value of gold. Here, dollars will fetch more gold on the marketplace than the quantity implied by the established rate. For example, $1000 might get you 1.1 ounces of gold. As a result, people will exchange gold for dollars with the applicable financial bodies at the fixed rate. Then, they will immediately turn around

[4] John Maynard Keynes, *The Collected Writings of John Maynard Keynes, Vol. 4* eds. Austin Robinson and Donald Moggridge, (London: Macmillan 1971), 138. Though the "barbarous relic" epithet is usually attributed to Keynes, it was used on several occasions before the 1923 publication of his *Tract on Monetary Reform*, going back as far as a *New York Times* article by John Austin Stevens in 1873. See Tyler Cowen, "Who First Called Gold a Barbarous Relic?" *Marginal Revolution*, (October 3, 2011) http://marginalrevolution.com/marginalrevolution/2011/10/who-first-called-gold-a-barbarous-relic.html

and sell those dollars in the market for more gold than that which they started. In other words, one could sell 1 ounce of gold for $1000 and then use that $1000 to obtain 1.1 ounces, so as to profit by 0.1 ounces. This is what economists call arbitrage, the exploitation of price differences on separate venues over the same good. Arbitrage will continue until the market and institutionally fixed prices for gold are equalized, thus bringing the outstanding amount of currency back in line with gold reserves. By these self-correcting processes, the money supply operates automatically.

This mechanism can also accommodate changes to the quantity of gold which might arise from outside forces. The most evident way that this can occur is if additional gold is mined from the ground. More dollars, of course, will then be put into circulation. And if we further assume that the quantity of goods and services in the economy remains unchanged, the general price level will rise. The gold standard has often been chided for this feature. Yet it is hard to envision a plausible scenario where a discovery is so large that it produces a destabilizing inflation. Gold rushes in California and Australia in the mid-nineteenth century led to a nearly tenfold increase in production from 1831 to 1860.[5] While this caused prices to rise in the short run, it did not stop the late nineteenth-to early twentieth-century period from witnessing a slight deflation. Making this all the more extraordinary is that gold production more than tripled from 1880 to 1910, largely owing to discoveries in South Africa.

Consider, too, the greatest precious metal find of all, which occurred during the sixteenth century. The Spanish and Portuguese imported mountains of gold and silver from their conquered territories in South America. This had a remarkably slight impact on European prices. According to one estimate, the accumulated imports of treasure into Spain rose by a factor of 129 to 1 from 1520 to 1650. At the same time, the inflation rate, as measured by silver prices, went up by about 1 % per annum—hardly startling by post-World War II standards[6] (Fig. 3.1).[7]

[5] Hugh Rockoff, "Some Evidence on the Real Price of Gold, Its Cost of Production, and Commodity Prices" in *A Retrospective on the Classical Gold Standard, 1821–1931*, eds. Michael D. Bordo and Anna Schwartz (Chicago: University of Chicago Press, 1984), Table 14.2 at 624.

[6] Earl J. Hamilton, *American Treasure and the Price Revolution in Spain, 1501–1650*, (Cambridge, MA: Harvard Univeristy Press, 1964), 42–45.

[7] Earl J. Hamilton, *American Treasure and the Price Revolution in Spain* 1501–1650, 34 and 403.

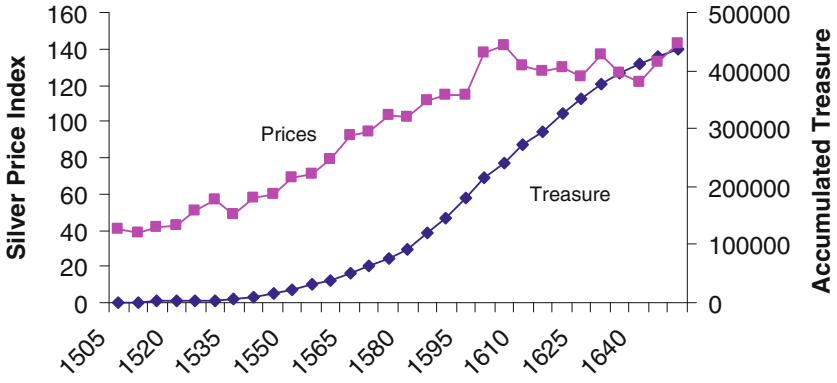

Fig. 3.1 Spanish imports of treasure versus price level, 1505–1650. *Source*: Earl J. Hamilton

The other way that the level of gold reserves can alter is through international trade. Suppose that a major industry has invested in new technologies enabling its workers to produce goods at a lower unit cost. The industry then lowers the prices of its products to exploit this new cost advantage, thereby capturing a larger share of the global market. As a result, the nation's exports increase. Where gold is the ultimate cash, international transactions will be settled in the yellow metal. Thus, a country that exports more than it imports will be a net recipient of gold from other nations; a country that imports more than it exports will be a net sender of gold. By the rules of the gold standard, the first country will undergo an increase in its money supply, while the second will experience a decline.

Now one might be tempted to extrapolate from this tendency. That is, one might infer that if the first nation can remain a net exporter, it will eventually acquire all the gold from the second. This, in turn, would strip the latter of any basis for its own money supply. But David Hume famously demonstrated the fallacy of this reasoning through a thought experiment.[8] Imagine that by some extraordinary occurrence a country were to lose four-fifths of its gold stock. Would the country's economy be lost? Hume argued

[8] David Hume, "Of the Balance of Trade" in *Essays*, *Moral*, *Political*, *and Literary*, ed. Eugene F. Miller (Indianapolis: Liberty Fund, 1985), 308–326.

that any drop in the money supply necessitated by the lowering of gold reserves would lead to a fall in prices. With less money available with which to purchase goods, the sellers of those goods would have to reduce their offering prices, amid the competition among them for revenue. The result of this is to render the country's exports more competitive on global markets and imports simultaneously more expensive. Exports thus increase relative to imports, pulling gold back to the nation's coffers. Hume then asks us to conceive the opposite scenario—in which a country miraculously sees its gold inventory multiply five-fold. In that case, the money supply would rise and so drive up prices. More money thus being available to purchase goods, buyers would compete with one another in bidding up prices. The country's exports would become less competitive as a result. Imports would also become cheaper. As exports consequently fall relative to imports, gold is sent abroad. By these equilibrating forces, the gold standard ensures that there is always just enough money to satisfy the needs of commerce.

What I have described as the gold standard only covers its essential elements. In practice, it is susceptible to a number of variations. The obligation to convert money into species might be limited to commercial banks. Alternatively, that responsibility can be solely lodged with a central bank. In addition, not everyone might be permitted to trade gold for money. Conversion rights might be limited to designated commercial banks or even just central banks. What is more, the gold standard may be run so that only certain configurations of the yellow metal are eligible for exchanges. People might be allowed to transact in both coin and bullion or only the latter. In this last case, we would have a gold bullion standard.[9] Money, too, may vary in its definition for the purposes of defining the extent of the gold reserve. Hence, this reserve may be limited to covering the notes outstanding. More comprehensive regimes would include checking deposits or even these in tandem with saving accounts.

The Artificial Method of Managing Money

Contrast all this with the artificial approach to money. In order for money to be constructed, it must be embodied in an object that is readily alterable. Paper is the perfect candidate for this role. It can be inexpensively

[9] Edwin Walter Kemmerer, *Gold and the Gold Standard*: *The Story of Gold Money*, *Past*, *Present and Future* (Auburn: Mises Institute, 2009), 118, n1.

manufactured and easily destroyed. That technological progress has made the electronic notation of this paper ever cheaper and more convenient only adds to its attractiveness. The immediate dilemma with paper, though, is that it has no quality which, in and of itself, compels individuals to value it as money. If it did, paper would have long ago been chosen in the market as the preferred medium of exchange upon Gutenburg's invention (circa 1440) of the printing press. Lacking anything intrinsic to make it estimable in people's eyes, paper's value can only be founded on its relative scarcity. Not only must counterfeiting be prevented, obviously, but the temptation of earning seigniorage profits by excessively printing money must be checked. To this end, governments arrived at the conclusion that a managed paper standard requires a publicly held institution holding exclusive authority over the issuance of money.

The central bank is this institution.[10] Serving as a backstop for commercial banks with which individuals and firms normally deal, central banks never interact directly with ordinary folk. Rather, central banks indirectly endeavor to advance everyone's common interests in concert with the commercial banks. Those interests are invariably defined to consist in the maintenance of price stability and the promotion of economic growth. This is not to say that the pursuit of these two goals was the original reason for establishing central banks. Though not the oldest—that title goes to Sweden's Riksbanken which opened in 1668—the Bank of England, the old lady of Threadneedle street as it is often called and the historical exemplar of central banking, was established in 1694 to provide the government with funding to manage the national debt.[11] Set up six years after a 1907 financial panic, the US Fed was primarily intended "to furnish an elastic currency", that is, the provision of liquidity to commercial banks in times of financial stress.[12] The dual objectives of price stability and economic

[10] Vera Smith provides an illuminating account of the rise of central banking, including the arguments for and against it that were advanced in Britain, Europe and the USA, in her *The Rationale of Central Banking and the Free Banking Alternative* (Indianapolis: Liberty Press, 1936). The theory of central banking attained a decisive intellectual and political victory at a set of international conferences in Brussels in 1920 and then at Genoa in 1922, where it was agreed that every country ought to have a central bank to coordinate and guide its monetary affairs.

[11] Joseph Hume Francis, *History of the Bank of England* (Chicago, Eucild Publishing Company, 1888), 52–56.

[12] See preamble to the original 1913 Federal Reserve Act, http://www.llsdc.org/attachments/files/105/FRA-LH-PL63-43.pdf

growth only came to the fore after World War II when Keynesian demand management came into vogue. However, especially since the late 1970s and early 1980s, the Keynesian approach has been tempered somewhat. The control of inflation gained more attention vis-à-vis economic growth. Indeed, the legislation governing the newest of the major central banks on the financial scene, the ECB, explicitly makes price stability the overriding objective.[13] That these aims are ranked reflects the presumption that they do not necessarily cohere—the pursuit of one could involve the sacrifice of the other.

So how are central banks supposed to fulfill this conflicting mandate? Anyone who even just occasionally follows media treatments of the economy will have seen the explanation repeated. When the economy shows signs of weakening, the central bank is supposed to relax monetary conditions by lowering interest rates. That will induce businesses and consumers to borrow more, whether to invest in capital projects or to spend on consumer durables and housing. The economy thus recovers with little risk of inflation. Assumed here is the existence of an ample supply of productive factors, idle workers and plants, for example, that are waiting to be employed. Conversely, when the economy is growing strongly, the central bank is expected to tighten monetary policy by raising interest rates. The assumption here is that productive factors become increasingly scarce as economic activity rises. Prices for those factors are then bound to get bid up, creating inflation.[14]

To control interest rates, the central bank's main tool consists in its control of the rate at which commercial banks lend to each other. In the USA, this is called the Fed funds rate. To influence this rate, the Fed engages in open market operations, whereby it enters the bond and money markets

[13] See the European Central Bank website, "Objective of Monetary Policy", http://www.ecb.europa.eu/mopo/intro/objective/html/index.en.html

[14] For a more elaborate and technical discussion of macroeconomic stabilization policy, the reader can consult any introductory macroeconomics textbook. A useful overview is provided by James A. Brander, *Government Policy toward Business*, 4th edition (Mississauga, Canada: John Wiley and Sons Canada, 2006), 379–386. Though commonly associated with Keynes, the notion that the central bank should be engaged in price stabilization originates with Irving Fischer. See his *The Purchasing Power of Money. Its Determination and Relation to Credit*, *Interest*, *and Crises* (New York: A.M. Kelley 1962) in tandem with *The Making of Index Numbers. A Study of Their Varieties*, *Tests*, *and Reliability* (New York: A.M. Kelley, 1967) where he develops the idea of price indices that central banks can use to regulate the price level.

to buy and sell debt securities. By selling securities, it can take money out of the financial system, driving interest rates higher; by purchasing securities, it injects liquidity into the system, and so moves rates lower. All this affects the cost of the product, namely credit, which commercial banks offer their customers. Competitive pressures, in turn, will tend to pass changes in this cost onto the retail market for consumer and corporate loans. That is when then the central bank's actions make themselves felt throughout the entire economy.

Remarkably, among the leading Western democracies, central banks are not directly accountable to the public. None of the top decision-makers are elected. Instead, they are appointed by politicians, often for longer terms than elected officials. Before their terms expire, central bank officials can only be removed upon negligence, blatant incompetence, or unfitness for the position. The Governor of the Bank of England is appointed for five years, that of the Bank of Canada for seven, while the President of the ECB has an eight-year term. While the chair of the Fed holds a four-year term similar to the US President, the members of the Board of Governors over which the chairman presides are appointed for 14 years. Together with five of the twelve regional Federal bank presidents, these two groups make up the Federal Open Market Committee (FOMC) that meets about eight times per year to decide upon interest rates.[15] The regional bank presidents themselves are chosen by the directors of their respective boards. In turn, the majority of these directors are selected by local commercial banks, a remnant of the apprehensiveness of centralizing power in Washington that informed the founding of the Fed.[16] With few exceptions, central banks have been impervious to the prevalent mistrust in Western societies of anything undemocratic.[17] Since the 1960s, the commitment to the spread of democratic ideals has succeeded in dispersing power and increasing participation in a diversity of institutions. These have ranged from the family to churches, schools, universities, and the

[15] Federal Reserve Board, "Monetary Policy", http://www.federalreserve.gov/monetarypolicy/default.htm

[16] Federal Reserve Board, "Reserve Bank Presidents", http://www.federalreserve.gov/aboutthefed/bios/banks/default.htm. Meyer.

[17] To allay rising suspicions, the Fed has taken various steps to increase its transparency. In 1994, it began releasing the rationale for its decisions. The period between this release and the actual FOMC decision was shortened to three weeks in 2006. Since 2011, the chair of the Fed has adopted the practice of holding regular press conferences.

workplace. Yet faith in democracy wilts before the challenge of governing money, as if confronted with an esoteric art too abstruse and delicate for common hands to touch.

This is not, of course, how central banking's echoing of monarchical and aristocratic modes of governance is typically explained. The rationale given is that democratic politicians have poor incentives to opt for the right monetary policies. Imagine that an election is coming up about a year now. One way that the party in power can raise their chances of re-election is by lowering interest rates. This will initially enliven the economy and make voters more hospitable to the incumbent. After the initial boost, however, the easing of monetary conditions will lead to inflation. By then, however, the incumbents will have won the election. Not having to face the voters again for another several years, they can now afford to take the unpopular step of raising interest rates to squelch the incipient inflation. If this does not merely slow down the economy, it will instigate a recession. Yet by the time the next election arrives, excess inflation will have been stamped out of the economy. Not only that, voters will have forgotten all the pain suffered in the process. Put another way, if we grant elected officials direct influence over monetary policy, it will engender political–business cycles.[18]

Even worse outcomes than this can be envisaged. Think of political systems that are so fractured that even recently elected governments are fragile. Being susceptible to overthrow, those who hold power will have little incentive to ever adopt anti-inflationary measures. On the contrary, in order to maintain precious popular support, they have every motive to inject extra doses of monetary stimulus anytime the economy shows signs of weakness. With matters proceeding in this way, rising prices become entrenched in people's expectations and turn into a self-fulfilling trend, putting the economy on a path whose final destination is a hyperinflationary climax. The fear of this happening—as it did in Latin America's democracies during the 1980s and 1990s—is the most salient part of the case for central bank independence as a *sine qua non* of a properly managed paper standard.[19]

[18] William Nordhaus, "The Political Business Cycle", *Review of Economic Studies* 87, no. 2 (1975): 169–190.
[19] Stanley Fischer, "Central Bank Independence Revisited", *The American Economic Review* 85, no. 2 (1995): 201–206.

Democracy's Journey Away from Gold

Central banks thus representing an exception to the democratic principle, the question arises how their artificial regulation of money came to displace the natural approach represented by gold. It is not as if the yellow metal has nothing democratic in its favor. The automatic character of the gold standard means that nobody needs to be invested with special powers to oversee the money supply. To the extent that the government would need to be involved via a central bank, this body would assume the significantly more modest function of ensuring the smooth operation of the gold standard whenever it runs into the occasional hiccup or comes under extraordinary stress. In performing these functions, the state would simply be ratifying the public's choice of gold as the natural object best fitted to serve as money. The democratic will here registers its decision not through the ballot box but through the marketplace. What eventually reversed this ostensible placement of gold in democracy's corner was two-fold. One was the strategic logic of electoral politics. The other was the values and habits of mind instilled by democracy.

The first test of liberal democracy's original commitment to gold came in the nation of its birth, Britain. In the aftermath of the French Revolution, Britain became embroiled in a war with its neighbor across the English Channel, which eventually involved the country in a protracted conflict with Napoleon. Britain had been on a *de facto* gold standard, though *de jure* a bimetallic standard including silver, since the early eighteenth century. But as the war with Napoleon became more protracted, a series of bank runs in 1796–1797 prompted the Bank of England to suspend the redeemability of its notes into gold. Inflation subsequently percolated upward and a debate was started on its causes.[20] Leading off for the bullionist side was Walter Boyd. He was a banker whose firm had recently gone into bankruptcy after the government stopped using it to market their loans. Though undoubtedly biased against the establishment as a result, his argument was nevertheless sound. In a 1801 pamphlet, Boyd maintained that the inflation was owing to the excess production of notes by the Bank of England to help finance the war with the French, an

[20] I owe my account of the bullionist debate given here to David Laidler, "Highlights of the Bullionist Controversy", Research Report Nol. 13, Stockholm School of Economics: Institute for Economic History Research, 2000; also, Jacob Viner, *Studies in the Theory of International Trade*, (New York: Harper and Brothers, 1965), 119–217.

excess made possible by the suspension of convertibility.[21] To the central bank's defense quickly came the anti-bullionist side, led by figures such as Nicholas Vansittart and Charles Bosanquet. They blamed higher prices on the combination of poor harvests, excessive note issuance by the country banks outside London, and the channeling of funds to Britain's allies in the war. A key plank in their stance was their denial that the central bank could ever supply too much money, so long as it restricted itself to discounting sound commercial paper, that is, to buying short-term IOU's (stands for "I owe you", an acceptance of a debt) that merchants had contracted with others. The real bills doctrine, as this view is known, holds that this discounting activity will always keep the money supply in line with the needs of trade.

Taken to its logical extent, the anti-bullionist view leads to the conclusion that a permanently inconvertible paper money is viable. David Ricardo, who eventually joined the bullionist forces and became its most illustrious spokesman, was able to hinder that conclusion from being acted upon. With a deductive logic that would later be derided as the Ricardian vice, the great nineteenth-century English economist pressed the thesis that a superabundance of money was the culprit of Britain's inflationary woes. He pointed out that the country banks, their notes being backed up by those of the Bank of England, could only issue additional currency on a base expanded by the central bank. Inveighing against the real bills doctrine, Ricardo observed that the quantity of money equivalent to the needs of trade could not be defined. "Commerce is insatiable in its demands", he writes, "and the same portion of it may employ 10 millions or 100 millions of circulating media".[22] In other words, the more money that is supplied, the more it depreciates. Eventually, its new value becomes proportionate to the existing quantity of goods. Any amount of money, then, can suffice for the requirements of commerce. It is only its purchasing power that changes.

Ricardo's greatest stress, though, was on the injustice to which creditors would be vulnerable with fiat money. Their property rights would be violated. Upon repayment of the loan, they would end up with the

[21] Walter Boyd, *A Letter to the Right Honorable William Pitt on the Influence of the Stoppage of Issues in Specie* (London: J. Wright, Piccadilly, and J. Mawman Poultry, 1801), http://books.google.ca/books?id=AqYyAQAAMAAJ&printsec=frontcover&dq=walter+boyd&hl=en&sa=X&ei=5p-dUPjgHIKb2QXkkIHwCQ&redir_esc=y#v=onepage&q&f=false

[22] David Ricardo, *The Works of David Ricardo: With a Notice of the Life and Writings of the Author* (London: John Murray, Albermale Street, 1888), 341.

ability to buy fewer goods than they originally had when making the loan. This is actually Ricardo's closing point in his reply to the anti-bullionist Bosanquet. Elsewhere, in his *On the Principles of Political Economy and Taxation*, Ricardo underlines:

> Experience, however, shews, that neither a State nor a Bank ever have had the unrestricted power of issuing paper money, without abusing that power: in all States, therefore, the issue of paper money ought to be under some check and control; and none seems so proper for that purpose, as that of subjecting the issuers of paper money to the obligation of paying their notes, either in gold coin or bullion.[23]

Ricardo's thinking here was reflected in the 1810 Bullion Report calling for an immediate resumption of the gold standard. Produced by a British parliamentary committee, it was voted down when put before the entire House of Commons. Still, Britain's legislative body did not categorically reject the idea of restoring convertibility. With the Napoleonic wars continuing to rage, Parliament thought it too early for a return to gold.[24] With the cessation of hostilities in 1815, Britain's liberal democracy was put back on the road to the gold standard. The redeemability of notes into specie was reinstituted in 1821.

Another monetary controversy erupted not too long afterward upon a sequence of financial crises in 1825, 1836–1837, and 1839. This time, it was a debate between the banking and currency schools.[25] Demonstrating how the question of the gold standard had now been settled, both parties agreed with the species redemption principle. Still, they differed on how best to implement it. The currency school maintained that the totality of money in circulation can be kept equivalent to what a purely metallic currency regime would entail by ensuring that all the notes issued are backed 100 % by gold reserves. By contrast, the banking school insisted that this was not enough, as money also consists of payment media such as bank deposits. They argued that a larger gold stock than that to support the

[23] David Ricardo, *On the Principles of Political Economy and Taxation* (London: John Murray, Albermale Street, 1821), 426.

[24] David Laidler, "Highlights of the Bullionist Controversy", 16–17.

[25] On this controversy and its legislative aftermath, see Jacob Viner, *Studies in the Theory of International Trade*, (New York: Harper and Brothers, 1965), 220–224 & 229–234; Glyn Davies, *A History of Money*, 310–313; David Laidler, "Highlights of the Bullionist Controversy", 23–25; Murray Rothbard, *Classical Economics: An Austrian Perspective on the History of Economic Thought*, Vol. 2 (Auburn: Ludwig von Mises Institute, 2006), 227–270.

notes was required if the central bank was going to have the wherewithal to supply liquidity to the financial system in a period of crisis. As it turned out, the currency school won the contest politically. Its convertibility rule was enshrined in the 1844 Peel Act. More importantly, too, that legislation established the Bank of England as the exclusive issuer of notes to implement the 100 % coverage rule.

Peel's legislation shaped the framework of the classical gold standard. Forming a global monetary order, it can be said to have commenced in 1871 and reigned until 1914. Germany gave impetus to the international movement toward the yellow metal, when it moved away from a silver-based currency to one founded on gold. It was soon followed by Belgium, Switzerland, Italy, France, Netherlands, Denmark, Norway, and Sweden.[26] Gaining momentum, the adoption of gold spread to the rest of Europe and most of Asia, with China a notable exception. Not all of these nations were liberal democracies at the time, but the burgeoning republic of the USA would eventually join the gold system. It had to wait until 1879 to digest the tectonic shifts in American society and politics brought about by the Civil War. A number of the classical gold standard nations turned into democracies prior to 1914, such as New Zealand and Finland, while choosing to retain their link to the precious metal. Figure 3.2 depicts a rising trend for the number of democracies (as defined by the Polity IV scale)[27] as the classical gold standard proceeded from 1871 to 1913.

In retrospect, it is clear that this early relationship was doomed. It was not that the gold standard was an economic failure. In its classical version at least, it worked very well. With governments constrained from printing money at will, the system delivered on its main promise of preventing inflation. In 1913, on the eve of World War I precipitating the abandonment of gold convertibility, the consumer price level in the USA and Britain was actually lower than it was in 1873. As (Fig. 3.3)[28] indicates,

[26] Jeffry Frieden, "The Dynamics of International Monetary Systems: International and Domestic Factors in the Rise, Reign, and Demise of the Classical Gold Standard" in *The Gold Standard in Theory and History*, 2nd ed., eds. Barry J. Eichengreen and Marc Flandreau, 207–228. (New York: Methuen, 1995).

[27] The Polity IV scale evaluates governments on a continuum from −10 to +10, with the extremes representing an entrenched autocracy and a consolidated democracy, respectively. In assigning a score, considerations include the level of political competition and constraints on executive power. See *The Polity IV Project* at, http://www.systemicpeace.org/polity/polity4.htm

[28] Measuring Worth, http://www.measuringworth.com/

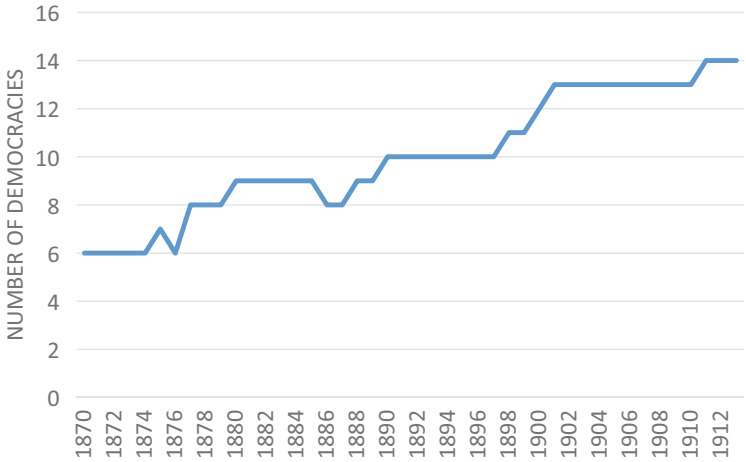

Fig. 3.2 Number of democracies, 1871–1913. *Source*: Polity IV

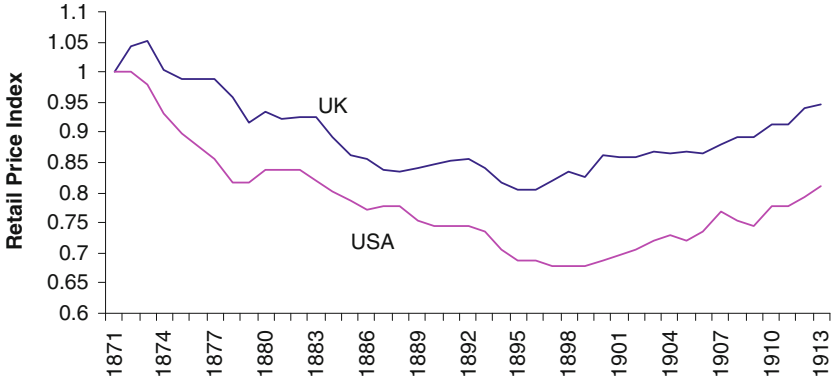

Fig. 3.3 US and UK retail prices, 1871–1913. *Source*: Measuring Worth

this performance can be broken down into two sub-periods—a deflationary tendency from the early 1870s to the mid-1890s, followed by a steady rise in prices through to 1913. This latter trend reflected additions to the gold supply, primarily from the discoveries in South Africa.

Current economic orthodoxy views deflation with horror. It is painted as a nefarious force that plunges economies into depression. The fear is that lower prices set a vicious circle into motion in which firms react to the attendant drop in revenues by laying off workers. Those left unemployed then buy fewer goods and services. So do those still employed, who have suddenly become more anxious about their job security. Sales fall again as a result, prompting this same process to repeat itself. Add to this that the drop in the price level increases the real burden of individual and corporate debt. This further reduces the demand for goods and services, as more resources are directed to meeting outstanding loan obligations. Meanwhile, some fail to pay these debts, and so bankruptcies rise.[29] Financial institutions that originally lent this money are then compelled to tighten credit availability to otherwise healthy firms, adding even more fuel to the economy's slide.

But the pre-World War I experience shows that deflation is not necessarily evil. In a growing economy, where the money supply is kept constant, deflation is precisely what is to be naturally expected. Prosperity is about a progressively larger quantity of goods being produced over time. There can be no doubt that the economy grew impressively during the classical gold standard period. From 1871 to 1913, British real GDP more than doubled, rising 112 %. During the post-Civil War period that the USA was on gold extending from 1879 to 1913, its real GDP more than tripled, up 260 %.[30] Britain had already been on the gold standard since 1821 and, over the ensuing 50 years, its real GDP nearly tripled. As if that were not proof enough, compare that pre-World War I American experience to a similarly sized time frame when the gold standard ceased to be in operation. So as not to bias the comparison, let us remove the period of lackluster growth witnessed after the recent financial crisis. Consider 1974–2008: real GDP went up 169 % during this period versus 261 % from 1879 to 1913 (Fig. 3.4).

True enough, prior to World War I, the USA was what we would today call an emerging market economy. As such, it could be expected to

[29] Irving Fisher, "The Debt Deflation Theory of Depression", *Econometrica*, 1, no. 4 (1933), 337–357.

[30] The growth data presented in this paragraph is derived from the Angus Maddison database of historical economic statistics. The relevant data file entitled, "Statistics on World Population, GDP and Per Capita GDP, 1-2008 AD" can be downloaded at, http://www.ggdc.net/MADDISON/Historical_Statistics/horizontal-file_02-2010.xls

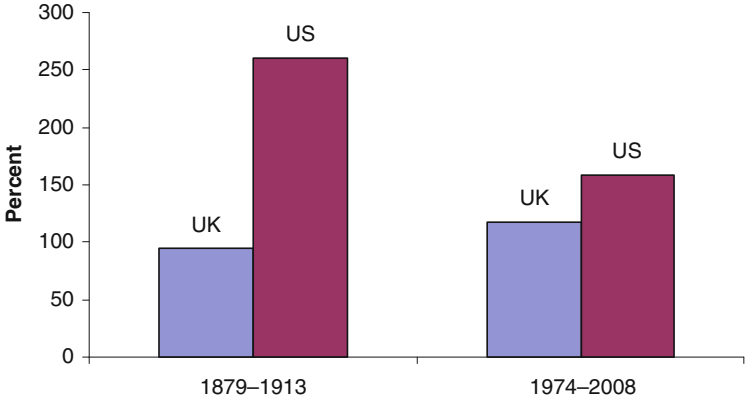

Fig. 3.4 US and UK real GDP growth, with and without gold. *Source*: Angus Maddison

enjoy higher growth rates than the developed nation it has since become. But even if we partially adjust for that by factoring the difference in the amount of human labor input, and thus consider GDP per capita, the USA saw that figure increase 89 % from 1974 to 2008, not much different from the 82 % ascent during the deflationary era of 1879–1913. Keep in mind that economic data prior to World War I is not as reliable as that recorded since the 1920s. Also, the constructed numbers have embedded within them the assumption that deflation is always correlated with diminishing economic activity. It is plausible, then, that the level of economic activity during the classical gold standard era has been underestimated. Broadening the analysis to more countries, a study looking at 17 of them over more than a century found that depression did not follow a deflationary phase 90 % of the time.[31] Economists, it seems, have been misled by the Great Depression into overgeneralizing the dangers of deflation.

That danger, to be sure, is real. But we must distinguish between good and bad deflations. In the context of an advancing economy, deflation is

[31] Andrew Atkeson and Patrick J. Kehoe, "Deflation and Depression: Is there an Important Link?" *AEA Papers and Proceedings*, 94, no. 2 (2004), 99–103.

good. This is because the demand for money, emanating from companies looking to turn their produced goods into cash, rises only steadily. Economic actors have sufficient time to calmly adjust to the price changes. But in the context of a sharp and sudden increase in the demand for money, deflation is bad. Such surges in the demand for money are most liable to occur in crisis situations. Whenever a mass of individuals and firms are short of funds, there is a rush to sell goods and financial assets for money. Even those not short of funds are tempted to seek refuge from the maelstrom and raise their cash position. The widespread fright thereby triggered becomes such that most decide the wiser course is to hunker down by reducing consumption and investment. To relax everyone's nerves here, it is necessary that the money supply increase to cushion the demand shock.

Opponents of the gold standard maintain that it prevents this very response from taking place. The government is stripped of any discretionary sanction to inflate the money stock. Following Barry Eichengreen, it is commonly alleged that the monetary link to gold deepened—if it did not outright cause—the Great Depression.[32] Without getting too enmeshed in the history of the period, leading up to the early 1930s, the USA had long been a net recipient of gold flows. From 1914 to 1930, US gold reserves had nearly tripled.[33] So despite a temporary surge of outflows in late 1931, in reaction to Britain's abandonment of the gold standard, the Fed had ample room to feed liquidity into the system.[34] It certainly had enough to prevent solvent financial institutions from being forced into bankruptcy and the public from subsequently losing confidence in banks and withdrawing their money en masse—both those circumstances precipitating a catastrophic tumble in the money supply that turned a recession into a depression.[35]

[32] Barry Eichengreen, *Golden Fetters*: *The Gold Standard and the Great Depression*, *1919–1939* (New York: Oxford University Press, 1992).

[33] See World Gold Council, "Historical Data – Annual Time Series on World Official Gold Reserves since 1845", (August 10, 2011), https://www.gold.org/research/historical-data-annual-time-series-world-official-gold-reserves-1845

[34] Data on US gold inflows and outflows during the 1930s is provided by Price Fishback, "US Monetary and Fiscal Policy in the 1930's", *Oxford Review of Economic Policy*, 26, no. 3 ((2010), Table 1 at 388–389.

[35] Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States*, *1867–1960*. (Princeton: Princeton University Press, 1971), 299–419. Between 1929 and 1933, the money supply dropped by an astounding one-third—as measured by M2, which includes currency held by the public as well as checking and savings deposits.

Moreover, a gold standard does not have to be structured in such a way as to require the entire money supply be backstopped. As the classical version based on the 1844 Peel Act was limited to notes outstanding, it left bank deposits free to fluctuate.[36] As such, the central bank can act as a lender of last resort by adjusting the reserves-to-deposits ratio. This is a prime example of that prudence discussed before fully consistent with the implementation of a natural measure like the gold standard. It cannot be forgotten either that this lender of last resort function was originally set forth by Walter Bagehot in his *Lombard Street*: *A Description of the Money Market*. This book was published in 1873 when Britain was operating under the classical gold system.[37] Clearly, he did not view that role as being irreconcilable with the convertibility of money into gold.

The Great Depression, too, tells nothing against a precious metal reserve precisely because such a framework no longer truly existed. After World War I, the world moved to a gold exchange standard. Under this regime, only one or a few currencies are directly backed by gold. The remaining currencies revolve around these, fixed in value against them on the FX market.[38] Heading into the 1930s' Depression, the US dollar and British pound served as the anchors for the gold exchange system. Favored at the time for the greater elasticity it offered to nations in managing their respective money supplies, the gold exchange system has the problem of providing too much elasticity. Rather than the general public holding their respective states to account, the system shifts the responsibility to other states. More precisely, it falls to those states running the non-anchor currencies.

The convertibility check thus becomes a matter of political negotiation. Initially possessing the greater leverage are the anchor countries. They are in control of the currency most widely used to settle international transactions. Yet they are under the temptation of exploiting their leverage by issuing more money than they can actually back up. This temptation is all the more alluring due to the non-anchor countries' willingness to accumulate holdings of anchor currencies. The greater their reserves of these

[36] Benn Steil and Manuel Hinds, *Money*, *Markets*, *and Sovereignty* (New Haven: Yale University Press, 2009), 158–159.
[37] Walter Bagehot, *Lombard Street*: *A Description of the Money Market* (New York: John Wiley and Sons, 1999), 64–65.
[38] Murray Rothbard, "The Gold Exchange Standard in the Interwar Years", in *Money and the Nation State*: *The Financial Revolution*, *Government*, *and the World Monetary System*, eds. Kevin Dowd and Richard Timberlake, Jr. (Oakland: Independent Institute, 1998), 125–132.

anchor currencies, the more easily the non-anchors can support their own money supply. Inevitably, as this buildup of reserves continues apace, the leverage will transfer to the non-anchor group. They now can wield the threat of converting their holdings of the anchor currencies into specie and depleting the gold held by the anchor group.

As it turned out, during the 1920s, the USA took advantage of its anchor status to run an easy money policy. In no small part, this was to help Britain deal with an overvalued currency brought about by the country's regrettable decision in 1925 to return to gold at the pre-war conversion rate. The enormous inflation caused by all the money printing to pay for World War I turned this move into a recipe for a huge and painful decline in prices.[39] The Fed, then led by Benjamin Strong, was already experimenting to stabilize prices and was encouraged in its loose money stance by the fact that consumer prices were steady. But it neglected to consider asset prices. These were accelerating upward in the stock market. The Fed also ignored that significant improvements in productivity during the 1920s were hiding the inflation that was actually taking place. Without the excess liquidity being provided, consumer prices would have gone down as a result of the greater quantity of goods being produced. The upshot of the Fed's monetary discretion within the gold exchange standard was an unsustainable boom. That set up the stock market bust of 1929 along with the economic downturn of the early 1930s that led numerous countries, including Britain in 1931, to delink their currencies to gold.

The Bretton Woods system set up after World War II was also a gold exchange standard. In this reincarnation of the interwar scheme, the US dollar was made the sole anchor, reflecting the country's status as the world's largest creditor and the currency's position as the leading monetary unit in international trade. It was fixed at $35 per ounce, though only central banks could request to convert their dollars into gold. Bretton Woods proved a sturdier gold exchange standard than its interwar precursor. Yet it too eventually foundered on the inability of the anchor to resist the lure of exploiting its superior position. As more and more dollars were issued than could be redeemed by all the gold stored in Fort Knox and the vaults at the New York Federal Reserve, the situation came to a head in the 1960s during the Johnson and Nixon

[39] Ben Steil and Manuel Hinds, *Money, Markets, and Sovereignty*, 175.

administrations. The need to fund both the Vietnam War and the Great Society imposed enormous budgetary stresses. Pressure was on the Fed to finance the expenditures, pressure to which it relented. A wave of dollar redemptions for gold hit the US treasury, in a campaign orchestrated by the Charles De Gaulle government in France. He was actually hoping to instigate the return of the classical gold standard. Instead, President Nixon announced the closing of the gold window in August 1971, a momentous decision oddly finalized during a rushed series of meetings at Camp David over a weekend.[40] The Western democracies have been on a fiat money standard ever since.

The Tension Between Gold and Democracy

Let us go back to Barry Eichengreen's influential brief against gold. It will be recalled that he blames it for the Great Depression, insisting that the gold standard kept countries from countering the slump with monetary stimulus. Yet if one reads Eichengreen carefully, one will notice that he does not actually sustain an argument against the gold standard as an ideal system.[41] What he says is that it no longer fits current political realities. Like many observers, he points out that the nations which were part of the pre-World War I monetary order demonstrated an ongoing willingness to abide by the so-called rules of the game. According to those rules, central banks had to tighten monetary policy whenever the gold fix was threatened by a deficit in the international balance of payments. Conversely, central banks were supposed to facilitate the easing of monetary conditions whenever gold was flowing in due to a surplus in the international accounts. In other words, central banks were not to sterilize the impact of gold movements. For the system to work, they could not engage in open market operation to replace the money lost due to gold outflows or eliminate the money gained from inflows.

Holding back from sterilizations of the first kind is clearly the most politically difficult course of action. The higher interest rates that must be tolerated put a damper on economic activity. But, as Eichengreen observes,

[40] Francis J. Gavin, *Gold, Dollars, and the Politics of International Monetary Relations* (Chapel Hill: University of North Carolina Press, 2004), 120–121 & 129.

[41] His argument is nicely summarized in *Golden Fetters*, 4–10 as well as in his *Globalizing Capital: A History of the International Monetary System*, 2nd ed. (Princeton: Princeton University Press, 2008), 29–32.

this was easier done before World War I. The laboring classes had not yet fully attained the vote; the franchise was still limited to those that met property and educational qualifications. Once that changed in the opening decades of the twentieth century, democratic governments could not be expected to play by the rules of the gold standard anymore. Politicians now had to heed that segment of the community which bears the brunt of the required adjustment mechanism. Now even if this explanation is valid, and there is a measure of truth in it, the fault still cannot be laid on the gold standard—unless, that is, it can be proven that democracy has arrived at the correct result in rejecting that monetary framework, or at least that democracy is the right method of adjudicating the question whether to reject that framework. Instead, Eichengreen simply assumes the rightness of democracy's verdict, a stand indicated by his having chosen to title his book *Golden Fetters* rather than *Democratic Fetters.*

Yet one will still be on the right track in highlighting the role of democracy. In doing so, however, one must be careful to avoid the Marxist error of thinking that it makes anything more than a loose sense to speak of the working classes—as if everyone who chiefly depends on the sale of their labor services to support themselves has a common interest with every other wage earner in the community; an interest, moreover, that necessarily diverges from other people who rely instead on the returns of capital. Such a divergence better corresponded with reality in the interwar period than it did afterwards. Many workers went on to acquire a stake in capital by the ownership of bonds and stocks. They did so either directly through their own personal accounts or indirectly through their insurance and pension plans. While there is no polling data available from the inter-war period, it is far from evident that the public was opposed to a restoration of the gold standard after its suspension in World War I. That many countries returned to the yellow metal suggests that the public was at least willing to defer to the financial establishment of the time which strongly favored the gold standard. In Britain, only a few industrial interests expressed apprehension, while the country's major newspapers supported the move.[42]

[42] Robert Boyce, "Government-City of London Relations under the Gold Standard 1925–1931", *The British Government and the City of London in the Twentieth Century*, eds. Ranald Michie and Philip Williamson (Cambridge: Cambridge University Press, 2004), 219–220.

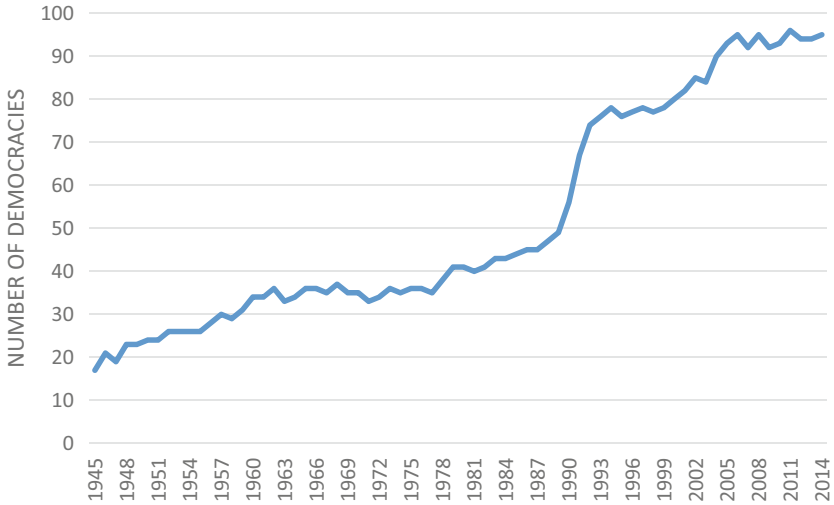

Fig. 3.5 The global expansion of democracy, 1945–2014. *Source*: Polity IV

Nor can the appeal to the laboring classes explain why gold was only finally given up in 1971. This was right after the 1960s, a decade in which the participation of ordinary individuals in the financial markets grew significantly. Not to mention that the period from 1945 up until the early 1960s, when the Bretton Woods gold edifice was at its sturdiest, democracy experienced what Samuel Huntington referred as its second wave of growth (Fig. 3.5). A negative correlation between gold and democracy only clearly appears from the early 1970s onward, about the time that the third wave of global democratic expansion began, set off by the 1974 Carnation Revolution in Portugal. That was then followed by a fourth wave after 1989, triggered by the collapse of communism and the Soviet Union.

So too, the idea that workers suffer disproportionately from the gold standard's operation presupposes a state of affairs in which wages do not readily adjust downward. Only then are firms compelled to align their costs to declining revenues by shedding a portion of their workforce. Otherwise, the possibility would exist for firms to simply negotiate a pay cut and keep all their workers. A psychological basis for such rigidities cannot be discounted. People can accept not getting something they do not yet have, but they certainly resist giving up something they already

do have.[43] Yet instead of militating against this inclination in our psyche, democracy encourages it. Consider as well that highly skilled individuals are almost always to be found among the most educated parts of society. They vote more often than their lesser educated counterparts. Naturally, then, they are going to favor a system that offers them a higher wage with job security over one in which they would be exposed to sharing in pay cuts with their less skilled brethren. In this way, democracy favors paper money over gold.

Then, too, there is the fact that voters as a group are not adequately informed about the details of public policy issues.[44] Individuals do not actually have much of an inducement to familiarize themselves with the pros and cons of all the policy ideas put before them. The mental effort is too great relative to the chances of its having any impact on election results. Each person has only a single vote amid the millions that have to be counted. The odds that one's mark on the ballot will make the difference in an election are infinitesimally low.[45] Not surprisingly, the economic opinions that voters do bring to bear are often misguided and ridden by an inability to grasp how markets really work. Many people are thus led to mistrust markets in favor of solutions proffered by the government that augment its scope and costs.[46] Once again, democracy works against gold.

The biggest factor weighing against gold in a democracy are the workings of a class division intrinsic to government. To begin with, there is the elementary fact that the state needs resources to execute its functions.[47]

[43] In cognitive psychology, this is referred to as the status quo bias. See Daniel Kahneman, *Thinking, Fast and Slow* (Toronto: Doubleday Canada, 2011), 304–305.

[44] Ilya Somin, *Democracy and Political Ignorance* (Stanford: Stanford University Press, 2013).

[45] This was elaborated by Anthony Downs in his *Economic Theory of Democracy* (New York: Harper, 1957). Downs' analysis naturally raised the question why anyone votes at all. The fact that people clearly do vote has been something of a dilemma for the theory of public choice, that is, the application of orthodox microeconomic theories to politics. Given that people do gain some sort of psychic benefit from voting to compensate for the trouble of going to the polling station, Downs' point about the unattractive cost–benefit calculus of casting a ballot is more germane to the intellectual effort that people will make in figuring out for whom to vote.

[46] Bryan Caplan, *The Myth of the Rational Voter: Why Democracies Choose Bad Policies* (Princeton: Princeton University Press 2007).

[47] John Calhoun, "A Disquisition on Government" in *Union and Liberty: The Political Philosophy of John Calhouni*, ed. Ross M. Lence (Indianapolis: Liberty Fund, 1992), 15–21. A shorter vision of the argument that I elaborate below was originally advanced in George Bragues, "Voters and Debt", *Financial Post* (September 1, 2011).

Labor must be hired to man the various facets of government. Buildings must be constructed to give public employees a place in which to do their work. Land must be secured upon which to put the buildings. In addition, there all the raw materials, computers, equipment, vehicles, weapons, supplies, and so forth needed to give substance to the state's decisions. In the past, the ruling monarchs were able to rely on their demesnes and their relationships with the nobility to supply their requirements. In more recent centuries, governments have come to depend chiefly on taxes. By imposing a tax, however, money gets redistributed from one part of society to another—to wit, from those who pay the tax to those that end up with the money. This latter group encompassing anyone who works for the government, supplies it with goods and services, or who otherwise receives benefits from it.

Out of this transfer, two rival groups are formed: taxpayers and tax consumers. Making up the category of tax consumers is anyone who, on balance, receives more money from the government than they pay to it. Hence, though a public sector worker has to file taxes like anyone else, they still belong to the tax-consuming class insofar as what they are obliged to give to the state is less than the gross amount on their paycheck. Likewise, any firm whose revenues disproportionately derive from the government, not merely via tendered contracts but also by economic advantages obtained through the political process, also counts as a tax consumer if their tax load is outweighed by their state-directed receipts. By the same logic, individuals receiving unemployment, welfare, or public pension benefits as their main or sole source of income will be, at least for the duration of time that they are receiving that income, members of the tax-consuming class. Everyone else receiving less money from the state than they are handing to it falls under the category of taxpayer.

One need not go so as far as to hold that human beings are utter egoists in recognizing that this class divide is going to be the source of deep and ongoing political conflict. Even agreeing with common sense that human nature is characterized by a limited altruism mostly confined to family and friends, it is evident that in a large community, with the overwhelming majority of people being strangers to ourselves, tax consumers will have few moral qualms in trying to extract more money from the taxpayers. The latter, in turn, will endeavor to defend themselves and seek to minimize what they are forced to hand over. Not only that, some among the taxpayers are liable to figure out that the best defense is a good offense. If presented the opportunity, taxpayers will opt to switch sides and join

the tax consumers. Unless checked, the mere presence of the state, with its power to coercively redirect wealth within the community, represents a mighty draw of people's energies and ambitions toward tax consumption.

Democracy pushes this inherent tilt further in the direction of the tax consumers. Ever since human beings moved beyond the hunter-gatherer to the agricultural and commercial–industrial stages of society, the rich have constituted a minority. Though the distribution of wealth among the rest of the population has shifted over time across different societies, the non-rich have always been a majority. At the same time, democracies confer power to those able to attract a minimum of 50 % + 1 of the votes. The route, therefore, to electoral success is obvious: offer the non-rich a menu of government-provided services and arrange to have the rich pay for it. In other words, forge a coalition of the tax consumers that outnumbers the taxpayers.

Thus, the democracies of ancient Greece and Rome continually harassed the rich to provide handouts and spectacles to the populace. This is nicely evidenced by a conversation recorded in Xenophon's *Symposium*, where a man named Charmides expresses joy in no longer being wealthy: "Then I paid a revenue to the body politic; now I live on the tribute that the state pays to me".[48] Besides being compensated for jury duty and other public services, Athenians were paid to attend religious festivals and theatrical productions, with much of this financed by property taxes on the wealthy. To fund the Athenian's state's largesse, the rich were especially burdened by a series of obligations known as "liturgies" which they saw as a way to soothe class resentment.[49] In contemporary democracies, the well-to-do fare better, in large part due to the existence of a bigger middle class, who have fewer incentives to soak the rich than do the poor. Still, the rich pay a disproportionate share of tax revenues throughout the Western democracies. For instance, in the USA, the top 20 % of earners covered 83.9 % of federal tax revenues in 2014. The top 1 % paid 45.7 % of revenues, almost half of what the federal government took in taxes.[50] Eligible voters have long outnumbered actual taxpayers, with the ratio recently being

[48] Xenophon, "Symposium" in *Xenophon*, Vol. 4, trans, O.J. Todd (Cambridge: Harvard University Press, 1979), iv. 32.

[49] Bruce S. Thornton, *Democracy's Dangers and Discontents*: *The Tyranny of the Majority from the Greeks to Obama*, (Stanford: Hoover Institution Press, 2014), 31–36.

[50] Laura Sanders, "Top 20 % of Earners Pay 84 % of Tax", *The Wall Street Journal*, (April 10, 2015), http://www.wsj.com/articles/top-20-of-earners-pay-84-of-income-tax-1428674384

1.8; in the USA, it has ranged between 1.6 and 1.8 since World War II. In Britain, the equivalent ratio has been 1.7.[51] So too, much of the government's spending flows to the middle class, while the poor receive relatively little. According to one analysis, the richest quintile in the USA received 10 % of funds on entitlement programs, the middle class constituting the middle three quintiles took in 60 %, while the last quintile made up of the poor took in 30 %.[52] When the submerged welfare state is taken into account, made up of the bevy of tax breaks the government provides, the upper and middle classes disproportionately benefit.[53]

That the poor do not fare as well as their plight merits is rather curious given the moral exigencies in democracy that bolsters the flowing of funds from taxpayers to tax consumers. Liberal democracy may be rooted in freedom, as well as various rights such as those to property designed to actualize that value, but its dearest commitment is to equality. Examining ancient democracies, Aristotle already saw that liberty was that regime's basic principle, but that it was understood in terms of equality. Everyone is free in that all are equally entitled to the same share in how the community is run and to live as they wish without subordination to another. Justice is about giving to each its due and in a democracy, according to Aristotle, that tends to be defined for political purposes as "numerical equality".[54] What he means is that democracy regards the highest goods of political life, namely rule, as something to be shared equally. Each of us has a vote and it has the same value in the final tally whether one is rich or poor.

Aristotle recognized, however, that democracies are prone to stretch their conception of justice to goods beyond those related to influence on political decision-making. Thus, an entitlement to an equal share of economic goods is apt to be claimed and the legitimacy of violating the property rights of the wealthy to bring this about will be eagerly affirmed on the argument that it was decided democratically by a majority vote in which everyone had the same chance to express their wishes. It is no coincidence that John Rawls, whose thesis essentially is that economic goods ultimately belong to the democratic community to redistribute

[51] Niall Ferguson, *Cash Nexus*, 86–87.

[52] Study cited by Zannon Minton Bedoes, "Makers and Takers", *The Economist*, October 13, 2012, http://www.economist.com/node/21564407

[53] Suzanne Mettler, *The Submerged State*: *How Invisible Government Policies Undermine American Democracy* (Chicago: University of Chicago Press, 2011).

[54] See Aristotle, *The Politics*, trans. Thomas Allan Sinclair (London: Penguin, 1992), Bk. III, Chap. 9 and Book IV, Chap. 4 for the points related here.

in line with egalitarian norms, is the most influential political philosopher of our time. Nor is it surprising that when a prominent economist, Robert Shiller, makes a foray into the field of morality to explore the relationship between finance and the good society, he seeks to spread the mechanisms and benefits of the securities market complex via a democratization of finance.[55] Democracies are all too prone to forget that justice also embraces the idea of inequality, that those of superior merit deserve more and that they are cheated when they receive the same as everyone else. Now, this is not to morally defend every detail of the manner in which wealth is allocated in contemporary democracies. More than a few rich people will surely, upon examination, be found not to deserve their fortune. This point being conceded, the fact remains that our polity goes hand in hand with a moral climate, characterized by influential notions of economic fairness and social justice, supportive of a redistributivist state transferring monies from taxpayers to tax consumers.

The tax consumer versus taxpayer clash is discernible in elections. Were a typical citizen asked whether they fell into the tax consumer or taxpayer category, it would often be a challenge for them to determine the correct answer. There are myriad of trails through which money leaves and enters one's pocket to and from the government. Yet there is one group for which this calculation is clear-cut: public-sector workers. The unions representing them—public-sector workers are unionized at a much higher rate than their private-sector counterparts—are among the largest financial contributors to American political campaigns. They overwhelmingly give to the Democrats, of the two main parties in America's political system, the one that most strongly favors the maintenance and growth of the public sector. It is the party most closely aligned with the interests of the tax-consuming class. Between 1989 and 2012, six of the top fifteen donors to election campaigns were public-sector unions. On average, these six unions donated 88 % of their political contributions to Democratic Party candidates.[56] Public-sector employees are also more likely than other people to actively participate in the political process and show up at the ballot box.[57]

[55] Robert Shiller, *Finance and the Good Society* (Princeton: Princeton University Press, 2012), especially 231–239.
[56] Daniel DiSalvo, *Government Against Itself: Public Union Power and Its Consequences* (New York: Oxford University Press, 2015), Table 4.1 at 58.
[57] Daniel DiSalvo, *Government Against Itself: Public Union Power and Its Consequences*, *58.*

Further evidencing the tax consumer versus taxpayer divide is the difference in voting patterns between low- and high-income individuals. Those with lower incomes tend to vote more for the Democrats, whereas those with higher incomes side more with the Republicans.[58] The latter, of course, is the party that professes the greater commitment to low taxes and is, therefore, the preferred option of the taxpayer class. It is true that in richer states, like California and New York, the wealthy vote for Republicans at a lower rate than their counterparts in poorer states. But this is because members of the upper-middle class in richer states adhere more strongly to the egalitarian norms that democracy encourages. One can only speculate on why this is the case, but my bet is that the egalitarian leanings of the upper-middle classes reflects greater levels of university education among them. The professors who taught them how to comprehend the world are ideologically titled to the left on the political spectrum.[59] All this being said, keep in mind that this qualification to the voting patterns of the affluent is not inconsistent with my account of the tax consumer versus taxpayer conflict. Driving that conflict is not simply money but also values.

Over time, as considerations of interest and morality combine to lead politicians to outbid each other in adding government programs, expenditures eventually reach a critical threshold. At this point, in order to finance the entire enterprise, a good number of the tax consumers within the middle classes shift into the category of taxpayers. For however vast the assets owned by the wealthy might be, they do not hold an infinite reserve fund at the community's disposal. The rich, too, certainly have the means of guarding themselves in the political process by lobbying for special tax deductions, funding candidates that support lower taxes, or investing their money abroad. Capital is more mobile than labor, after all. Nor should it be forgotten that democracy's provenance in ideals of liberty remains in the moral background, always available to be invoked by some in resisting the tax demands of an egalitarian state. Politicians can try to manage middle-class resistance to higher taxes by charging that the rich are not

[58] For this point as well as the qualification below about the way the wealthy vote in richer US states, see Andrew Gelman, *Red State*, *Blue State*, *Rich State*, *Poor State*: *Why Americans Vote the Way They Do* (Princeton: Princeton University Press, 2009).

[59] Daniel B.Klein and Charlotta Stern. "Professors and Their Politics: The Policy Views of Social Scientists". *Critical Review* 17, no. 3–4 (2005): 257–303.

paying their fair share of the government's costs and that the social services provided are a good investment. But this can only go so far.

And so the political recourse is inevitably made to budget deficits and the accumulation of public debt. Smoothing the way is the psychological fact that human beings are given to myopia, the tendency to overly discount the future. Consequently, the prospect of having to pay for the deficits and debt with higher taxes and inflation in the future hangs faintly in voter's minds. These prospective costs do not sway their thinking whenever they are presented with lavish promises of new government spending by political candidates. Making such campaign pledges all the more likely to be passed into law is that the young and unborn, on whom the burden of the debt falls, cannot vote to protect themselves. In 1978, an article was published entitled, "Deficits and Democracy", which noted, mostly on the basis of data from 1967 to 1974, the propensity of popularly elected governments to spend in excess of tax revenues.[60] Now that more than three decades have passed since that article appeared, that pattern has certainly persisted and, if anything, has grown worse, as I shall adumbrate toward the end of the next chapter. To summarize democracy's fiscal failing: publicly provided goods can be made to appear cheaper than they actually are, helping to maintain the demand for them above people's demonstrated willingness to pay for them.[61]

The gold standard collides against this structural weakness. It neutralizes one of the methods, namely the discretionary creation of money by the central bank, which the governing classes can employ to help fund large government expenditures. In fact, it removes the most politically convenient means. Taxes are subject to voter approval and are typically unpopular; money printing can be done without securing consent. To boot, the resulting inflation can always be pinned on profiteering businesses, or a host of other non-monetary factors like higher labor costs or raw material prices. In doing so, political officials can prey on the voter's rational ignorance of economic principles.

In a confrontation between an automatic mechanism operated by bankers and traders versus the imperatives of the most comprehensive association in society, there can be little doubt about which must emerge as

[60] W. Mark Crain, W. Mark, and Robert B. Ekelund Jr. "Deficits and democracy". *Southern Economic Journal* (1978): 813–828.

[61] For a thorough elaboration of this thesis, see James Buchanan, *Democracy in Deficit*: *The Political Legacy of John Maynard Keynes* (Indianapolis: Liberty Fund, 2000).

the victor. I conclude that the final abandonment of the gold standard in 1971 was the logical evolution of democracy's DNA. All regimes inherently resist having their sovereign body checked by a higher power and, in this respect, democracy is no different. It was inevitable that money would be removed from a natural order and taken under the artificial ambit of the popular will, even as an awareness of the dangers in assuming that control has convinced the sovereign to create a distance between itself and the operational management of the currency by granting independence to central banks.

Though there are other political realities that bear on the financial markets, the democratic repudiation of gold is the most profound and pervasive. Any practicable idea about how to improve or fix some issue in the markets must now wrestle with democracy's predilection toward artificial money. With the delinking of money and gold, we have seen all sorts of stratagems and newfangled instruments spawned to help savers and investors defend their property interests, with the result that finance has come to assume a larger place in society. A major impetus for this expanding influence has been the inundation of liquidity that has been unleashed in this post-gold epoch and that has found its way into financial assets. While the public has not always been a winner from this development, the liberal democratic state has, on balance, benefited in securing an ally in the financial markets for its various aggrandizing projects, even if it sometimes chafes at the constraints that come with that pact. Nowhere has this tension been more evident than in the bond and money markets.

CHAPTER 4

The Bond Market

Of all the financial instruments constructed out of money, none is more politically significant than those traded in the bond market. Corporations do, of course, participate in those markets. They do so to finance both their day-to-day operations and longer-term capital projects. But the biggest players by far are government bodies of one level or another—national, regional, state, provincial, municipal, or even international (the World Bank, for example, issues bonds). So too, government-backed agencies tap the bond market as a source of funding. Best known among these in the USA are the Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac).[1] At the end of 2014, the debt outstanding of the various American levels of government and their affiliated bodies made up approximately 65 % of the $39 trillion total outstanding in the US bond markets.[2]

Yet the government's influence derives from more than its market share. The prices at which the government's bonds trade affects the interest rate that everyone else either pays or receives. These rates then go a long way

[1] Officially at least, such agency debt does not count as full-fledged government securities. Whether state or privately owned, these entities are supposed to operate on a for-profit basis. Bond investors, though, have usually treated them as having a state guarantee on their debt. This view was corroborated at the height of the financial crisis in 2008 when the federal government effectively nationalized both Fannie Mae and Freddie Mac by placing them under conservatorship.

[2] SIFMA, "Statistics", http://www.sifma.org/research/statistics.aspx

G. Bragues, *Money, Markets, and Democracy*,
DOI 10.1057/978-1-137-56940-0_4

in deciding the amount of leverage in society—that is, the level of debt that individuals and firms happen to carry relative to whatever assets they own. Mind you, democracy itself produces a way of life that goes hand in hand with the accumulation of personal debt. Adding to this leverage is that the mere presence of government debt securities creates a reservoir of liquidity that makes it easier for private firms to issue bonds as well. More significantly, however, the government looms large in the bond market because that is where it must go to borrow funds. Whenever the state would rather not impose taxes or create money, it has to solicit funds from investors in debt securities. To the extent that states rely on this financing, they become beholden not merely to the wishes of their citizens but also to investors. Every move the government makes, even if it has the slightest of financial implications, becomes subject to investor adjudication. A side effect of this evaluation is that the markets offer illuminating insights about the existing political situation. Another effect, though, is that the markets do become a factor that impinges on the calculations of policymakers.

This, of course, raises suspicions. Why, after all, should a bunch of bond traders have any crucial say in a democracy? Are not the affairs of elected governments for the people to decide?[3] One is reminded of a graffiti message sighted in Poland: "We wanted democracy, but we ended up with the bond market".[4] Yet this is a flawed way to politically look at the bond and money markets. These markets are perfectly compatible with liberal democracy. They hold out the potential of advancing the common good by checking the excesses of government.

Alas, that potential is not realized. Governments have so deeply enmeshed themselves in the debt securities complex, and so routinely exploited the psychological vulnerabilities of investors, that they have co-opted the bond markets. The reality is that these now serve as handmaidens of the state, as adjutants of its policy directives. There are moments when the markets are able to break free from this servile

[3] Susan Strange, *Retreat of the State*: *The Diffusion of Power in the World Economy* (New York: Cambridge University Press, 1996); Joseph Stiglitz, *Globalization and its Discontents*, (New York: W.W. Norton, 2002).

[4] Quoted from Thomas Friedman, "Foreign Affairs; Don't Mess with Moody's", *The New York Times*, (February 22, 1995), http://www.nytimes.com/1995/02/22/opinion/foreign-affairs-don-t-mess-with-moody-s.html

disposition and hold the state to account, but they are just that—moments. Mostly, governments use the markets as enablers of their worst fiscal policy tendencies.

Trading, Pricing, and Yields

Many people do not recognize how big the bond markets are. They are bigger than those for equities, though one would never know it from the greater media coverage that the stock market receives. Most of the price quotations displayed on CNBC are for stocks; very few are for bonds. Illustrating, too, how bonds are underappreciated was the journalists' treatment of the Euro crisis. At bottom, this was a bond market event. More precisely, it was about the prospect of certain Southern European bonds, principally Greek, going into default. Yet the coverage tended to focus upon its implications for the survival of the Euro currency. So boring, apparently, are the movements of bonds that even their more breathtaking trends and gyrations need to be dramatized with a story line about the fate of a continental currency experiment.

Consider how much it would take to theoretically buy all the companies listed on the Nasdaq and New York Stock Exchanges, America's two main equity venues. The amount needed to purchase every share is the total US stock market capitalization. At the end of 2014, it was $26.3 trillion. That was only about two-thirds of the $39 trillion outstanding on the US bond market[5] (See Fig. 4.1). Globally, the picture is similar. In 2014, the market capitalization of stocks around the world was $67.8 trillion. Compare that to the $86.3 trillion total value of debt securities outstanding.

So where exactly do all these bonds trade? Some trading activity takes place on exchanges. Most of it, though, takes place over-the-counter (OTC). On an exchange, securities are standardized and trading is conducted under the aegis of a single authority. On an OTC market, by contrast, a wider variety of securities are available, tailored to buyer and seller requirements. Trading there occurs via phones and computers connecting traders at banks and broker-dealer firms. Within this vast trading network—running through the world's financial hubs of London, Hong Kong, and New York—the main nodes are the world's leading central banks. The Fed

[5] World Federation of Exchanges, "Statistics", http://www.world-exchanges.org/statistics

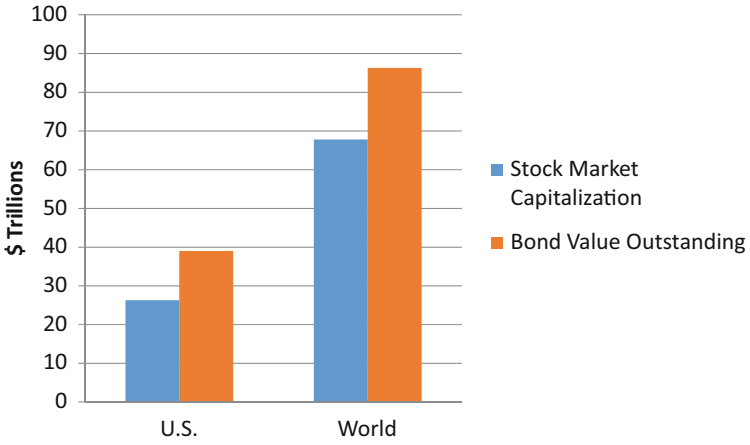

Fig. 4.1 Bond market larger than equities, 2014. *Source*: SIFMA, BIS, WFE

and the ECB, to cite just two prominent examples, regularly buy and sell debt securities with designated banks and broker-dealers as part of their open market operations.

Much of the transactional volume occurs on what is called the secondary market. This is where already existing securities are traded. It is the market which attracts the most attention, the one alluded to whenever a newspaper article or a television report mentions that the 10-year Treasury bond went up in price. Yet this market only exists to facilitate its primary counterpart. The primary market is where newly issued debt instruments are distributed. That makes it the arena where governments and corporations directly receive financing. What a secondary market does is render it more alluring for investors to buy new offerings of bonds in the primary market. The secondary market performs this role by supplying a liquid environment in which to later sell those new securities. It also serves a price discovery function. From the secondary market, issuers and investors in the primary market are able to obtain an estimate of the appropriate interest rate for a new debt instrument.

Just so it is clear to all readers: a bond is an IOU issued by a borrower to investors. An easy way to understand this is to think of a person named Bob who, instead of borrowing money from a bank, decides to obtain loans from ten different individuals. Bob gives each of them

a ticket in return for the loan. Written on this ticket is a promise from Bob to pay whoever is holding that ticket the original amount lent plus interest in accordance with stipulated timelines. The ten ticket holders are then able to trade their pieces of paper with others. This is because the payments are due not to the individual who initially acquired the ticket but rather to its current possessor. As one would expect, the tickets would be exchanged at prices reflecting both the prevailing interest rate and Bob's financial circumstances. If Bob loses his job, the tickets will drop in price; if Bob receives a promotion, the ticket prices will rise. Now simply substitute Bob in this illustration with a government body or a private corporation and you will have a decent sketch of the credit markets. The tickets that those entities sell are what are called bonds.

A bond will specify both the duration for which the credit is extended as well as the scheduling of repayments. A bond that extends credit for a period of one year or less is actually referred to widely as a money market instrument. They are called that because holders do not have to wait too long before getting repaid, which makes them a near-equivalent to money. But, technically, a money market instrument is still a bond, albeit a short-term one. With these securities, the issuer simply repays the principal, also known as the face value, at the maturity date. Interest is still paid, but it arises out of the fact that the issuer has to first sell their bond for less than the principal that must be repaid. The Republic of Ireland might issue one-year paper with a face value of $100 but only get $98 for it. One year later, when they have to pay back $100, Ireland will have effectively paid $2 in interest. With longer-term bonds, however, the promised repayments typically consist of a periodic series of disbursements called coupon payments. The purchaser of a five-year bond, for instance, will typically receive ten interest payments made semi-annually. In addition to this, the issuer of the bond has to repay investors the principal or face value owing at the maturity date. Though not as common, there are also zero-coupon bonds, in which only a single payment is scheduled at maturity. The difference between these and what are called money market securities is that the maturity date is set more than a year away.

In the parlance of credit markets, the interest on bonds is referred to as the yield. Which brings us to a logical law of debt securities: price varies inversely with yield. This means that whenever bond prices increases, yields go down; and whenever bond prices fall, yields go up.

Believe it or not, many investors do not grasp this fundamental fact.[6] To grasp it, one first needs to recognize that the amount of money to which an investor in a debt security is entitled is set beforehand. This is why bonds and money market instruments are also referred to as fixed income securities. Thus, with the incoming cash flow part of the equation fixed, the only way that the yield can change is through the price paid to receive that cash flow. The greater the price, the lower the yield, since one is paying more to obtain the same amount in future payments. Likewise, the lower the price, the higher the yield, since one is paying less to obtain the same amount in the future. For example, a one-year bond with a face value of $1000 priced at $985 has an annual yield of 1.52 % (1000 minus 985 then divide that result by 985). Yet should the price for that instrument rise to $990 the next day, the yield would fall to 1 % (1000 minus 990 then divide that result by 990). With bonds featuring coupon payments, the calculations become more complex, though the logic underlying the inverse relation of price and yield remains the same.

Furthermore, yields will vary with the time that is left to maturity. Everything else remaining equal, the further out until a bond is fully paid out, the higher the yield. A ten-year bond issued by the Kingdom of Spain will typically carry a higher yield than a two-year bond from the same country. Financial economists have posed several theories to explain why this is, though the most commonsense explanation (technically known as the liquidity theory) is that long-term bonds entail more time for something to go wrong before all the money is received. Investors naturally demand a bigger yield to compensate for this risk. It is not always the case, however, that yields are greater on long-term bonds. On occasion, short-term bonds will carry the higher yield. When this happens, it is usually because the central bank is tightening monetary policy. Such a policy, of course, implies higher interest rates, but traders and investors often calculate that this increase will only be temporary and therefore will not extend to the payouts on longer-term securities. Other than this, the main reason that short-term debt might

[6] According to a 2009 survey conducted by the Financial Industry Regulatory Authority (FINRA), only 21 % of respondents correctly stated that bond prices fall when interest rates, or yields, rise. See Library of Congress, "Financial Literacy among Retail Investors in the United States" (December 30, 2011), 27, http://www.sec.gov/news/studies/2012/917-financial-literacy-study-part2.pdf

have the greater yield is that the country owing the money is undergoing financial stress. Because the country might not meet its immediate obligations, investors require a higher yield to factor in the lower probability that they will be repaid. For instance, just before Greece received its first bailout in early 2012, the yields on the country's three-year bonds had shot up to 77 %, at the same that its ten-year bonds were trading at 22 %.

Finally, some readers might need clarity about the specific terms used to designate the different types of debt securities. Usually, those terms distinguish securities by the identity of the borrower. Thus, a money market instrument issued by a government is called a treasury bill. A similar instrument issued by a private company is known as commercial paper. And when it comes to bonds, this same difference by issuer is manifest in the division between government and corporate bonds. Government bonds can be further broken down by the level of jurisdiction. Local governments, for example, issue what are called municipal bonds. If a regional government is the borrower, such as an American state or a Canadian province, then the resulting security is denoted a state and provincial bond, respectively. Sitting atop this entire constellation of tradable debt are national government bonds. Generally viewed as the safest debt securities—and therefore those with the lowest yields—national bonds serve as a benchmark for all other bonds within the country.

Politically Informed Yields

So much, then, for the basic elements of credit markets. Now to enter into its political dimensions, it will be necessary to dwell further on the matter of yields. This is where the relationship between governments and the markets starts and it is where the relationship evolves into its most consequential manifestations. Yields are the major rendezvous point between the two parties. Yields are, after all, the price that governments negotiate with the market for credit. Though both benefit in coming together for a loan, the continual haggling over price can put a strain on the relationship. A sense of dependency can arise that allows one side to exploit the other. Feelings of ill-will and recriminations may easily be triggered when one of the parties reneges on their promises or demands too high a price to continue the relationship. Each side tries to do the best it can for itself by wielding the leverage at its command.

For the markets, that leverage consists in the fact that they hold the money that the government wants; for governments, it consists in the fact that they can coerce people, including those in the markets, to get whatever they want. How one sees this contest depends on whether one believes the state or the markets ought to serve as the ultimate organizing principle of economic life. Those who lean toward the state will find it objectionable whenever the markets set the yields too high for governments to borrow. Those who lean toward markets will find it presumptuous for governments to expect that they can borrow at whatever yields suit them.

Settling this debate involves answering the following: do the bond markets tend to establish the right yields for government bonds? Or do they systematically get the yield wrong? A great deal of evidence indicates that the bond markets more often get it right than wrong. Let me begin with a recent example, Greece. The markets first gave warning of a problem there in the fall of 2008, about two-and-a-half years before that country's debt crisis first hit the acute stage in the spring of 2010. This can be seen in Fig. 4.2[7], which depicts the yield spread between Greek ten-year bonds and Germany's ten-year bonds, known as bunds. The reason the comparison is made to Germany is that its bonds are deemed to be the safest in Europe. So the difference between its yields and those of Greece represent a risk gauge of the latter's debt.

Notice how the spread suddenly lurched up in late 2008 and early 2009. It then declined somewhat throughout 2009, though never going back to the previous range near the zero level at which the spread traded prior to the fall of 2008. Then, beginning late in 2009, and accelerating into early 2010, the Greek–German bond spread moved dramatically higher. It was in May 2010 that the Eurozone governments finally came to terms with what the markets had been signaling and arranged a bailout. That did not stop the spread from widening further into 2012. The bond market thus eyed the prospect of a second bailout for Greece, which indeed was finalized in February 2012. From there, the yield spread steadily declined, though that reflected the ECB's pledge, enunciated by Mario Draghi in July 2012, to do

[7] *European Central Bank*, "Long Term Interest Rates", http://www.ecb.int/stats/money/long/html/index.en.html

Fig. 4.2 Yield spread, Greece ten-year bonds versus German ten-year bunds, 2008–2015. *Source*: ECB

whatever it takes to save the Euro—more on that in Chap. 7. In any event, the markets took Draghi's pronouncement to include a willingness to purchase Greek bonds. Later, the spread began to rise again in the second half of 2014. The bond market was alerting the world that a new round of trouble was on the horizon. That came true in January 2015 when Alexis Tsipras was elected to lead Greece on a promise to renegotiate the country's debt.

Well before Greece's recent travails, bond yields have proven themselves politically and economically insightful. One can go back to the decade after the French Revolution, the period between 1790 and 1799. At the time, Britain's bonds, known as the consols, were considered the benchmark for safety. Over that decade, the yield spread between French long-term debt and Britain's consols averaged 9.5 %. Such an elevated level corresponded to the political volatility that is universally recognized as having marked France in the aftermath of its revolution. The French–British bond spread then declined to an average of 3.9 % in the 1800–1809 time frame. This squares with the prevalent notion that Napoleon brought a semblance

of order to revolutionary France. Yield differentials also widened during the 1848 revolutions, which impacted Continental Europe more than it did Britain. Accordingly, French yields went from an average premium of 0.85 % versus consols in 1847 to 2.46 % in 1848 and 2.74 % in 1849.[8]

Government bond movements also illuminate World War II and the events leading up to it. Key turning points are discernible in the historical yield data. One can note statistically significant changes occurring around the February 1939 German invasion of Czechoslovakia. The same goes with the official start of hostilities in September 1939, the Japanese attack on Pearl Harbor in December 1941, and the subsequent entry of the USA into the war. Yields reacted as well to the D-day invasion of Normandy in June 1944, and the final collapse of Germany in April 1945. In line with the consensus view that the blame for World War II rests with Adolf Hitler and the Nazis, an index of European government bonds traded in Switzerland, then the safest place to trade sovereign debt, shows an uptrend in yields from 1933, when the Nazis attained full control of the German state.[9] Considering that US government bond yields steadily fell during the 1930s and 1940s, this means that European–US yield spreads generally rose.[10]

Interestingly, combing through the historical yield data lends further support to an observation made in the previous chapter. Yields make it clear that the gold standard prevented governments from inflating away the value of their debt. Figure 4.3[11] displays the yield spreads on long-term government debt for the USA, France, Germany, and the Netherlands relative to Britain's consols from 1870 to 1913. The trend is manifestly down. Evidently, as nations demonstrated a commitment to gold by their continued adherence to it, bond investors progressively demanded less of a risk premium to buy their debt. The link to gold, after all, meant that countries were restrained from harming bond holders by reducing the purchasing power of the money still owing them. It should be added that investors were also safeguarded from adverse

[8] Figures presented here based on historical yield data provided by Sidney Homer and Richard Sylla, *A History of Interest Rates* (New Brunswick, NJ: Rutgers University Press, 1991). See tables at 156–157, 172, 195–196, and 222–223.

[9] Bruno S. Frey and Marcel Kucher, "History as Reflected in Capital Markets: The Case of World War II", *The Journal of Economic History* 60, no. 2 (2000), 468–496.

[10] Sidney Homer and Richard Sylla, *A History of Interest Rates*, 352.

[11] *Measuring Worth*, http://www.measuringworth.com/

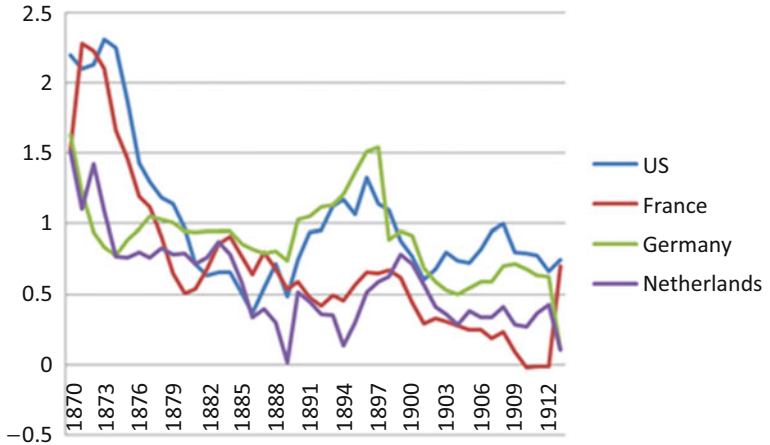

Fig. 4.3 Selected yield spreads versus British consols, 1870–1913. *Source*: Sidney Homer and Richard Sylla; Measuring Worth

moves in FX rates that would affect any international bonds they might have in their portfolios. For if a set of national currencies are tied to gold at a set rate per ounce, it logically follows that the price ratios between those currencies will also be fixed.

What is especially remarkable about the narrowing of spreads is that political risk was obviously perceived to be low, if not diminishing, heading into World War I. That epochal conflict, with all its attendant costs, appears to have come as an utter shock. As such, the yield data belies the oft-expressed view among historians that in the years leading up to August 1914, tensions were simmering between the European powers because of intensifying nationalism, imperialist conflict over colonies, and an escalating arms race. One could, of course, counter that the markets were irrationally sanguine. But in making such a judgment, we have to be mindful of that deep-rooted bias by which the benefit of hindsight makes us all too eager to believe that something could have readily been predicted. Lewis Frey Richardson famously discovered that, statistically speaking, the start and duration of wars are random events.[12] Based on what the markets factored in prior to World War I, Richardson is correct.

[12] Lewis Fry Richardson, *Statistics of Deadly Quarrels* (Pacific Grove, CA: Boxwood Press, 1960).

How Democracy Enables Debt

Despite this impressive record in pricing yields, one is hard pressed to contain the gnawing suspicion that the bond market's acuity and prescience are limited—indeed, perilously limited. Though numerous facts can be summoned to corroborate this suspicion, nothing feeds it more than a striking anomaly that has played out over the past three decades. Since the early 1980s, government bond yields throughout the developed world, as mirrored in interest rates, have steadily declined. Meanwhile, the weight of government debt has pretty much done nothing but trend upward. How can this be? Has not the likelihood of full repayment fallen? Should not yields increase to reflect that reduced likelihood?

This anomaly does not go unnoticed, though it is rarely probed. The decline in yields is typically chalked up to the success of the world's central banks, led by the US Fed, in bringing down inflation. But this cannot explain why real current yields—the yield on a ten-year US government bond minus the prevailing US rate of inflation—has fallen as the debt has escalated. In 2001, the last time the USA ran a budget surplus, that inflation adjusted yield was 2.29 %. Then move forward to the end of 2014, by which time the country's public debt had nearly doubled as a percentage of GDP. By then, the ten-year Treasury bond was trading at a 0.61 % above the going rate of inflation. The bond market was charging less real interest to a much more indebted customer.

What is going on? Recall the tax consumer versus taxpayer dynamic from the previous chapter. There, we had emphasized how, in a democracy, the class conflict between tax consumers and payers leads politicians to run deficits. To finance these deficits, democratic states are propelled to secure full control over the money supply and unshackle themselves from any constraint, such as the gold standard, on printing the money necessary to pay its obligations. This same imperative, in tandem with the mores and culture of democracy, presses it to rely on the debt financing offered by the bond market. With this credit tap on hand, democracies are able to indulge its natural proclivity toward debt, stacking up ever greater amounts of it. So powerful is this attraction to debt that wherever it does not overwhelm the bond markets, it will at the very least distort the latter's judgment of public finances. To lay this all out will take us beyond finance and economics into history, politics, and psychology.

That democracy is primed for debt is something that first comes into view when we wonder why bond markets are allowed to exist at all.

This will likely strike many readers as a strange question to raise, so for granted do we take those markets as a fact of life in advanced societies like our own. Yet the practice of lending on interest, which the credit markets embody, was, until comparatively recently, morally and legally discouraged in the Western world. It remains so in those countries influenced by Islamic teachings. As the most all-encompassing organization in society, the state can always choose to wield its coercive power and moral authority to eliminate interest rate contracts. If not that, governments can at least push such deals to the margins of the economy, as many of them do with loan sharking. It is not as if debt is absolutely necessary to finance economic activity. Societies always have the option of favoring equity financing. Under this arrangement, the owners of the firm supply the money to buy the assets and resources needed to start up and operate a business. The resulting profits and losses are then shared. Instead of incurring debt, governments could rely solely on taxes to fund its activities alongside any profits generated from its own enterprises.

To solve the conundrum, let us recount the story of how interest-based lending became morally licit. That practice only acquired full moral legitimacy, only ceased to be identified with the sin of usury, around the seventeenth and eighteenth centuries when liberal democracy was germinating. This was no coincidence. Our democracies have various features that not only permit credit markets but actually necessitate them. Before liberal democracies were born, philosophers and theologians were virtually united in giving their intellectual support to prohibitions on the charging of interest for loans. Aristotle was the greatest authority in this tradition, maintaining in *The Politics* that money is meant to be utilized in exchange.[13] Deployed in this way, money is used up or consumed. By charging interest, however, money does the opposite of this in reproducing itself. On this basis, Aristotle concluded that lending on interest was unnatural and, therefore, morally wrong. As part of his effort to synthesize Christian teachings with Aristotelian philosophy, St. Thomas Aquinas expounded on this argument in the *Summa Theologica*.[14] He drew a distinction between objects whose use consists in their being destroyed and those which can be employed while preserving their substance. A glass of water is an instance of an object being destroyed upon usage; the person

[13] Aristotle, *The Politics*, Bk I, Chap. 10.
[14] St. Thomas Aquinas, *Summa Theologica*, trans. Fathers of the English Dominican Province, II.II.Q78, http://www.newadvent.org/summa

who drinks it leaves nothing for others. A tract of land that is worked to cultivate corn is an example of an object retaining its substance upon usage; the land remains after harvest to be planted on again. In sympathy with Aristotle, Aquinas equates money with the first type of good on the argument that its purpose is to be spent in transactions. Hence, to sell money as if it were a good that continues to exist after its use is essentially to offer nothing to the borrower in return for something. That is hardly a fair trade, at least when construed in those terms. What about the argument, though, that both the lender and the borrower consent to the terms of the loan? Nowadays, consent serves as something of a moral trump for transactions between adults, but Aquinas thought otherwise. He argued that inasmuch as borrowers are in urgent need of the money, they are not authentically free in agreeing to a loan.

It is not uncommon for this pre-modern philosophic stance to be explained away as a mere product of the times. Bertrand Russell, for example, observes that ancient philosophers like Aristotle were tied to a landowning ruling elite.[15] Since land cannot be easily liquidated, any immediate need for cash could only be met by borrowing. As such, the landowning class had a strong incentive to limit what creditors could charge them. That the antipathy to interest continued to persist after Christianity acquired ideological dominance in the West can be similarly accounted for by the fact that the Catholic Church held land as its chief asset and so tended to be a debtor. After the Reformation, the climate of opinion became more favorable to interest lending, as the leading theologians and philosophers of the period were connected to the commercial classes. Prominent within this class were those whose professional occupation was to provide credit. Contemporary philosophers, Russell adds, have not generally endeavored to revive the old moral animus against interest since they are mainly employed by universities. Bonds represent a significant proportion of these institutions' endowment portfolios.

It is admittedly more than a coincidence that conceptions of usury have altered in line with the shifting of economic interests affecting intellectuals. Even so, Russell's brand of historicism cannot explain how some of the late Scholastic thinkers of the sixteenth and seventeenth centuries, operating within the ambit of the Catholic Church, qualified the Aristotelian–Thomist teaching. They did so by acknowledging that money

[15] Bertrand Russell, *History of Western Philosophy* (London: Routledge, 2004), 181–182.

can reproduce itself. Not only that, they recognized that a lender gives up the chance of profitably using the funds he or she hands to another. They saw there was an opportunity cost incurred by the lender that deserves compensation. Notable in this regard was Felipe de la Cruz, who in his 1637 work, *Tratado Unico de Intereses*, caught sight of the essence of interest in stating that, "the right to receive money in the future has less value than money received in the present".[16] Granted, the late Scholastics proved incapable of completely transcending the philosophical and religious authorities of the day. Nevertheless, they managed to puncture that tradition with insights that began the evolution toward a better understanding of the phenomenon of interest.

Certainly, there emerged compelling intellectual grounds for such a development. The Aristotelian–Thomist view presupposed a teleological picture of reality, according to which the nature of a thing is properly understood by grasping its end or *telos*. In this way, the essence of money was defined as an object of consumption precisely because its overriding purpose was to be used in exchange. But the scientific revolution of the sixteenth and seventeenth centuries subverted this understanding. The universe came to be seen as something better understood by way of the efficient causes of things. The scientist was now to focus entirely on how things come to be. No longer were scientists enjoined to determine final causes, to wit, the purposes for which things exist. Applying all this money, it no longer made sense to view the medium of exchange simply in terms of its purpose as a facilitator of exchange. It made more sense to see money in terms of all the cause–effect relations of which it is susceptible. Money's capacity to augment itself in the act of lending no longer appeared deviant. One could now interpret that multiplicative character as a compensation for time and risk.

Concern for the plight of the less advantaged, more pronounced in the Christian as compared to the classical pagan animus toward interest, also became less determinative. The rise of commerce from the Renaissance period forward meant that the provision of credit increasingly took place between businesspersons, or between them and members of the nobility. It was no longer so much the moneyed elite lending to the lower socio-economic orders. The latter could be defended against predation, without

[16] Felipe de la Cruz cited by Alejandro A. Chafuen, *Faith and Liberty: The Economic Thought of the Late Scholastics* (New York: Lexington, 2003), 122.

impinging on the activities of the more advantaged groups, by redefining usury as the charging of excess interest. That, of course, is how usury is understood today.

By the time liberal democracy was beginning to germinate in the eighteenth century, the moral transvaluation of interest had largely been accomplished. Nonetheless, the emergence and spread of that regime served to consolidate this epochal alteration in values. What must never be forgotten is that liberal democracy is distinguished from the pre-modern polities it displaced by its neutrality toward the good life and the meaning of existence. It used to be thought that the state should endeavor to promote a particular way of life and view of the universe. In the ancient world, the warrior-statesman heedful of the many pagan deities tended to be set up as the role model. In Christian societies, that role was taken up by the saint devoted to the one, all-knowing and omnipotent God. The internecine religious conflict that ravaged Europe during the sixteenth and seventeenth centuries led the Enlightenment thinkers to conclude that social peace could only be assured by limiting the government's role to the safeguarding of people's lives and possessions. Everyone is left free to pursue their happiness as they saw fit, believing and doing whatever seems to them correct, on the condition that they not harm others. With the right to liberty thus established as a democratic norm, the giving of individual consent became a decisive criterion of whether or not a given action passes the moral bar. It is on this basis that Jeremy Bentham finally settled the interest question for the Western democracies. Against Aquinas, he argued that no wrongdoing occurs if both the creditor and debtor freely agree to the terms of a loan.[17]

Freed from government paternalism regarding the purpose of life, most individuals will naturally be inclined to define happiness in hedonic terms. Living a good life will be about enjoying pleasure and avoiding pain. Obviously, what is deemed pleasurable and painful will differ from one person to the next, but the vast majority naturally tends to converge on the necessities, conveniences, and embellishments of life. Hence it is that most denizens of liberal democracy put much of their energies into the pursuit of a materially comfortable existence. As this cannot be provided without the generation of wealth and prosperity, the politics of liberal democracies comes to be inevitably oriented around the objective of

[17] Jeremy Bentham, *Defence of Usury* (New York: Theodore Foster, 1837).

economic growth. One need only consider how almost every election is swayed, if not decided, by the state of the economy to acknowledge this point. Even if guilty of idealizing classical civilization, the French philosopher Jean-Jacques Rousseau was basically on the right track in saying: "The politicians of the ancient world were always talking of virtue and morality; ours speak of nothing but commerce and money".[18] Thus does a formally neutral position on the part of democracy about the ultimate good for humanity substantively end up in a form of government biased toward a bourgeois way of life.

Such an existence would hardly be a reality for more than a minority if it were not for the widespread availability, made possible by the allowance of interest, of debt finance. In essence, finance is about managing the fundamental economic fact that revenues, be it those of a firm or an individual, do not synchronize with expenditures. The operator of a fast-food restaurant must put up the money to rent space, obtain equipment, and buy supplies, even before selling a single hamburger. A retailer specializing in Christmas goods must pay workers at regular intervals throughout the year, even should most of its sales will be concentrated in December. A newly married couple may want to buy a house for the family they are planning to have, though it might take them both 20 years of wages to earn the list price. If credit cannot be readily obtained, then the fast-food operator will have to find someone willing to invest in an ownership stake in the restaurant; the Christmas goods retailer will have to keep more cash on hand to pay workers from January to November; and the newlyweds will have to stay in their rented apartment and save their money. The upshot of all this is a decrease in economic activity. Instead of investing in value-creating projects, the Christmas retailer's cash must lie idle in order to make payroll. Rather than having a new home constructed for the newlyweds, the existing rental stock would have to accommodate them. And while a restaurant owner can conceivably receive equity financing, the projected return on investment would have to be higher than it would with debt. Unlike shareholders, creditors legally have the right to be paid before a company's owners and often have their loans secured by assets. For this reason, the cost of debt is generally lower than that of equity. This sets the bar higher for equity as opposed to debt for when to invest in an

[18] Jean-Jacques Rousseau, "Discourse on the Sciences and the Arts", *The First and Second Discourses*, trans. Judith R. Masters (New York: St. Martin's Press, 1964), 51.

enterprise. The expected rate of return needs to be higher with equity to make up for the additional cost of financing. Hence, an economy that solely relies on equity will see fewer projects funded; an economy that also permits debt will see more projects funded. This last prospect suits democracy better.

How Democracy Magnifies Debt

All this, however, is only to say that liberal democracy's commitment to economic growth mandates the existence of the money and bond markets. But my point is stronger than that: democracy is inclined to magnify debt and implicate the bond market in the process. This remains to be shown. To begin this task, then, it is no historical accident that the origins of the modern-day bond market are to be encountered in the Northern Italian republics of the late Middle Ages and Renaissance. Monarchs were able to obtain loans during this era, but only from merchants and banks.[19] These would often regret extending the credit. The most notable instance of this was the fatal losses that overtook the Bardi and Peruzzi banks in the mid-fourteenth century. These Florentine banks had lent Edward III, the English king at the time, a substantial sum to finance what historians would subsequently call the Hundred Years War. Suffering a series of early defeats, Edward III reneged on his debt. That set off an international financial crisis, culminating in the bankruptcy of the Peruzzi and Bardi banks in 1343 and 1346, respectively.[20] Edward III's conduct exemplified the risks of lending to monarchies. With only a single individual ruling in a monarchy, there are fewer constraints on that person's conduct. So, whenever it becomes tempting to stop making debt payments, little can be done to dissuade a sole ruler. The situation is different where authority is shared, as it was in the Renaissance Italian republics and is now more so in today's democracies. Anyone vested with executive authority in such regimes is forced to think twice before giving into the beguiling course of debt repudiation. They are accountable to others. More than a few of these other parties will have an interest in seeing that the state preserves its reputation in the eyes of creditors.

[19] Sidney Homer and Richard Sylla, *A History of Interest Rates*, 94–95 & 135.
[20] James Macdonald, *A Free Nation Deep in Debt*, 110.

Bond investors recognize this. It makes them more willing to lend to democracies than autocracies. A further consideration is that bond markets lack the specialized knowledge and oversight capabilities that banks are able to cultivate through their close relationships with governments. Not being equally positioned to develop such relationships, bond markets shy away from autocrats and lean toward democracies, where close ties to government matter less. Another edge that democracy has when it goes asking the bond market for money is that its leaders have been voted into power. This makes the public apt to accept the state's liability as its own. Debt racked up by an authoritarian figure is more likely to be viewed as not imputable to the people. Though the exact nature of the advantage is contested, there is a scholarly consensus that the democracies of our epoch have more favorable access to the bond market than autocracies.[21] Democracies thus start with a greater capacity to magnify debt, having a more willing partner with which to do it.

A bit of reflection on corporate taxation leads us to another reason why democracy is given to the aggrandizement of debt. One of the peculiarities of corporate taxation is that interest expenses, which proxies the cost of debt, are deductible from income in most jurisdictions. Dividends, representing the cost of equity, are not. Insofar as dividend payments receive any compensation for this separate treatment, the tax imposed on those monies usually occurs at the individual level among the shareholders receiving them, who are assessed at a lower rate than ordinary income. Yet all this does is reduce the extent of the double taxation incurred by shareholders. For they do not simply pay the government a share of their dividend proceeds. Shareholders also pay indirectly, inasmuch as the pot of available money for disbursement to them from the corporation is reduced by the non-deductibility of dividends. In the USA at least, the government's privileging of debt over equity seems to have originated in the late nineteenth century with the railway industry's intense opposition to a law that would have taxed interest expenses and dividends equally. Railway companies—then a political force to be reckoned with—insisted that a charge on interest would destroy their businesses, given the leverage they

[21] Emily Beaulieu, Gary Cox, and Sebastian Saiegh, "Sovereign Debt and Regime Type: Reconsidering the Democratic Advantage", *International Organization* 66, no. 4 (2012), 709–738.

were forced to assume to finance large up-front capital costs.[22] Admittedly, this is an interesting historical point, but it does not explain why the same favored treatment of debt prevails elsewhere outside the USA.

A more plausible explanation is that accounting methods initially reflected the interests of creditors. These were the earliest suppliers of financing to limited liability corporations. Creditors are especially concerned to determine how much of a margin of safety a firm has in fulfilling its debt obligations. To do that, they prefer to see interest alone deducted as a financing expense from revenue in calculating profit. This accounting practice also benefits creditors by underlining their priority over shareholders. Were dividends to be subtracted as well, it would give the impression that shareholders have the same claim on the firm's cash flows. Subtracting interest alone makes it clear that debt holders have first rights over revenues. Perhaps when governments beefed up their tax collection structures in the twentieth century, they simply ended up adopting the prevailing modes of accounting.

Even if this conjecture is true, it cannot explain why the practice of favoring debt persists. After all, governments have not been averse to imposing accounting rules for tax purposes different from those that otherwise guide corporate reporting. Arguably, the most credible solution to this puzzle appeals to the same kind of factor that led to the legalization of interest-based lending to begin with. That is, more investments receive the green light with the privileging of debt, which tends to raise the economy's over-all growth rate. Nor should one overlook the fact that debt is more of a spur to generate value than equity. Interest payments have to be made no matter what the circumstances may be if a company is to avoid bankruptcy. But dividend payments can always be suspended if a company runs into a tough patch. Debt concentrates the minds of management to seek efficiencies, forge new markets, and develop fresh products.[23]

This type of argument was used to support leveraged buyouts (LBOs). In an LBO, an investment company or a management team buys control of a company, financing the bulk of the purchase with debt. LBOs were the talk of corporate finance in the late 1980s. Back then, LBOs were often financed with the issuance of junk bonds, a security pioneered by

[22] Steven A. Bank, "Historical Perspective on the Corporate Interest Deduction". Chapman Law Review 18, no. 1 (2014), 33.
[23] Michael C. Jensen, "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers", *American Economic Review* 76, no. 2 (1986), 323–329.

Michael Milken at Drexel Burnham Lambert. Junk bonds involve a lower likelihood of repayment than ordinary bonds. In return for taking on this risk, holders of junk bonds are compensated with the prospect of higher yields—hence, why those securities are also referred to more politely as high-yield bonds. LBOs were heavily criticized for loading huge debt burdens on firms. It was alleged that this load forced companies to cut costs through mass firings of workers, while rendering them more vulnerable to economic downswings. Many LBO firms did indeed go bust in the recession of the early 1990s. LBO transactions then became sparse, until being resuscitated again in the form of private equity in the mid-to-late 2000s.[24] After peaking in 2007, LBO activity collapsed with the financial crisis in 2008 and 2009, but has since recovered.[25]

Interestingly, under this reincarnation, the use of leverage has attracted noticeably less reproach than before. Perhaps this is because investors in private equity include pension funds, insurance companies, and university endowment funds. They are all more respectable than the corporate raiders identified with LBOs during the 1980s. They are also more influential in political circles as lobbyists. Whatever the reason might be, the sanctioning of LBOs underlines how democracies eventually reconcile themselves to the presence of significant debt in the economy.

In this, just as in the original legitimization of debt, democracy's adherence to the principles of freedom continues to make itself felt. Plato, the fifth-century-BCE Greek philosopher, described the typical citizen of democracy as someone who:

lives along day by day, gratifying the desire that occurs to him, at one time drinking and listening to the flute, another drowning water and reducing; now practicing gymnastic, and again idling and neglecting everything; and sometimes spending his time as though he were occupied with philosophy. Often he engages in politics and, jumping up, says and does whatever chances to come to him; and if he ever admires any soldiers, he turns in that direction; and if it's money-makers, in that one. And there is neither order nor necessity in his life, but this life sweet, free, and blessed he follows it throughout[26]

[24] Steven N. Kaplan and Per Stromberg, "Leveraged Buyouts and Private Equity", *National Bureau of Research Working Paper*, NO. 14207 (2008), http://www.nber.org/papers/14207
[25] S&P Capital IQ, "Online Loan Market Primer", (July 15, 2015), http://www.spcapitaliq.com/insights/lcd-s-online-leveraged-loan-market-primer-almanac-updated-with-2q-data
[26] Plato, *The Republic*, 561c–d.

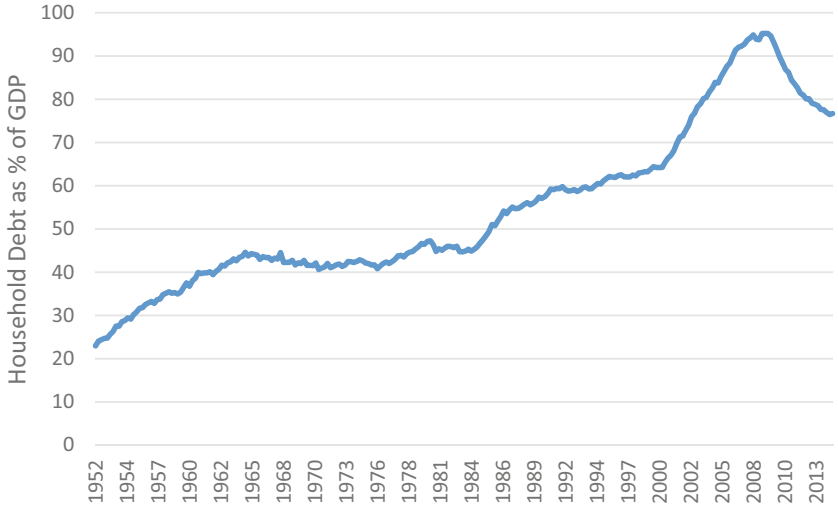

Fig. 4.4 Total US household debt as % of GDP, 1952–2014. *Source*: St. Louis Fed

No doubt, Plato's depiction of the democratic personality exaggerates the flightiness and lack of discipline beyond what an impartial observer in our day would see. But he does capture the fact that, empowered by the right to liberty, people who live in democracies use their freedom in a myriad of ways to express and gratify themselves. To fund all of this, of course, individuals can work hard and save their money until they can afford what they want. Among a people dedicated to autonomy and self-realization, however, this will inevitably seem overly constraining. Instead, they will hearken to financial strategies that allow them to give substance to their freedom now by assuming debt. They would rather not wait until later. They will still work, but not so much to save, as to keep up with their debt obligations. In this way, democracy tends to shift people's time preferences, such that the present is given greater weight than the future.

There is a rival set of explanations for the secular rise in consumer debt, pictured for the USA in Fig. 4.4. Instead of attributing that rise to a democratically induced demand for credit, as I do, opposing accounts emphasize the supply side of the equation. A commonly held variant is that financial institutions, having been deregulated since the 1970s and 1980s,

have sought to maximize their profits by pushing consumers into debt. This effort has succeeded, so the argument goes, thanks to the aggressive marketing of mortgages, credit cards, auto loans, and home equity lines of credit. Encouraging this, purportedly, was the advent of securitization in the fixed income markets. By allowing commercial banks to package loans into bond securities that could be sold to investors, those banks were afforded more room on their balance sheets to lend further to individuals. Moreover, the banks did not have to be careful about the credit worthiness of borrowers. Able to move the loans off their books, the banks figured that they would not be the ones ultimately suffering losses. These would now be borne by someone else—namely, the holders of the bonds containing the loans that the banks first originated.[27]

Another alternative explanation to mine for the escalation of consumer debt was advanced by Daniel Bell. The influential American sociologist argued that the emergence of installment debt, combined with a mass-consumption economy, vitiated the Protestant work ethic. Following Max Weber, Bell held that this ethic formed the moral foundation of capitalism in North America and Northern Europe from the eighteenth century into the early twentieth century.[28] The Protestant work ethic promoted savings and deferred gratification. But it first came under attack by avant-garde elements of the culture celebrating instinct, impulsivity, spontaneity, and hedonism. After World War II, however, these attitudes spread beyond the avant-garde, and were co-opted by the wider community, including by corporations as general affluence increased. In Bell's eyes, it is capitalism that fuels the growth of debt, not democracy.

It must be conceded that banks can do a lot to promote their credit products with all the ingenuity and allures at their disposal. But nobody is going to take up their offers unless they are already predisposed to do so. A mortgage broker may have a compelling presentation with teaser interest rates and all sorts of other inducements. Still, he will be hard-pressed to arrange any mortgages, if he is speaking to a group of penny-pinching, future-oriented disciples of Benjamin Franklin. By publicizing their services and making their terms more attractive, suppliers of credit can indeed affect the level of debt that is assumed in the community. Yet

[27] Robert W. Kolb, *The Financial Crisis of our Times* (Oxford: Oxford University Press, 2011), 187–225.
[28] Daniel A. Bell, *The Cultural Contradictions of Capitalism* (New York: Basic Books, 1976).

the willingness itself to assume debt, reflecting the personal trade-offs that have to be made between present and future consumption, comes first. Demand, what people subjectively want, is the determinative factor. Nor is the plentiful supply of goods in general decisive. This is what Daniel Bell implies when he goes beyond the introduction of installment credit in pointing the finger at the prosperity generated by capitalism. Bell, it must be said, is right that a suspicion of debt characterized the earlier stages of liberal democracy. A popular ethics guide during the nineteenth century was a book entitled *Self-Help* by Samuel Smiles. He inveighed against the assumption of debt, approvingly quoting the proverb, "Who goes a-borrowing, goes a-sorrowing".[29] Bell is also right to think that the subsequent reversal of that attitude is an epochal change that needs to be explained. Even so, the mere addition of wealth, though it does give individuals greater means to engage in various forms of self-indulgence, does not necessarily make people more present oriented. In fact, all the evidence suggests that the wealthy save a greater proportion of their income than do those with smaller fortunes. Not capitalism, then, but democracy is that which raises what economists like to call individual time preferences.

Democratic Sources of The Sub-Prime Mortgage Crisis

From this greater weighting of the present over the future emanates a good part of the demand for all the consumer and residential loans bundled nowadays into asset-backed and mortgage bonds. What are asset-backed and mortgage bonds? Mortgage bonds, otherwise known as mortgage-backed securities (MBS), are collections of individual mortgages originated by financial institutions. The mortgages are sold to parties that assemble all the loans together into a single tradable instrument, a bundling exemplifying the just alluded to practice of securitization. Buyers of MBS receive the payments made by the mortgage borrowers to discharge interest and principle they owe. Thanks to this arrangement, the bond market effectively becomes the vehicle financing people's purchases of homes. As for asset-backed securities (ABS), these also involve

[29] Samuel Smiles, *Self-help: With Illustrations of Characters, Conduct, and Perseverance* (New York: Harper and Brothers, 1871), 329.

the pooling of individual loans. However, ABS goes beyond funding real estate, encompassing credit cards along with auto, student, aircraft, capital equipment, small business, and home-equity loans. As everyone knows, these instruments mushroomed in the early 2000s—that is, until a wave of default on sub-prime mortgages caused the ABS and MBS market to seize up, giving way to the 2007–2009 financial crisis.

The time preference channel, though, cannot entirely explain the phenomenal growth of ABS and MBS. Democracy's regard for freedom and equality also combined to raise the demand for credit. For most people, after all, a house is their biggest asset. Even where it is not their biggest, it is certainly their most tangible—it is the possession that most vividly signals their economic status. Furthermore, we must remember that anyone who does not own a house is dependent on another. They are subject to a landlord for the satisfaction of a most pressing exigency of human life, the need for shelter. With a house, though, a person becomes more of a master of their living space and less of a servant. All this being the case, it is inevitable that projects to reduce disparities in wealth and status, which democracies with their love of equality are inclined to favor, will eventually encompass real estate. Paradoxically, too, liberty concerns can strengthen such redistributive efforts even while checking and redirecting them. Private property rights have long been seen by the advocates of liberty as inextricably connected to individual freedom. Those rights have also been thought to be more politically secure, the more that people own property. The thinking is that if the general public has more skin in the capitalist game, as it were, they will be more suspicious of ideological agendas that threaten the inviolability of their property. From here, it is not a huge leap to infer the proposition that widespread house ownership ought to be encouraged as a means to promote the cause of freedom. Thus we have the basis of an alliance between the partisans of liberty and equality in democracy.

America's experience testifies to this coalition. To be sure, the campaign to expand home ownership originated out of the equality camp and, as things turned out, the drive for equality would go on to be more of the driving force. It all began in the 1930s during the Roosevelt administration. Back then, mortgages were of a shorter duration than is typical today. Mortgages usually consisted of five-to-ten-year contracts mandating that the borrower repay the entirety of the remaining principle at the end of the stipulated term. At this point, if a homeowner still owed money and was unable to discharge the debt, they would need their mortgage

refinanced by the lender.[30] Otherwise, they would be compelled to forfeit their house. In the midst of the Depression, with real estate values collapsing, banks often chose not to refinance when the mortgage principal came due, precipitating a wave of foreclosures. In response, the US government established the Home Owner's Loan Corporation in 1933. This agency was conferred with publicly raised funds to buy defaulted mortgages and restore them to the original borrowers. A year later, the Roosevelt administration created the Federal Housing Administration (FHA) to insure private lenders against mortgage defaults. The private sector, however, did not take up this offer of insurance to increase residential loans as much as the Roosevelt administration liked. So the latter then created the Federal National Mortgage Association in 1938, what later came to be known as Fannie Mae. Its aim was to jumpstart the mortgage market by purchasing FHA-insured loans outright from financial institutions. This approach eventually worked. The availability of mortgages to the middle classes grew substantially after World War II, leading to the proliferation of suburbs around America's cities.[31]

Move forward now to the mid-1960s. The commercial banks, as well as savings and loans companies, were suddenly finding it harder to provide mortgages. The problem lay in their inability to obtain funds to lend out to home buyers. Behind this scarcity was an uptick in inflation generated by the Fed's printing of money to pay for escalating government expenditures. This uptick caused interest rates to trend higher, as lenders sought to make up for the prospect of being paid back in money with less purchasing power. Add to this the fact that the banks were then bound by Regulation Q. This rule imposed a ceiling on the interest rates which they could pay to depositors. As a result, the rates that banks were able to offer were lower than those in the money and bond markets. Naturally, savers began shifting their funds to those markets. With deposit-taking institutions thus left with fewer monies to lend out, liquidity in the mortgage market began to dry up.[32]

[30] Richard K. Green and Susan M. Wachter, "The American Mortgage in Historical and International Context", *Journal of Economic Perspectives* 19, no. 4 (2005), 93–114.
[31] Christopher L. Peterson, "Fannie Mae, Freddie Mac, and the Home Mortgage Foreclosure Crisis", *Loyola Journal of Public Law* 10 (2009), 155.
[32] Richard K. Green and Susan M. Wachter, "The American Mortgage in Historical and International Context", 97–99.

To remedy this, a new Fannie Mae was brought into being. This would be the version that would figure very prominently in mortgage finance during the 1990s and 2000s. Set up in 1968, the new Fannie Mae was given the authority to buy mortgages from any private lender, not just those insured by the government. More importantly, it was made into a privately held company. It could thus raise money from shareholders and issue debt securities on its own account. The upshot was that the government managed to retain a vehicle by which it could still promote home ownership without at the same time having to commit its own resources. Another benefit for the government was that it could remove Fannie Mae's debt from its balance sheet. This was a key consideration for the Johnson administration in endeavoring to address the government's deteriorating financial position as a consequence of the "breads and guns" policy it was pursuing in simultaneously erecting the Great Society and fighting the Vietnam War.[3333] Worried, though, that Fannie Mae would monopolize the mortgage sector, the US government installed a competitor. Accordingly, Freddie Mac was founded in 1970 along similar lines to Fannie Mae.

Up to this stage, then, the sequence of events in American housing can be summed up as follows. First, democracy provided the impetus to increase house ownership. This was initially pursued through a variety of state agencies. But then the susceptibility of democracy to budget deficits and money creation made itself felt. The government was then compelled to outsource the task of creating more homeowners to the private sector. To ensure that this task was successfully performed, the government made sure not to fully privatize the contracted firms. Both Fannie Mae and Freddie Mac were granted an implicit state guarantee of their mortgage portfolios. A framework ended up being established in which the promoters of housing stood to privately gain from their successes and could shift losses onto society in case of failure—a recipe for improvident risk-taking.

It was when the forces of equality eventually came together with those of liberty that this danger was fully realized. By the mid-1990s, the home ownership rate in the USA had risen to 64 %, up significantly from 43.6 % in 1940.[34] Still, that percentage had not changed much since 1960 when it stood at 62 %. This was despite the fact that Fannie Mae and Freddie

[33] James R. Haggerty, *Fannie Mae*, 38–39.

[34] United States Census Bureau, "Historical Census of Housing Tables", http://www.census.gov/hhes/www/housing/census/historic/owner.html

Mac had taken to securitizing mortgages and insuring the resulting bonds, thus bringing the investing public into the mission of providing finance for housing. By itself, the ideal of equality specifies no upper limit as to what proportion of the population should own a house other than 100 %. It is widely agreed that some people are better off renting than owning. If someone is likely to have to move their residence in the near future, it makes little sense for them to take all the trouble of buying a house. Similarly with those who would prefer not to invest the time and effort necessary in maintaining a house. But as it is difficult to nail down exactly what the optimal percentage of renters might be at any given juncture, equality is given freer sway in the calculation. No clear line exists to restrain the most unwavering advocates of equality from seeing any number substantially below 100 % as constituting a problem. Hence, the drive was launched to step up the issuance of mortgages to low-income individuals, beginning with the 1977 Community Reinvestment Act. This law directs financial institutions to take special account of the credit needs of poor neighborhoods. Subsequently, the Boston Federal Reserve Bank published an influential study suggesting that lenders were not adequately following the Community Reinvestment Act. Banks were found to be denying mortgages to traditionally marginalized groups, such as blacks and Latinos, at rates beyond those which could be explained by the income and employment status of the loan applicants.[35] The study did not charge savings and loans and banks with overt discrimination. But it did hint at a structural bias in the decision-making process surrounding the approval of mortgages.

In the same year that this finding was released, the US government passed the GSE (Government Sponsored Enterprises) Act. This legislation mandated that 30 % of the mortgages purchased by Fannie Mae and Freddie Mac consist of loans to low- and middle-income individuals. Lending standards were further relaxed in 1995 when that quota was raised to 42 % and then again to 50 % in 2000. Under George W. Bush's "ownership society" initiative, by which the liberty side's belief in private property was enlisted in the campaign to expand mortgage availability, that figure reached 56 % by the time the financial crisis entered

[35] Alicia H. Munnell, Lynn E. Browne, James McEneaney, and Geoffrey M.B. Tootell, "Mortgage Lending in Boston: Interpreting HMDA Data", *Federal Reserve Bank of Boston Working Paper*, no. 92–7 (1992), http://www.bos.frb.org/economic/wp/wp1992/wp92_7.htm

its panic phase in 2008.[36] None of this should be taken to imply that Bush's appeal to the liberty tradition was well-founded. The thoughtful supporter of private property cannot help noticing the inconsistency of trying to limit the state by employing it to furnish resources to selected individuals. Neither can it be expected that these individuals will subsequently resist the very state that granted them favors. If anything, the beneficiaries of such policies will look to the government as their patron and be disposed to take a sanguine view of its interventionist ways. But what cannot be gainsaid is this: the ideas of equality and liberty wound up politically working together to infect the financial markets with low-quality MBS.

The counter to this account is that Fannie Mae and Freddie Mac were not responsible for insuring and packaging the worse of the sub-prime mortgages that triggered the crisis. The blame for these, it is said, lies with the issuers of private-label MBS.[37] This version of events lies at the heart of the most widely touted film recounting the financial crisis, *The Big Short*, based on a best-selling book written by Michael Lewis.[38] It must be recalled, though, that the two government-supported entities forced private players out of the higher-quality segment of the sub-prime market and into the lower tiers. With its implicit state guarantee, Fannie Mae and Freddie Mac could finance their operations in the bond market at a lower cost than their fully private counterparts. This allowed the two government-backed players to buy the best of the sub-prime mortgages available. They could then turn around and sell these in securitized form at lower yields than their competition. The dilemma was that this activity could not satisfy the needs of financial institutions looking to meet their obligations under the Community Reinvestment Act. There remaining, as a consequence, unsatisfied demand for additional sub-prime MBS, a private industry emerged and flourished to scour the riskiest environs of

[36] Peter J. Wallison and Edward J. Pinto, "Free Fall: How Government Policies Brought Down the Housing Market", *AEI Financial Services Outlook*, April 2012, http://www.aei.org/files/2012/04/25/-free-fall-how-government-policies-brought-down-the-housing-market_154717638135.pdf

[37] Simon Johnson and James Kwak, *13 Bankers: The Wall Street Takeover and the Next Financial Meltdown* (New York: Pantheon Books, 2010), 144–145.

[38] Michael Lewis, *The Big Short: Inside the Doomsday Machine* (New York: W.W. Norton and Company, 2011). For more details on the film, see IMDb, "The Big Short", http://www.imdb.com/title/tt1596363/

the sub-prime sector.[39] Nor should it be forgotten that governments do not simply exercise their influence through financial means. Their actions carry a prestige and legitimacy that affects the norms and expectations of everyone subject to its authority. By encouraging Fannie Mae and Freddie Mac to augment its sub-prime portfolio, the state lowered people's sense of what constituted a sound loan. The line was blurred between a prime and a sub-prime mortgage. That this was the intent of the US government can be verified in a 2000 statement issued by the Department of Housing and Urban Development, in which it expressed its hope that, "expansion of the GSE's [will] look more like an increase in the prime market".[40]

A larger—and potentially more fatal—objection to our account is that the mortgage problems tended to be centered in the USA. Other democratic nations, after all, are dedicated to freedom and equality. So why were other countries not buffeted by a similar wave of mortgage defaults? Part of the answer is that the underlying premise of this question is not entirely true. Ireland and Spain experienced housing busts as well. Their governments strive to promote ownership by exempting mortgage interest and residential capital gains from taxation, just like the USA. That said, the USA is unique in both providing a government-supported framework for the purchase and insuring of residential loans as well as relying heavily upon the financial markets to fund those loans via the securitization model. The USA is among the few developed nations in which the state is involved with the former, the others being Japan, Netherlands, and Canada.[41] In none of these latter countries, unlike the USA, is there a specific directive for mortgages to be made readily available to low-income earners. Accounting for this difference is the relative strength of liberty concerns in the USA. That has enabled both of democracy's moral pivots to commingle there in producing a more active role for government in housing than could be had from the sway of equality alone.

Far more significant, though, is the legacy of slavery and racial segregation. This profound and lasting moral stain has understandably made the

[39] See the dissenting statement by Peter J. Wallison in *The Financial Crisis Inquiry Commission Report* (Washington: US Government Printing Office, 2011), 464, http://fcic.law.stanford.edu/report

[40] HUD quoted by Peter J. Wallison and Edward J. Pinto, "Free Fall: How Government Policies Brought Down the Housing Market", *AEI Financial Services Outlook*, 4.

[41] IMF, "Global Financial Stability Report", 126, http://www.imf.org/external/pubs/ft/gfsr/2011/01/index.htm

American people and its politicians more supportive of policies designed to lift the condition of poor minorities. The result, as measured by an IMF index of government participation in housing, was that the USA headed into the crisis with the highest level of intervention among advanced economies.[42] Add to this America's deep and active financial markets. These offered a receptive place in which the mortgages originated under the state's aegis could be packaged and traded. Thus, the US percentage ratio of MBS to all residential loans was 64 % in 2008, more than double the next closest nations, Britain and Canada, at 31 %.[43]

One more objection to my account is left. A skeptic might be willing to admit that the logic of democracy leads to the attempt to expand home ownership with the provision of more credit. Nevertheless, once the credit is ultimately funded through the bond market, as it is when mortgages are securitized, the decision as to specifically whom to extend credit, and on what terms, does not rest with democracy. That decision belongs to the bond market. Nobody forced investors to purchase mortgages made out to high-risky borrowers. That investors nevertheless did was a market failure, not a democratic one.

To answer this objection, let me point to a complicating factor that arises when mortgages are bundled into traded securities. When a bank is deciding whether to extend a mortgage to a local individual, it can readily obtain the information needed to assess the likelihood that the borrower will repay the loan. If the bank decides to keep the mortgage on its books, it can monitor the borrower's financial condition without incurring any great cost. In other words, information flows relatively impeded from the borrower to the lender. This is not the case when the lender effectively becomes an investor in an MBS. It would be a daunting task for an investor to evaluate the credit worthiness of each and every borrower behind the thousands of mortgages in a single MBS. Now informational constraints of this kind are not uncommon in the general marketplace. Someone looking to buy a used car will usually not have the expertise as to whether a certain model of vehicle is going to need multiple repairs. Market forces often solve this problem through firms that specialize in providing information to buyers. With used cars, for example, there is *Consumer Reports* magazine. The bond market, too, has its own equivalents to *Consumer Reports*,

[42] IMF, "Global Financial Stability Report", 126.
[43] IMF, "Global Financial Stability Report", 117.

firms that evaluate the quality of fixed-income securities. They are known as bond-rating agencies.

More than a few observers see the bond raters as masters of the financial markets universe.[44] Globally speaking, three agencies dominate the markets: S&P, Moody's, and Fitch. Similar to the way professors evaluate student papers, these organizations use letter grades to assess bonds. However, the rating agencies are far more precise in their qualitative distinctions. They use a larger combination of multiple letters, in some cases even numbers, to indicate the likelihood that the bond issuer will repay investors. In general, the ratings go from A to C, with more A's signifying a higher rating and fewer C's a lower rating. Hence, AAA is the highest bond rating for both S&P and Fitch, while for Moody's it is Aaa. For S&P and Fitch, the lowest rating is D, indicating that the bond is in default, whereas Moody's will not assign a rating to such debt. Bonds with a higher rating, those in the A and upper B range, are categorized as investment grade. Meanwhile, those carrying a rating in the middle B range and below are non-investment grade or, to use the more popular term, junk.

Bond-rating agencies were singled out as chief culprits in the breakdown of the MBS market in 2008. The indictment invariably refers to their business models, which encouraged the bond raters to overstate the quality of MBS and ABS. Allegedly motivating them in that way is that they are paid by the companies that package and issue MBS. In the past, investors paid the bond raters. But that changed once technological advances, namely the photocopier, made it practically impossible for the distribution of published reports to be limited to those who paid for them. Also, bond issuers were forced by the bankruptcy of Penn Central in 1970 to more assiduously certify the quality of their securities to shell-shocked investors.[45] As a consequence, investment analysis acquired the characteristics of a public good such that a firm could not hope to earn a reasonable profit in selling it. What seems to have saved the industry, though, is that government regulations mandate that certain classes of institutional investors—commercial banks, insurance companies, pension funds, brokerage firms, and mutual funds—use credit ratings in determining whether their portfolios meet legislated definitions of financial safety. To attract demand

[44] Timothy J. Sinclair, *The New Masters of Capital: American Bond Rating Agencies and the Politics of Creditworthiness* (Ithaca: Cornell University Press, 2005).
[45] Lawrence White, "Markets: The Credit Rating Agencies", *Journal of Economic Perspectives* 24, no. 2 (2010), 214.

for their securities, then, bond issuers find it necessary to obtain a rating and, indeed, a powerful interest in getting the highest one possible. So if they do not like the evaluations a particular bond rater tends to give, they might shop for a better grade elsewhere. Knowing this, bond raters will seek to prevent their customers from seeking a second opinion at all and give the benefit of the doubt in their assessments.[46]

The weakness in this argument is in not recognizing that bond raters have an interest in maintaining their reputations. Once a pattern of shoddy and compromised analysis comes to sight at a particular rating agency, bond issuers can be expected to shy away from using its services for fear of not being able to sell their securities. To avoid this conclusion, one would have to see the bond raters as being systematically vulnerable to short-sightedness. This is hard to believe in an industry tilted to cultivating the opposite mindset. So much of their analytic task involves peering out years, if not decades, into the future of alternative economic scenarios. This being said, the alignment of bond rater incentives with quality analysis does presume the existence of a freely competitive market in the industry.

Alas, that is not the reality. In the USA, only a select group of firms count as "Nationally Recognized Statistical Organizations" for the purpose of bond ratings needed to comply with regulations. This designation goes back to 1975 when the Securities and Exchange Commission (SEC) sought a convenient means of delineating capital adequacy rules for broker-dealers after a plethora of these firms plunged into bankruptcy during the late 1960s.[47] Even well before this, the government had already appealed to ratings in the framing of regulations, obliging commercial banks in 1936 not to hold bonds ranked below BBB. Regulatory invocations of ratings have multiplied ever since, with Herwid and Pershid Langohr listing 13 instances of such uses from 1936 to 2000.[48] The practice is not limited to the USA, as European regulators also appeal to ratings in their legislative dictates, though not as extensively as their American

[46] Robert W. Kolb, *The Financial Crisis of our Time*, 220.

[47] Emily McCllintock Ekins and Mark A. Calabria, "Regulation, Market Structure, and the Role of Credit Rating Agencies", *Policy Analysis*, (August 1, 2012), 7–10, www.cato.org/pubs/pas/PA704.pdf

[48] Herwig Langhor and Patricia Langhor, *The Rating Agencies and Their Credit Ratings: What They Are, How They Work, and Why They Are Relevant* (West Sussex, UK: John Wiley and Sons, 2008), 431–432.

counterparts. What this means is that the big three—S&P, Moody's, and Fitch—are cosseted from competition by state-imposed barriers to entry. Unless a firm is willing to undergo the costs of becoming recognized as an officially sanctioned bond rater, incumbent agencies need not be anxious about losing business. It thus becomes more affordable to risk reputational damage by snapping up the short-term gains available from issuing inflated ratings. One might think that institutional investors could fully discount this government created bias. But the problem is that they have an interest in acquiescing to the prevailing regime and buying whatever satisfies regulatory thresholds. The status quo gives institutional investors a convenient exculpation should their portfolios ever collapse. They retain the option, after all, of claiming that they were invested in high-rated bonds of the sort that the government told them to buy.

Prior to the sub-prime mortgage debacle, in response to the failure of credit-rating agencies earlier in the decade to alert investors to financial irregularities at Enron and WorldCom, the US government had already taken steps to open up the industry to competition. Yet the 2006 Credit Rating Agency Act merely reduced the arbitrariness by which the SEC could issue the designation of "Nationally Recognized Statistical Organization", instead of abolishing that designation altogether as a requirement to operate as a full-fledged bond rater.[49] Not only that, but the legislation did not touch the bevy of rules dictating investors to heed ratings in their portfolio choices. There remains on the books the basis of a politically inflated demand for bond-rating services. Instead, the latest raft of regulations in the 2010 Dodd-Frank Act preserves the bond-rating oligopoly by opting instead for tighter supervision of incumbent firms as well as measures aimed at reducing conflicts of interest within those firms generated by their security-issuer-pays model.[50] Some of the regulatory requirements, it must be pointed out, have been removed that made it incumbent on financial institutions to heed the ratings of the bond agencies.[51] But the government's imprimatur over who can be a bond rater

[49] Emily McCllintock Ekins and Mark A. Calabria, "Regulation, Market Structure, and the Role of Credit Rating Agencies", 29–30.

[50] *SEC*, "Dodd-Frank Act Rulemaking: Credit Rating Agencies", http://www.sec.gov/spotlight/dodd-frank/creditratingagencies.shtml

[51] See, for example, Securities and Exchange Commission, "Removal of Certain References to Credit Ratings under the Securities and Exchange Act of 1934" (December 27, 2013), http://www.sec.gov/rules/final/2013/34-71194.pdf

still remains. As with any granted privilege, the awe and respect it elicits is greater the longer one has had it. And so the big three incumbents continue to dominate the market.

Consistent throughout has been an overriding desire to maintain a system in which the government ensures that the chief stewards of the people's savings hold only the safest financial assets. Alexis de Tocqueville would have expected this, even though he never heard of a credit-rating agency. He well noted, "how the increasing love of well-being and the shifting character of property make democratic peoples afraid of material disturbances"[52] (p. 671). In other words, the quest for material comfort and security produces widespread anxiety about the prospect of undergoing a decline in the standard of living. Heightening this anxiety is that the market economies which liberal democracies embrace are characterized by incessant change. The relative fortunes of occupations and industries continually gyrate in response to shifts in technology, production methods, and consumer preferences. People react to all this with a marked level of risk aversion. They could, to be sure, shield themselves from these vicissitudes by forming voluntary associations that pool individual risks. For instance, workers can always establish fraternal societies in which each pays an annual due in return for receiving benefits in case of sickness and unemployment. Yet liberal democracies, as Tocqueville well explained, encourage an individualistic ethic that leaves everyone inhabiting a social island shared merely with their family and closest friends. Anyone not on that island is viewed as a stranger with whom they cannot confidently relate for social support. With no other alternative before them, democratic peoples invariably look to the state as the most promising agency to manage their risk. The government's employment of selected bond-rating agencies to promote financial stability represents a manifestation of this phenomenon.

Public Debt and The So-Called Bond Vigilantes

This desire for security is crucial, too, in explaining the leverage which the government exercises upon the bond market when it comes to its own debt. Those who deny this leverage, who instead hold that it is exercised by the bond market over governments, often point to that species of financial life known as the bond vigilante. Originally uncovered by Ed Yardeni,

[52] Alexis de Tocqueville, *Democracy in America*, 671.

a well-known investment research consultant, a bond vigilante is someone who roams the sovereign debt market on the lookout for governments that are pursuing macroeconomic policies to which investors are liable to object. Such policies include elevated budget deficits, escalating debt, and a loose monetary regime. Once such malefactors are identified, the bond vigilante will join forces with his or her fellows in the cause of market justice and aggressively bet against the debt securities of the country involved. With the costs of funding its debt increasing as a result, the country is forced to obey the bond vigilante. Depending on the problem at hand, the budget deficit will have to be slashed, or the money supply tightened, or both. Given that those who take part in this type of trading are described as vigilantes, the case is already stacked against their actually pursuing justice. It is a way of speaking very much in accord with the opinion of bond market critics who see traders there as having usurped the democratically granted authority of governments to oversee the economy. There was a slew of books and articles published in the 1990s stating this charge. The issue then went dormant in the early to late 2000s, until it reemerged amid the European sovereign debt crisis that began in 2010. Various politicians and intellectuals once again raised the cry that the bond market had displaced democracy in imposing austerity policies.

What the critics neglect to take into account is that the system of government under which we operate is meant to be a liberal, rather than a majoritarian, democracy. In the latter, the ultimate decision-making authority in the community lies entirely with whomever 50 % + 1 of the population deems appropriate. Anything that constrains this authority, such as bond investors suddenly demanding a higher yield for government debt securities, will appear as an affront to democracy. The implicit assumption here, though, is that the money capital wielded by bond investors does not truly belong to them to direct as they please. That is, whenever the government's necessities demand it, bond investors are enjoined to offer their funds to the community on amicable terms. This is tantamount to declaring that the will of the majority trumps private property rights. In a liberal democracy, by contrast, majority power is given its due in making social decisions, but it is not supposed to reign absolutely. It is checked and balanced by practices and institutions that defend regional interests. It is constrained by the requirement of putting proposed legislation before the review of a body less beholden to the public. It is framed by a judicial framework designed to protect a set of individual rights based on the rule of law. Included within that set is the right to private property.

True, liberal democracies limit that right when a compelling public interest demands it. Yet barring a war that threatens the nation's security, it is hard to justify the expectation that investors ought to be ready to lend out their money at affordable rates to the government irrespective of the policies being pursued. Such an expectation, taken to its logical extent, would permit the state to compel individuals to purchase its bonds. That is what the Northern Italian republics of Venice, Florence, and Genoa did in the Renaissance when bond markets first emerged.[53] But it is not what liberal democracies are supposed to do.

In respecting the property rights of bond investors, it is not as if liberal democracy is granting sustenance to a faction inherently at odds with the common good. In theory, the credit markets can serve as a check to the everlasting propensity of governments to misuse their power. Recall the tax consumer versus taxpayer analysis from the previous chapter. Given the combination of the uneven distribution of wealth in advanced economies, and the democratic principle that a minimum of 50 % + 1 decides for the community, the most successful politicians will be those that build a majority coalition of tax consumers on the backs of a minority of taxpayers. Democracy's commitment to equality furthers this dynamic, giving moral force and urgency to this state-directed redistribution of wealth. After some time has passed and politicians have outdone each other in offering public goods to voters, the costs of the government's programs threaten to turn the tax consumers into taxpayers. To forestall voter ire, especially among the electorally critical middle class, politicians find it very tempting to collect less in taxes from the public than is spent on their behalf. Consequently, the government runs persistent budget deficits and piles up a large public debt, thereby passing on the costs of present government benefits to future generations—who, conveniently for democratic politicians, do not have a vote. By lending to the government the difference between its outlays and receipts, the bond market offers politicians a very beguiling source of financing. Precisely by bringing the state within its ambit, however, the bond market can keep it from going too far with its expenditures. Bond traders can progressively raise the yield on the government's bonds the more that the public debt rises. The government would then have an incentive to fix its finances before reaching the critical point where bond investors refuse to continue funding it or where the required

[53] James Macdonald, *A Free Nation Deep in Debt*, 73.

yield escalates sharply—all thanks to bond investors' application of their property rights. This check becomes even more vital, in light of how our liberal democracies have abandoned the monetary tie to gold. Absent this constraint, governments can more confidently go into debt knowing that the option exists to simply manufacture currency to pay back their bonds. If yields are increased concomitantly as monetary conditions are relaxed, the bond market can hinder this politically convenient tactic.

In practice, do the bond markets constrain governments in these ways? In light of what has transpired in the Eurozone since 2010, first in Greece, Ireland, Portugal, and then subsequently, in Spain and Italy, the answer would appear to be an obvious yes. In one way or another, accelerating bond yields have forced these countries to retrench their public sectors and raise taxes (though, it must be said, much greater emphasis has been laid on taxes). Yet the bond market's invigilation of governments is more complicated than that. This becomes evident when we ask: how did several nations, developed ones no less, arrive at the stage where debt finance either became prohibitively expensive, or virtually unavailable, all around the same time? If the bond market were serving as an effective check, would not at least a few of these country's politicians have been deterred from watching over a perilous buildup of public debt? Perhaps these instances can be brushed aside as a freakish sequence brought about by a perfect storm of unfavorable political and economic variables. Even then, there is a longer historical record that still needs to be explained away.

States renege on their debt more regularly than one might think. In his 1933 book, *The Bond Market*: *An Autopsy*, Max Winkler spoke of government defaults as, "an ancient tradition". This goes back to Dionysus of Syracuse in the fourth century BC through to the Greek city-states of the same era. Then there was Rome in its both republican and autocratic phases as well as England between the fourteenth and sixteenth centuries. Spain defaulted on several occasions in the sixteenth and seventeenth centuries. So did every single Latin American country in the nineteenth century. That century also saw defaults in Germany, Austria, Portugal, and Spain again.[54] Then, too, there was the wave of defaults after World War I among many of that conflict's belligerents. A default, by the way, consists not just in the non-payment of a scheduled obligation. It also encompasses a temporary suspension of payment, a restructuring of the debt, or

[54] Max Winkler, *Foreign Bonds*: *An Autopsy* (Washington: Beard Books, 1999).

even the inflationary tack of paying the debt back in a deliberately cheapened currency. Using a more statistical approach than Winkler, Carmen M. Reinhart and Kenneth S. Rogoff count 318 defaults between 1800 and 2008, this among 66 countries accounting for 90 % of world GDP.[55] That works out to a rate of about 1.5 defaults a year, although their occurrence tends to be temporally clustered. The nineteenth century featured a number of short-lived spikes in debt reneging. Defaults reached their highest levels during the interwar period. Subsequently, the rate declined toward the pre-World War I range, eventually plumbing all-time lows just before the recent financial crisis.

Parsing the data, Reinhart and Rogoff notice that not every country is equally subject to losing confidence from the financial markets. They distinguish two groups: the serial defaulters and the non-defaulters. The serial defaulters are made up of developing nations with a history of debt restructuring and high inflation. The non-defaulters, meanwhile, consist mostly of developed nations that have demonstrated a long and consistent record of meeting their credit obligations and achieving price stability.[56] The first group manifests less of what Reinhart and Rogoff call debt tolerance. What this means is that the markets turn against the securities of the serial defaulters at significantly lower thresholds of public debt than is the case with the non-defaulters. In 2001, for example, when Argentina was felled by the markets, its public debt/GDP percentage stood at 50 %. Countries in the non-defaulter category generally have to be above 60 % before encountering serious obstacles in obtaining capital from the bond markets. When Sweden succumbed to a crisis in the early 1990s, its public debt/GDP ratio was in the 60–70 % range. Not too much later in the mid-1990s, Canada saw its bond yields escalate when its debt hit similar levels. More recently, non-defaulters have been able to go much beyond those levels before attracting the bond market's scrutiny. Portugal saw its line in the sand drawn at around 80 %, and Italy even higher at 115 %. Japan's ratio currently stands around 174 % and it is able to borrow from investors at some of the lowest interest rates in the world. The USA can do the same even though it recently breached the 100 % threshold. This difference in treatment accorded to countries based on their policy history

[55] Carmen M. Reinhart and Kenneth S. Rogoff, *This Time is Different: Eight Centuries of Financial Folly* (Princeton: Princeton University Press, 2009), 34–47.
[56] Carmen M. Reinhart and Kenneth S. Rogoff, *This Time is Different: Eight Centuries of Financial Folly*, 21–33.

suggests that the bond markets do hold governments to account. Lending the most credence to this is Reinhart and Rogoff's observation that "graduation" from serial defaulter to non-defaulter takes a long period of fiscal and monetary probity for a nation to achieve.

The problem is that the bond market is like the citizen army of a medieval town that only goes into action when its walls are about to be breached by an opposing force. To be a truly effective check on states, bond traders should be taking preventative measures when the enemy of excess debt is still at a distance, well away from the town walls. Yet bond markets often do the exact opposite, feeding the enemy by eagerly investing in a spendthrift country's bonds. Debt crises tend to be preceded by massive capital inflows from abroad. A good part of these monies find their way into the country's bond and money markets. Afterwards, this inflow is suddenly reversed into an outflow. This is what happened in Mexico prior to its receiving a bailout from the USA and IMF in 1995. It also occurred in Argentina in the decade before its 2001 default. And it was the same in Portugal and Greece in the decade leading up to the Euro sovereign debt crisis. Such was the demand for Greek bonds, which the country effectively defaulted on when it negotiated a restructuring of its debt in 2012, that yields spreads versus German bunds fell from 11 % in 1998 to a mere 0.1 % to 0.3 % range between 2002 and 2007. What is telling in all these cases is that the countries involved were all viewed as candidates for graduation from the serial to the non-defaulter class. Bond investors are evidently enticed by the potential in these situations to reap huge rates of return. They can buy debt securities on the cheap issued by nations that later become recognized as solid credits. But anytime the chance of such gains exists, the human inclination toward overconfidence is apt to be triggered. In their excitement, investors bid up prices too high and, as Adam Smith discerned, returns do not end up matching the risks assumed.[57]

Aside from this psychological weakness, there are deeper factors making the bond market a less than watchful sentinel. Chief among these is the desire for safety that animates the vast majority of human beings, a desire more firmly impressed on the dominant middle-class souls of liberal democracy exposed to the tremors of market economies. The thrust of this is that the bonds issued by an entity armed with a coercive authority

[57] Adam Smith, *The Wealth of Nations*, I, x, b.

to tax are usually going to elicit strong demand. Risk-averse investors are the natural allies of the tax-consuming class whose interests eventually predominate in democracies. The bond market will happily fund the tax consumers in return for a share of the taxpayer pie. It cannot be denied that fixed-income players have an interest in seeing that the government does not overreach. But the chase for a secure yield is apt to temper this concern. And this leaves the markets sufficiently emboldened to test the maximum point of a state's debt tolerance. Indeed, so strong is this impulse that investors are apt to overlook the risks inherent even to the most secure instruments of sovereign debt. An illustration of this is the tendency to define the bonds of a few highly ranked governments, such as the USA and Germany, as zero-risk securities for the purposes of calculating the risk premium on other bonds. I have followed this common usage here in describing yield spreads. Strictly speaking, however, nothing in the investment world is perfectly safe. There is no refuge from which to completely escape the Heraclitean flux of advanced commercial societies. Only time, of course, will tell if those who have harkened to the relative sanctuary of German bunds and US Treasury securities since 2008 will end up harshly rediscovering that fact. The rapid ascent in both these countries' debt/GDP ratios as their bonds have rallied is certainly ominous.

Also helping to sustain an inflated demand for government bonds is the web of aforementioned regulations. By these, I mean the rules mandating such institutions as banks, insurance companies, and pension funds to limit their portfolios to those debt securities officially designated as safe. History amply demonstrates the bond-rating agencies are disposed to give them the badge of safety right up until it becomes frightfully obvious that the state backing the debt is under major stress. Greek bonds were not downgraded to junk until April 2010 by S&P, by which time their yields were 6.5 % above German bunds.[58] Capital requirements for banks—the guidelines for which are established internationally by the Basel Accords—permit them to set aside fewer reserves for government bonds. Needless to say, this rather conveniently serves the interests of the states making up the Basel regulations in assuring themselves a market for their debt. Even amid the recent turmoil in the Southern European bond market, European banks could buy their own nation's bonds and

[58] Emma Ross-Thomas and Andrew Davis, "Greece's Debt Cut to Junk, First for Euro Member", *Bloomberg*, (April 27, 2010), http://www.bloomberg.com/news/2010-04-27/greek-debt-cut-to-junk-at-s-p.html

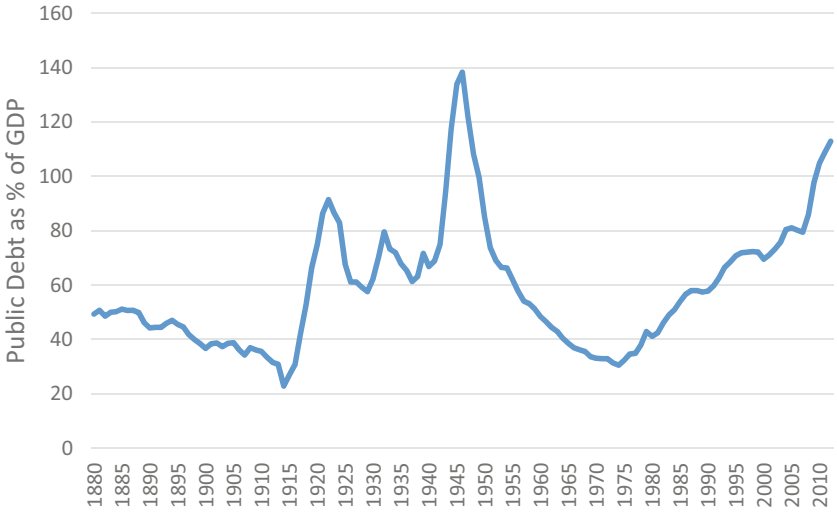

Fig. 4.5 G20 Advanced nations debt as % of GDP, 1880–2012. *Source*: IMF

not have to set aside any capital. In 2015, the Basel Committee of Banking Supervisors announced that it would review this practice.[59] But as I write these words, it was still being allowed. Nor should we overlook the investment banks who earn fees and commissions from marketing and trading sovereign debt. To protect their bottom line, the investment banks prefer to see governments continually issuing bonds. What all this amounts to is a financial version of the military–industrial complex, what one might call the government bond market complex.

Figure 4.5[60] graphically seals the case that the bond markets have not been up to the task of restraining governments in the post-Bretton Woods era. The chart below depicts the public debt/GDP ratios of the

[59] Huw Jones, "Global Bank Watchdog to Review Rule on Zero Weighting of Sovereign Debt", *Reuters*, (January 23, 2015), http://www.reuters.com/article/2015/01/23/basel-sovereign-regulations-idUSL6N0V22ZO20150123

[60] IMF, "Historical Debt Database", http://www.imf.org/external/ns/cs.aspx?id=262. For a description of the database, see S. Ali Abbas, Nazim Belhocine, Asmaa ElGanainy, and Mark Horton, "A Historical Public Debt Database", *IMF Working Paper*, no. WP/10/2045 (2010), http://www.imf.org/external/pubs/ft/wp/2010/wp10245.pdf

G20 advanced nations from 1880 to 2012. In part, the chart reminds us how wars and their aftermath used to be the major source of pressure on government budgets. Indeed, the need to finance wars lies at the historical origins of the bond market in Renaissance Italy, seventeenth-century Holland, and eighteenth-century England. Back then, the tax-consuming class was smaller than it is in contemporary democracies. The tax consumers were made up of elites ambitious to attain prestige and gain in war. They were also driven by a cupidity that thought it normal business to secure international markets through force.

From the onset of World War I to the immediate years after World War II, the G20 advanced nations rarely maintained a debt ratio below 60 %. Before that, during the classical gold standard period, public indebtedness was low. That figure also trended lower after World War II, plumbing a low of 23 % in 1974. Not uncoincidentally, that was around the time that the last remnants of Bretton Woods were torn down. The consequent delinking of money to gold has completely unleashed democratic governments to indulge their propensity toward deficits and debt. Driven by a much larger cohort of tax consumers than ever before, more interested now in social welfare expenditures than in fighting wars, G20 debt ratios have steadily risen since 1974 toward interwar levels. And all of this made possible by the bond market. Should it continue being so amenable—and there is little reason to see why it will not—the weight of the public debt will continue its ascent, especially as Western governments are expected to face a rising tide of spending on entitlements to pensions and health care as the population ages.[61] Sooner or later, therefore, the bond vigilantes will make their appearance to hold governments to account. One cannot be sure when exactly that will happen. But whenever it does, it will probably be too late.

No Easy Fixes

To conclude this chapter: just because the bond market sometimes demands more onerous lending terms from certain governments does not imply that the political realm is at the beck and call of its creditors. And, just because the bond market happened to be the scene of mayhem for a certain class of debt, namely MBS, does not do away with the fact that

[61] See Laurence J.Kotlikoff and Scott Burns, *The Clash of Generations: Saving Ourselves, Our Kids, and Our Economy* (Cambridge, MA: The MIT Press, 2012).

the scene was ultimately directed by politicians. After all, if a horse should suddenly resist the severe whippings of the charioteer, nobody would infer that chariots are generally directed by horses. As long as the charioteer respects the natural limits of the horse, nobody can doubt who is truly leading the race.

The government ought to get off that chariot. It should cease favoring debt in allowing interest payments to be deducted from taxes. It should stop subsidizing people's assumption of debt to buy houses. It should leave the evaluation of bonds to private firms and abolish the phalanx of regulations limiting the competition faced by the dominant rating agencies. Most critically, the government should once again be confined by a gold standard so that it becomes more reluctant to run up the public debt with the co-operation of the bond market.

These are the prescriptions that most logically follow the diagnosis offered here. The rub is that the diagnosis pinpoints democracy as the root of the problem. And those prescriptions involve undoing precisely what democracy put into place following its own predominant tendencies. Fixing the political distortions of the bond market within the confines of democracy is thus a much more complicated affair than simply dismantling all of the government's various interventions. Any solution must recognize that one is going against the grain of democracy. I will sketch out some proposals in the pages ahead. For now, though, let me shift your attention to the politics of that most popularly followed sector of the financial markets: the stock market.

CHAPTER 5

The Stock Market

When most people think of "the markets", what immediately comes to mind is the trading of stocks. Indeed, nothing in the universe of investment finance has a greater hold on the popular mind than the stock market. When local news reports cover business, it is always, if not solely, equities that they refer to in alerting us to the latest numbers on the Dow Jones and the Nasdaq (National Association of Securities Dealers Automated Quotation). The major US television networks specializing in business news—CNBC and Fox Business in particular—have their screens flowing with stock quotes. Even though newspapers no longer publish full tables of share prices, this data continues to feature prominently in business sections. Newspapers continue to feature a list of the most actively traded stocks, a rundown of the biggest gainers and losers, as well as a summary of the high, low, and closing levels of local company shares. On the Internet, where most people now go to look up quotes, this price action, along with the related stories, definitely stands out. To see this, one need only consult the home pages of popular financial sites like Google Finance, CNN Money, Yahoo Finance, TheStreet.Com, and MarketWatch. Other than perhaps real estate, stocks are the most discussed asset class at dinner parties and in everyday conversations.

It is not hard to figure out why this is the case. Equity price movements stir two of the mightier passions of the human soul: hope and the love of gain. The stock market offers investors the chance of putting a relatively small amount of money into a company's shares at the early stages of its

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growth trajectory and then watching that stake multiply into a huge fortune as the firm's profits leap exponentially. Take an investor who invested $10,000 in shares of Apple Inc. in 1984. This was four years after it had first issued stock and also around the time the company had introduced the Macintosh computer. By the end of 2015, that investor would have accumulated a position worth $2.8 million. Even someone who had waited until 1980 to purchase shares in Walmart, by which time the discount retailer had already grown to surpass $1 billion in revenues, would have seen a $10,000 initial investment turn into $6.8 million at the end of 2015.[1] Huge price changes over shorter periods of time than this stoke people's excitement all the more and the stock market does not hold back such beguiling prospects. Timminco, a Canadian solar technology firm, could have been bought for $5 per share in Canadian currency when environmental stocks were coming into vogue in mid-2007. Within a year, as the fervor for alternative energy investments swelled, the shares had skyrocketed to $35. Had one been able to secure an initial allotment of stock in LinkedIn, a social networking site for professionals, one would have doubled one's stake within a single trading day. Many more stories like this could be told. Still, an equal, if not greater, number could be told with a far less happy ending, an outcome that evokes a more powerful emotion than hope—fear.

As one would expect in a democracy, the stock market's place in the popular consciousness makes itself present in the political arena. It is well-known that presidents and prime ministers have their performance judged on what happened to the rate of unemployment, economic growth, and inflation when they held office.[2] But we must not forget that they are also assessed by how well the stock market progressed during their tenure. A very good way to predict an upcoming US Presidential election, at least when an incumbent is running, is to simply look at how the stock market has performed in the previous three years.[3] Despite the quip, first

[1] Return calculations here based on price history obtained from Yahoo Finance: http://finance.yahoo.com/

[2] Ray C. Fair's US Presidential election prediction model, whose forecast ended up within the standard error range for the 2012 campaign, simply uses GDP growth and inflation (as measured by the GDP deflator) as the components of a three-variable equation. See "Vote Share Equations—November 2012 Update", http://fairmodel.econ.yale.edu/vote2012/index2.htm

[3] Robert R. Prechter, Jr., Deepak Goel, Wayne D. Parker, and Matthew Lampert, "Social Mood, Stock Market Performance and U.S. Presidential Elections: A Socionomic Perspective on Voting Results", *SAGE Open* (2012), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1987160

made by the Nobel Prize-winning economist Paul Samuelson, that the stock market has predicted nine of the last five recessions, sharp declines in share prices are often interpreted ominously and beget reactions of varying forcefulness from government officials.

Of course, democracy's interactions with the stock market also go the other way. The stock market does not simply influence some of the goings-on of democracy. More significant is that the goings-on of democracy influence the market. What happens in Washington and other political capitals affects and, indeed, structures the stock market. At least in terms of the public's involvement, the stock market is arguably the most regulated of all the financial marts. Some of this interventionism shows discernible signs of democracy's commitment to economic growth and freedom. But liberal democracy, as we have seen, is more inclined to the pursuit of equality.

Accordingly, this disposition is much more clearly etched into the regulatory structure governing the issuance and trading of stocks. Alongside this larger moral and ideological force, equities also reflect the part of special interests in extracting privileges out of the democratic political process. Equity returns, too, are impacted by the policies that governments are disposed to implement as well as the institutional framework by which they help set the rules of the economic game. Not only is the magnitude of returns affected by politics, so too is their variability. Indeed, a provisional case can be made that the state generates the bull and bear market cycles that give rise to so much drama in the stock market. For all the noble intentions that governments profess in regulating the stock market, much of what they do is counterproductive. A great deal of this activity, it must be said, would be better off curtailed. As it is for bonds, though, so it is with stocks: a not insubstantial part of the government's meddling must be accepted as a basic fact of democratic life.

Defining and Categorizing Stocks

By way of a primer for readers that are not entirely familiar with equities, or who may need a refresher, let me begin by noting that stocks represent ownership in a firm. Ownership will usually be partial and, hence, shared with others. The extent of one's respective stake is determined by the number of shares one holds and, more importantly, the proportion that number represents relative to the total amount of existing shares. However, stock ownership is not like a typical partnership, where the several owners are personally and jointly liable for obligations arising from

debts incurred by the firm or any legal judgments against it. Each of the partners—and, for that matter, the single owner of a sole proprietorship—can potentially lose more than what they originally invested in the business. By contrast, those who share possession of a company through stock enjoy limited liability. Shareholders can at most be parted from the whole amount of their investment in the shares. Their other personal belongings will not be affected if, say, the company is found guilty of a gargantuan environmental crime and is ordered to pay damages of an amount greater than its net worth. This means that the corporation has a legal status fundamentally distinct from the individuals who own shares in it.

From the time that the Dutch East India Company first issued shares to the public in the early 1600s, this limited liability provision has been seen as imperative. No other voluntary mechanism exists to attract large pools of investment capital to sizable undertakings capable of realizing economies of scale. After all, most individuals who buy stock do not run the company on a day-to-day basis. Rather, the company is operated on their behalf by a team of professional managers. The latter usually own some stock in the company, but often not amounting to a large percentage of the outstanding shares. At the same time, stockholders cannot readily monitor the firm's activities. The proud owner of 1000 shares in Disney cannot walk into the accounting department at company headquarters in California and expect to obtain access to the current month's advertising sales figures. By contrast, Disney's chief executive officer (CEO), even if he or she did not own a single share in the company, could quickly receive that data. Nobody would entrust their money into an arrangement of this kind, unless they could be assured that their risk is limited to the loss of their investment. Their house, car, and other personal assets have to be put beyond jeopardy in order to entice any interest. Limited liability does not mean that shareholders lose all influence over the company. They can have a say in who manages the company at the highest levels as well as in defining its over-all strategy. Shareholders can exercise this voice by voting for a Board of Directors that represents their views. But as each share generally equals one vote, only those investors who own, or are able to effectively command, a majority of the stock are in a position to steer the company. As such, the typical stockholder effectively has no control rights over the firm. Their rights are limited to the cash flows generated—what they have, more precisely, is a claim to partake in the firm's profits.

The most basic categorization of stocks divides them into preferred and common. Preferred stock is analogous to bonds insofar as investors are

drawn to them by the promise of a reliable stream of periodic payments. In the bond universe, it will be remembered, these are referred to as coupon payments. With stocks, the equivalent are called dividends. Like bonds, preferred shares do not carry voting rights. As a compensation for this, preferred shareholders have priority over the distribution of profits, or any monies resulting from the firm's liquidation, at least in relation to the owners of the common shares.

Interestingly enough, preferred shares have lately emerged as the government's favored means of injecting capital into struggling companies whose survival is thought to be in the public interest. The lack of voting rights with preferred shares works to allay any concerns about nationalization. Such concerns tend to arise in liberal democracies, committed as they are to private property. Moreover, the superior claim that preferred shareholders have to the firm's profits vis-à-vis the common shareholders helps in convincing the public that taxpayer interests are being privileged over those of owners. During the recent financial crisis, preferred shares was how the US government tried to shore up the major banks as well as AIG, a global insurance company whose troubles threatened to bring the entire financial system down. It was also how the American government, along with its Canadian counterparts at the federal and provincial level, came to the rescue of General Motors and Chrysler. To be sure, the bailout package was more complicated than the simple buying of preferred shares. Aid was also offered via the purchase of preferred convertible shares. Holder of these securities can choose to redeem them into common shares at a preagreed price. Governments also invested in distressed firms by purchasing stock warrants. These also confer the right to buy the common shares, but without the prospect of dividend payments along the way that preferred convertible shares offer. By thus partly tying themselves to the fate of the common shares, the US government left taxpayers the opportunity to gain handsomely from the recovery of the companies it assisted.[4]

Common shareholders are the last claimants on the firm's cash flows. Everyone else contracted with the company must be paid first. Not only does this include bondholders and owners of preferred shares, it also encompasses government tax collectors, suppliers, creditors, and employees. Yet precisely because they represent the last claimants, common shares

[4] Congressional Budget Office, *Report on the Troubled Asset Relief Program*, (March 2015), https://www.cbo.gov/publication/50034

offer much better prospects for a huge return on investment than any other security. The reason for this is that those with prior rights have fixed claims, whether it be workers with their wages, suppliers with their invoices, bondholders with their principal and interest, or preferred shareholders with their guaranteed dividends. But if the company can manage to pay all these parties, then there is no definitive limit to what it can give shareholders by succeeding in the marketplace. It is no wonder, then, that virtually all of the action in equities nowadays involves common shares. For all intents and purposes, the stock market is coterminous with the trading of those shares.

The vast assortment of common equities can be sliced and diced in a multitude of ways. Among the more commonly distinguished categories are cyclical stocks representing shares in companies, such as those in the auto and housing industry, whose performance correlates with the vicissitudes of the economy. Opposing these are defensive stocks encompassing firms in sectors, like consumer staples and utilities, able to weather economic downturns, though unlikely to thrive during upturns. Blue chips, an allusion to the highest value poker chip at a casino, are stocks of well-established companies deemed to be secure investments. Then there are speculative shares, involving companies with an unproven track record involved in product lines whose ultimate success is very much open to question. Think here of a small company mining for diamonds in uncharted territory or a new biotech venture working on an untested cancer drug. Somewhat akin to this, if less risky, are growth stocks. This is where the company has something of a track record but is operating in a product line or industry with much untapped potential. Investors are willing to pay a high price for this promise relative to the going rate for the stocks of other companies with analogous revenues, profits, and balance sheets. Growth companies' shares will trade at high ratios of price to sales, price to earnings, and price to book value (the difference between assets and liabilities on the balance sheet), all of which are commonly used metrics to assess the valuation of equities.[5] Stocks with high valuation ratios are typically contrasted with value stocks. Typically, these consist of companies in more mature industries whose shares are relatively inexpensive based on price to sales, price to earnings, and price to book value ratios. Stocks are also differentiated by the size of the company as measured by

[5] Pablo Fernandez, "Valuation Using Multiples: How Do Analysts Reach Their Conclusions?" *SSRN Working Paper* (2001), http://ssrn.com/abstract=274972 or http://dx.doi.org/10.2139/ssrn.27497

market capitalization. Recall that this equals the price per share multiplied by all the shares outstanding—in other words, what it would take to buy the entire company. On this basis, equities are divided into small-cap, mid-cap, and large-cap. Lastly, there is the option of dividing them by sector, for example, into bank, steel, internet, or oil stocks.

Where do all these stocks come from? A company's stock will first enter the marketplace through an Initial Public Offering (IPO). Almost always, this is executed using the services of an investment bank or, more often, a group of them called an underwriting syndicate. Investment banks provide advice on the selling price of the shares and market those shares to investors. Once a company's shares are publicly traded, it can issue additional shares through a seasoned equity offering (SEO). It can also raise more money by offering existing shareholders rights to buy more shares.

Where are all these stocks traded? Mostly, they are transacted on a stock exchange. This is an association of individuals and firms approved to directly buy and sell the shares of companies that have been listed as meeting stipulated conditions rendering them eligible for trading. Anyone else, such as an ordinary individual or the manager of a hedge fund, who wants to trade these stocks must do so through someone authorized to trade on the exchange. Listing requirements vary from one venue to the next. Not surprisingly, the more prestigious exchanges, like the NYSE, impose the strictest conditions in terms of shareholders equity, market capitalization, and recent earnings. In enforcing these standards, exchanges play an important social function in attesting to the public that a given company is a legitimate vehicle for investment. Firms that do not meet the listing requirements of any exchange trade instead on an OTC market. There, the standards can get as low as those that prevail among the so-called pink sheets in the USA. Firms listed on pink sheets do not have to comply with the usual regulatory requirement to submit audited financial statements. Traditionally, the Nasdaq has been classified as an OTC market since its founding in 1971. But as its operations have become more structured, that description no longer holds. The SEC affirmed this in 2006 when it officially recognized the Nasdaq as an exchange alongside the NYSE.

As measured by market capitalization, the NYSE and Nasdaq are the largest stock exchanges in the world. Beyond the USA, the biggest exchanges include the London Stock Exchange (LSE) Group, the Japan Exchange Group, the Shanghai Stock Exchange, and EuroNext. The latter is a consortium of trading operations in London, Brussels, Amsterdam, Lisbon, and Paris. It should be noted, however, that over the past decade,

a growing proportion of transaction volume has shifted to so-called alternative trading systems, such as electronic communication networks. Here, investors, mostly institutional, are able to execute orders on electronic networks either directly with each other or via market makers, who always stand ready to either buy and sell at the bid and ask prices they post.

Indices: The Measures of Markets

Before wrapping up this primer of the stock market, one has to mention indices. With a vast multitude of stocks trading—the USA alone has approximately 5300 listings—equity investors face the cognitive challenge of trying to make general sense of the market's movements. Indices make this task easier by aggregating the performance of a representative group of stocks into a single number. In the popular mind, the stock market barometer that most resonates is the Dow Jones Industrial Average (DJIA). It was originally made up of 12 stocks when it was introduced in 1896. Since 1928, the index has consisted of 30 blue chip US companies. To calculate the DJIA, the prices of those 30 companies are added up and divided by a certain number (Fig. 5.1).

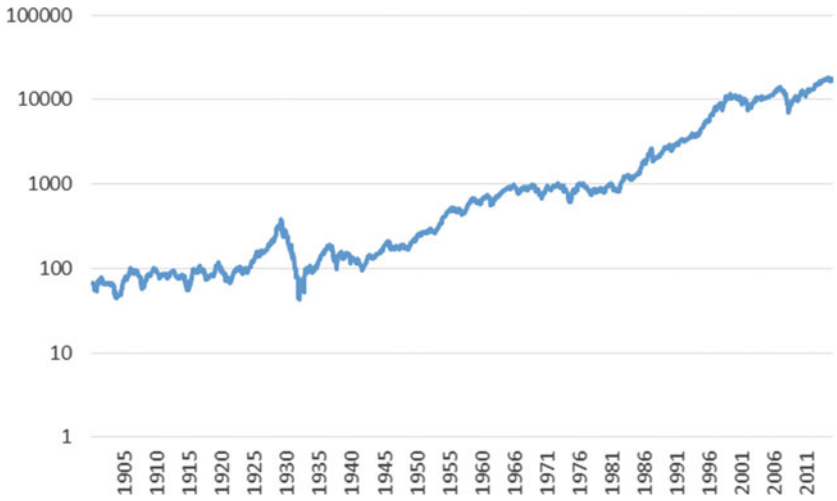


Fig. 5.1 Dow Jones Industrial Average 1900–2015. *Source*: St. Louis Fed

Table 5.1 Stock indices around the world

Country	*Stock index*
USA	Dow Jones Industrial Average
	S&P 500
	Nasdaq Composite
	Russell 2000
Canada	S&P/TSX Composite
Brazil	Bovespa
UK	FTSE 100
France	CAC 40
Germany	Xetra DAX
Japan	Nikkei 225
Hong Kong	Hang Seng
Australia	S&P/ASX 200
China	Shanghai Composite

This divisor initially equaled the number of stocks in the index. But with modifications in the constituents of the index (only General Electric remains from 1896), in addition to the occurrence of numerous stock splits and dividends, it has been continuously adjusted.[6] Because it is calculated in this way, the DJIA is defined as a price-weighted index. Market capitalization indices are calculated differently. Instead of adding up share prices, one sums the market capitalizations of the stocks compromising the index. Among this category, the S&P 500—this number denoting the quantity of stocks composing the index—is the leading barometer of US large company shares. Among investment professionals, it is considered the benchmark of the US stock market. For smaller US firms, the Russell 2000 is the measure of choice. As for the technology and growth companies predominant on the Nasdaq exchange, those are tracked by the Nasdaq Composite Index.

Beyond the USA, arguably heading the group of index benchmarks is the FTSE 100 on the LSE. Across the English Channel in continental Europe, French stocks are proxied by the CAC 40, while the German market is measured by the Xetra DAX. Investors that want to comprehend the entire European stock scene typically do so by consulting the Euro Stoxx 600 index or the more narrowly focused Euro Stoxx 50. In Asian equity markets, the key data points are the Nikkei 225 for Tokyo and the Hang

[6] Heading into 2016, the divisor for the DJIA equaled 0.1557.

Seng Index for Hong Kong. Australia is monitored via the S&P/ASX 200. A plethora of indices also exist to check upon movements outside the developed world in the emerging markets. The leading ones here include Brazil's BOVESPA Index on the Sao Paulo exchange, the BSE 30 in India, and the Shanghai Composite for China (Table 5.1).

Political Pre-conditions of the Stock Market

That ends our summary of what stocks essentially are, where they trade, and how their overall price movements are gauged. With every reader, I hope, now up to speed, the political dimension of the stock market can now be probed. To start off, the same question with stocks must be asked that was initially raised with bonds: why is the stock market allowed to exist at all? In some ways, this is a somewhat more puzzling question for equities than it was for bonds—at least once one gets over the feeling that the stock exchange is just part of the natural order, an appearance caused by its being a permanent fixture in capitalist economies. Interest-bearing debt contracts go back more than 4000 years to Mesopotamia. At best, organized frameworks for the trading of equity stakes only go back roughly half that time to the ancient Roman republic. From the second century BCE, the Forum was the scene of trading in shares of the so-called *publicani*, companies to which the Roman state outsourced public works such as the construction of infrastructure and the collection of taxes. After the fall of the Roman Empire, it would not be until the late Middle Ages before the seeds of the modern stock exchange reappeared in the itinerant fairs of the period and the commercial republics of Northern Italy.[7] As trade increased between the Mediterranean and the Hanseatic League in Northern Europe in the thirteenth and fourteenth centuries, Bruges became a financial center where merchants met to deal in bills of exchange at the Place de la Bourse, a hotel owned by the van de Beurse family.

The word "bourse" stuck as a term designating a stock exchange. It was subsequently used to describe the Antwerp market once the financial nucleus of Europe had moved there from Bruges in the sixteenth century. Antwerp is usually credited as being the first regular stock exchange, but the Spanish plundering of the city in 1576 meant that it was soon

[7] B. Mark Smith, *A History of the Global Stock Market: From Ancient Rome to Silicon Valley* (Chicago: University of Chicago Press, 2003), 11.

overtaken by Amsterdam in the seventeenth century.[8] Trading there was dominated by the aforementioned Dutch East India Company and less so by its geographic counterpart, the Dutch West India Company. Toward the end of the seventeenth century, after the Glorious Revolution, the financial action began to shift to England. There, the coffee houses of London were buzzing with stock trading activity in the shares of the British East India Company and the Bank of England. This decentralized mode of trading eventually ended after the establishment of the LSE which, depending on how one wishes to interpret the history, took place either in 1773 or 1801.[9] Meanwhile, in 1792, brokers who had been plying their trade on the street curbs of lower Manhattan entered a pact to trade securities among themselves at preferred rates under a common set of rules. In part, this was an attempt to improve the then poor ethical image of the stock brokerage trade. But it was also a cartelistic ploy to reduce competition among themselves so as to be able to charge higher trading commissions. That pact is known as the Buttonwood tree agreement, because it was signed nearby a species of that tree at what is now 68 Wall Street. It represents the founding event of the NYSE.[10]

Recounting the origins of stock exchanges, of course, still leaves the question unanswered of how stocks got there in the first place to be exchanged. As I have already noted, shares of ownership traded on exchanges come with a unique feature that hugely enhances their marketability: limited liability. This legal protection was legislated by the state. Just as we saw with the bond markets, the trading of equities as we know it today only came into being as a result of a political act. With respect to the credit market, this consisted in allowing interest to be charged on loans. With stocks, it was the provision of limited liability as a matter of right to just about anyone willing to incorporate. This is not to say that there were no stocks being transacted before this watershed movement in the history of corporate law. It was not until the mid- to late nineteenth century that this legal shift was consolidated in the Western world and, of course, there were equity markets centuries before then. Still, up to this time, government bonds tended to dominate trading over shares. This divergence only

[8] B. Mark Smith, *A History of the Global Stock Market*, 15–16.
[9] Ranald C. Mitchie, *The London Stock Exchange: A History* (Oxford: Oxford University Press, 2001), 32–36.
[10] Charles R. Geisst, *Wall Street: A History From Its Beginnings to the Fall of Enron* (Oxford: Oxford University Press, 2004), 11–14.

began to narrow significantly after the general availability of limited liability gave rise to an explosion in the number of stocks listed. Investors were consequently drawn into the equity marketplace by additional opportunities of being assured a floor on potential losses.

The political dependence of the stock market might be contested on the argument that the legislative sanction of limited liability merely recognizes individual rights of contracting. In this view, publicly traded corporations are not essentially creatures of the state, but rather voluntary associations whose right to jointly determine their own economic affairs as they see fit has simply been politically acknowledged.[11] Yet this is to impose a moral interpretation on the historical facts. For it presupposes that individual rights exist above, and prior, to the state. This may well be true, but it requires a separate philosophic argument. In any event, the individual rights account does not deny the role of politics in underpinning the exchange of corporate shares. It merely speaks to the nature of the state's agency, maintaining that it legally enables the stock market rather than creating it as its child. Most importantly, though, is that limited liability does not simply touch upon the interests of those individuals that contract together to form a corporation. By limiting the downside of the equity holders, limited liability transfers the residual risks of the business to society. More specifically, that risk is shifted to customers, suppliers, and lenders in addition to the local communities and governments with which a corporation interacts. Say a limited liability company negligently sells thousands of poisoned food items for which a court fixes damages above the value of its assets. All those who suffered harm as a result of the tainted produce will end up having to bear part of the cost. After all, the company will not have enough to pay all the damages and the remainder cannot be obtained from the shareholder's other assets. To put it in economic terms, limited liability poses negative externalities. As the guardian of society's interests, it naturally falls to the government to figure out whether these externalities are compensated by the economic benefits that limited liability brings in encouraging the equity financing of sizable commercial organizations.

There is another argument that seeks to minimize the role of politics in grounding the stock market. This is the thesis that the limited liability

[11] Henry N. Butler, "The Contractual Theory of the Corporation", *George Mason University Law Review* 11, no. 4 (1989), 99–123.

guarantee can be adequately explained on the basis of its economic logic. Not only, so the argument goes, does that guarantee reduce the need for investors to monitor the internal workings of firms, it allows ownership stakes to be readily transferable, thereby bringing the price system to bear in aggregating information about the company's situation. Where this situation is bad, and the share price is consequently low, management can be held accountable for its unsatisfactory performance by the prospect of someone buying enough shares on the cheap to assume voting control of the firm. Transferable parcels of ownership also make it easier for investors to diversify their holdings. They are then more likely to take a chance on risky ventures promising high positive spillovers to society. This is precisely because such commitments will constitute a smaller part of investors' portfolios and be balanced off against securities. "The advantages of limited liability", Frank H. Easterbrook and Daniel R. Fischel have written, "suggest that, if it did not exist, firms would have to invent it".[12]

A good deal of credence must be granted this economic argument. Favoring it is the fact that most advanced countries, notwithstanding differences in culture and politics, had converged toward the legal recognition of limited liability by the end of the nineteenth century. Even so, if economic logic always and everywhere dictated the laws and policies of states, prosperity would be far more widespread around the world than it is today. For what prevails is not simply what makes most economic sense, but what makes most sense to those groups in the community wielding the greatest political power to set the rules. Moreover, the question whether limited liability should be generally granted was the subject of contentious political debate among great political and philosophic minds. To assert this was predetermined by economic factors would be tantamount to brushing off the articulation of the various arguments put forward as nothing more than hot air. It should not be forgotten either that, amid the consensus on the virtues of limited liability, different practices and institutions have evolved to distinguish the organizational structure of the corporation from one country to the next. In Germany and Japan, forms of corporate governance evolved that give less priority to the interests of shareholders than in Anglo-Saxon nations. The result is that the stock

[12] Frank H. Eastebrook and Daniel R. Fischel, *The Economic Structure of Corporate Law* (Cambridge: Harvard University Press, 1991), 47.

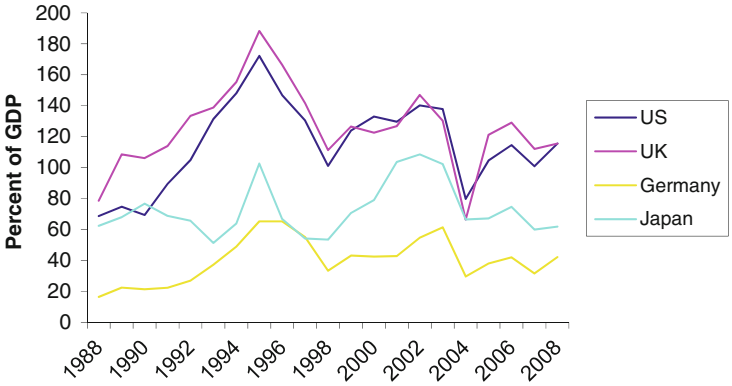


Fig. 5.2 Stock market capitalization as % of GDP, selected countries, 1988–2012. *Source*: World Bank

market has traditionally played a smaller financial role, relative to banks, in Germany and Japan compared to the Anglo-Saxon universe. Figure 5.2 illustrates this by comparing stock market capitalization as a percentage of GDP across Germany and Japan in addition to the USA and the UK. Only politics can account for this difference.

The political foundations of equity markets are best understood by reviewing the legislative changes that took place in Britain during the mid-nineteenth century. This is when the country was spearheading the industrial revolution and when it represented the most developed of the relatively few democracies then in existence. Interestingly enough, the background for the story of limited liability in Britain was an historical event that had taken place two centuries earlier, a stock market mania that swept the imagination of the public. The hype and enthusiasm was such that it even made a fool of Isaac Newton, one of the greatest intellects the human race has ever known. Coming to a head in 1720, coincidentally enough around the same time of John Law's Mississippi Company affair, the South Sea Bubble revolved around a publicly traded firm that had taken over the British government's liabilities in what was essentially a scheme to swap debt for equity.[13] In order to entice investors to buy

[13]While there are numerous accounts of the South Sea Bubble, the most engaging is given by Charles MacKay, *Extraordinary Popular Delusions and the Madness of Crowds*, 46–88.

shares, the South Sea Company was granted a monopoly over English trade with Spain's colonies in South America. Though the potential of this market was limited by Britain's chilly relations with Spain, investors wildly bid up South Sea shares, setting off a wave of enthusiasm that spread to other corners of London's burgeoning stock market. With all sorts of half-baked ideas attracting equity financing, including a company that planned to trade in human hair, Britain's Parliament moved to cool down the frenetic activity in London's coffee houses. Ostensibly, this was justified on the public's interest in protecting investors and maintaining the integrity of the marketplace. Actually, though, British politicians were motivated more by the desire to protect the South Sea Company from other firms competing for equity funding.[14] The result was the Bubble Act of 1720, which restricted the joint stock corporate form to those companies that obtained parliamentary approval.

By greatly raising the barriers to public incorporation, this legislation certainly hindered the stock market. It restricted the listing of shares to companies adept at political lobbying and well connected to Britain's lawmakers. Yet this constraint did not immediately make itself felt. Businesspersons like Matthew Boulton and James Watt of steam engine fame appeared content organizing their commercial operations within partnerships. But all this changed with the invention of rail transport, whose infrastructure required huge investments of capital beyond what wealthy families and individuals could possibly muster on their own.[15]15 Canals, roads, and bridges also entailed big upfront costs, as did the mass production processes made feasible by the industrialization of the economy. Initially, Parliament simply approved the granting of charters for such projects. However, that was proving time consuming and expensive in addition to providing legislators too much temptation for graft. Thus, the Bubble Act was finally repealed in 1825, more than a century after its passage—such was the persistence in historical memory of the hostility toward company shares instigated by the losses that investors sustained when the South Sea Bubble imploded. In 1844, William Gladstone shepherded passage of the Joint Stock Companies Act permitting firms to obtain a corporate charter

[14] Ron Harris, "The Bubble Act: Its Passage and Its Effects on Business Organization", *The Journal of Economic History* 54, no.3 (1994), 610–627.

[15] John Micklethwait and Adrian Wooldridge, *The Company: A Short History of a Revolutionary Idea* (New York: Modern Library, 2005), 47–49. This book provides the most succinct and accessible account of the origins and evolution of the limited liability corporation.

by simply registering with the government. What this law did not contain, though, was the provision of limited liability.

Leading the effort to include this pivotal right was Robert Lowe. To the extent that he is remembered at all today, he appears as a British politician known more for his involvement in education policy and his opposition to the extension of the franchise than for his contributions in amending and codifying the law of companies.[16] Indeed, a biographical reference book on British politicians makes not a single mention of Lowe's legislative efforts in the corporate arena.[17] A free market advocate of the classical school of economics, Lowe nevertheless had to confront the towering figure represented by Adam Smith in his drive to attach limited liability to the framework of incorporation. Though often overlooked nowadays by many of his followers, the eighteenth-century author of *The Wealth of Nations* opposed joint stock corporations. Smith argued that the interests of the directors and managers who supervised and ran such firms invariably clashed with those of the shareholders who owned them. As Smith explained this misalignment:

> being the managers rather of other people's money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own. Like the stewards of a rich man, they are apt to consider attention to small matters as not of their master's honour, and very easily give themselves a dispensation for having it. Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company.[18]

Besides citing the authority of Smith, Lowe's opponents pointed to the transfer of risk entailed by limited liability to creditors, suppliers, customers, employees, and the wider community. Opponents also insisted that

[16] For an account of this debate, see Andrew Gamble and Gavin Kelly, "The Politics of the Company", in *The Political Economy of the Company*, eds., John Parkinson, Andrew Gamble, and Gavin Kelly (Oxford: Hart, 2000), 29–34; Paul Halpern, Michael Trebilcock and Stuart Turnbull, "An Economic Analysis of Limited Liability in Corporation Law", *University of Toronto Law Review* 30, no. 2 (1980), 118–119; John Micklethwait and Adrian Wooldridge, *The Company*, 49–52.

[17] Laybourd, Keith. *British Political Leaders: A Biographical Dictionary* (*2001*) ABC Clio Santa Barbara, California pp. 210–211.

[18] Adam Smith, *Wealth of Nations*, V.i.e.

limited liability would encourage frenzied speculation in stocks. Vested interests, too, put forward arguments against Lowe. Well-to-do businesspersons were anxious about having to compete against organizations that could more easily tap equity financing than they could under the status quo. Status-conscious members among the higher socio-economic echelons of British society worried that a general right of incorporation would empower the poor to start up new ventures and upset the class structure.

The arguments that decided the battle in favor of Lowe's cause were of the sort that one would expect to emerge victorious in a democracy. First, Lowe invoked the cause of individual freedom, a core principle of that regime. More precisely, he appealed to individual property rights, which implies a person's entitlement to use their possessions in dealing and combining forces with others on whatever terms the parties can voluntarily agree upon. "The principle", Lowe said, "is the freedom of contract, and the right of unlimited association—the right of people to make what contracts they please on behalf of themselves, whether those contracts may appear to the Legislature beneficial or not, as long as they do not commit fraud".[19]

Coming to Lowe's defense was John Stuart Mill, the greatest thinker of the period. Mill observed that the alternative modes of organizing production for big commercial undertakings consisted in choosing between the joint stock corporation and the government-run enterprise. While acknowledging the managerial incentive problems highlighted by Smith, Mill argued that these were slight in comparison to the shortcomings of socialized mass production. Now, it is true that history and current practice reveals state-owned corporations co-existing with democracies. But it usually only does so in a narrow set of industries whose import to the public interest can be pointedly and plainly drawn, such as public transportation and electrical utilities. A general policy of socializing large-scale activities would be in tension with liberal democracy's commitment to private property. So it is no surprise that Britain's democracy did not opt for that alternative against the limited liability corporation. Not sharing the upper-class anxiety that Lowe's proposal aroused, Mill also contended that the helping financial hand offered to the poor argues in favor of making limited liability a general right. A century and a half of experience

[19] Robert Lowe, Law of Partnerships and Joint Stock Companies, *Hansard*, February 1, 1856 http://hansard.millbanksystems.com/commons/1856/feb/01/law-of-partnership-and-joint-stock#S3V0140P0_18560201_HOC_37

since Mill stated this argument has taught us that the poor are not so easily assisted by that right. Companies typically are only able to widely sell shares via an IPO after having already successfully operated for some time. They will have usually already obtained financing from the management's personal resources along with family, friends, angel investors, and venture capitalists. Crowdfunding, in which entrepreneurs can raise equity funding through Internet platforms, may yet change this, but we must still await the final verdict on whether this will help the poor start and grow businesses. All this being said, the success of Mill's debating move to tie the general provision of limited liability to the interests of the poor chimes with democracy's devotion to equality.

Acclaimed as the Magna Carta of company law, limited liability was established as a right attached to incorporation in the Joint Stock Companies Act of 1856, subsequently brought under the 1862 Companies Act. One might question whether this legislation actually reflects the laissez-faire principles that Lowe advocated on its behalf.[20] A truly hands-off approach on the part of the government, it could be argued, would simply permit individuals to incorporate, enabling the resulting firm to be treated legally as a person. The company would then be left to obtain any limitations on its liability through contractual negotiations with whatever parties it opts to interact with in producing its goods and services. Such parties would include each of the governments under whose jurisdiction the company operates. These governments, in turn, would enforce the terms of the negotiated contracts through the courts. In any event, limited liability would very probably be a non-negotiable demand by corporations and so would end up being included in all its agreements. The state may as well automatically provide it and save companies the contracting costs. That it is non-negotiable is suggested by the fact that, even before Britain changed its laws, political bodies around the world, including the national governments of Sweden and France as well as the state governments of the USA, were compelled to offer limited liability in competing against each other for the economic benefits of having companies locate in their territories. In fact, the prospect of losing business to foreign jurisdictions was a not inconsequential factor that propelled the passage of Lowe's Joint Stock Companies Act.[21]

[20] Tibor Machan, *Libertarianism Defended* (Hampshire, UK: Ashgate, 2006): 304–305.
[21] John Micklethwait and Adrian Wooldridge, *The Company*, *50–51*.

This legal framework, along with similar legislation around the world, did more than just elevate the role of the stock market in the economy. Between 1863 and 1869, there were 4998 firms that registered as joint stock companies in Britain. By the 1910–1913 period, the number had leapt to 30,420, making for a tenfold increase in the rate of joint stock company formations from 714 to 7605 per year.[22] Not all these enterprises ended up with their shares listed on the stock market. Yet a good number did, inasmuch as the number of securities listed on the LSE soared from 500 in 1853 to over 5000 in 1913.[23] Comparable growth was witnessed in the USA on the NYSE, whose listings rose from approximately 114 in 1859 to around 600 during World War I.[24] At the same time this was happening, though, corporations grew to become mammoth organizations, dominating numerous industries as a result of consolidation. Adam Smith originally worried that the inefficiencies of joint stock corporations meant that they could not succeed without the state granting of a monopoly. It turned out instead that once such corporations were given full legal sanction, they would become, if not always technically monopolies, sufficiently close to it to worry many observers. J.P. Morgan's investment bank financially engineered much of this concentration of economic power by arranging the required mergers and acquisitions, while managing the issuance of securities for the newly forged corporate giants. None of this would have been possible without the stock market and the combining of individual investor forces it brings about.

Commenting on democracies, Aristotle once observed that their attachment to equality was so paramount that they would ostracize for a time anybody in the community whose power was perceived to have become exorbitant.[25] In the late nineteenth and early twentieth centuries, the legal persons we call corporations, and the persons who led them (the robber barons being the pejorative term for them that has ever since stuck), naturally became the objects of this democratic suspicion. In the USA, this provided fuel to the progressive movement that sought an enhanced role for the state to counter what its adherents saw as the oppression and social injustices being perpetrated by a system of monopoly finance capitalism. Prior to World War I, the progressives could already point to a

[22] Ranald D. Mitchie, *The London Stock Exchange*, 93.
[23] Ranald D. Mitchie, *The London Stock Exchange*, 95.
[24] Giesst, Charles R. *Wall Street: A History*, 47 & 267.
[25] Aristotle, *The Politics*, Bk. III, Chap. 13.

few successes. There was the Sherman Anti-Trust Act, passed in 1890 to prohibit anti-competitive practices and subsequently affirmed by the US Supreme Court against John D. Rockefeller's Standard Oil, which the justices ruled had to be broken up. A few measures regulating working conditions and product safety were also implemented. So too, a good deal of the power that the New York commercial banks wielded over the money supply had been transferred to the Federal Reserve in 1913.

By this time, too, the progressives had largely succeeded in changing the definition of liberalism in American political discourse. In its classical expression, liberalism represented a posture of wariness toward the state. In its later progressive expression, liberalism came to embody a hopefulness about the state's capacity to positively advance the public interest. In view of the etymological and historical connotations of the term "liberal", the concept of freedom thus underwent a significant qualification in political thought. The older consensus frayed according to which the meaning of freedom encompassed liberty in the economic sphere in addition to the political and cultural realms of society. Economic freedom increasingly came to be seen as special pleading for large corporations to do as they pleased in controlling people's lives. Inasmuch as stock markets made those corporations possible, it must be assigned a responsibility in redefining a key politico-philosophical notion associated with democracy.

Political Drivers of Stock Prices

It is evident, therefore, that the very being of the stock market depends on a political judgment. Were limited liability repealed tomorrow by the US government, the NYSE and Nasdaq would shrivel to fragments of their current selves. But once politics lends a continued existence to the stock market, it then also exhibits a tendency to affect shares prices. To elaborate on this, let us run through the main players trading stocks and, more importantly, how their deliberations and actions cause share prices to move.

First, the players. Ordinary individuals trading out of their stock brokerage accounts obviously constitute a not insignificant part of the equity market's ecology. But they are overshadowed by institutional investors—which is to say, pension funds, mutual funds, insurance companies, hedge funds, brokerage firms, charitable foundations, university endowment funds, and commercial banks. These are responsible for the bulk of share

trading volume, perhaps as high as 90 % if one includes high-frequency traders. By the end of 2010, institutional players owned 67 % of US equities up from 5 % in 1945.[26] This is part of a long-term trend that has seen direct possession of equities by US households drop from 91 % of the market value of all shares in 1950 to 36.7 % in 2010. Much of this can be accounted for by greater levels of ownership among pension funds, both public and private, as well as mutual funds. In 1950, these organizations controlled a mere 2 % of company shares; by 2010, that figure was up to 37.4 %.[27] Since their assets are ultimately pledged to households, what has basically transpired is that individuals have delegated the terms of their participation in the stock market to institutional players. The upshot of this is that a larger proportion of the public is now financially exposed to equities than before. Yet the democratization of the stock market this entails is, befitting the regime in which we live, more modern in character than it is ancient—more a representative than a direct democracy. In the same manner that citizens nowadays have elected politicians to make specific decisions about legislation on their behalf, investors have portfolio managers to make specific decisions about their security positions.

The market players thus having been laid out, consider now what fundamentally makes stock prices rise and fall. In understanding the causes of equity price changes, one is best off starting with the elementary proposition that a stock constitutes the promise of a series of future cash flows. Inasmuch as a dollar to be received in the future is worth less than the same money in hand now, these cash flows have to be discounted for the passage of time. We already saw this with bonds. But what distinguishes a stock from a bond is that the stream of prospective money is not fixed. Shareholders possess the right to partake in the firm's profits, yet both the magnitude and duration of these are not known in advance. One never knows for certain beforehand how well, and for how long, the company will perform. The hope, of course, is that profits will

[26] Ownership data from Marshall E. Blume and Donald B. Kleim, "The Changing Nature of Institutional Stock Investing", *Wharton School Working Paper*, (Nov. 12, 2014), 4 https://fnce.wharton.upenn.edu/files/?whdmsaction=public:main.file&fileID=9094; "The 2010 Institutional Investment Report: Trends in Asset Allocation and Portfolio Composition", http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1707512

[27] Data on institutional versus household ownership of equities obtained from the Fed's "Flow of Accounts of the United States", http://www.federalreserve.gov/releases/z1/current/data.htm

continually grow, a sentiment implicit in a stock pricing equation called the Gordon growth model:

$$P = \frac{D_1}{R - G}$$

P stands for the current stock price, D_1 is the expected dividend per share for next year, R is the required rate of return on the stock, and G is the expected growth rate of dividends.

This model is not without its flaws. It only works if the growth rate is less than the required rate of return, that is, the cost of equity. Otherwise, the denominator would be less than or equal to zero and the stock price that the model would specify would then be either negative or infinite. Companies in their early years have been known to grow at rates in excess of 30 % per annum, substantially greater than the 10 % range often estimated for the cost of equity in developed nations. In reality, too, companies do not grow at the same rate into perpetuity. If a firm actually accomplished that feat at a high enough rate, it would eventually take over the entire global economy.

That said, while it would be an exaggeration to describe it as the stock market equivalent of Einstein's $e = mc^2$, Gordon's equation is nevertheless helpful in illuminating the factors that drive stock prices. The only adjustment we have to make is to substitute earnings for dividends. This can be justified on the grounds that dividends are a function of earnings. A company will not be able to pay dividends for long if it is not generating income. Also arguing for the adjustment is that market participants talk more about earnings than they do about dividends. Applying this substitution, the adjusted Gordon growth model would be:

$$P = \frac{E_1}{R - G}$$

E_1 is now estimated earnings per share (total earnings divided by the number of shares outstanding) for next year. G now accordingly refers to the growth rate of earnings. Restated in this way, what the equation makes clear is that stock prices vary directly with earnings expectations over the next 12 months. Conveniently enough, this happens to be the most commonly cited time horizon among stock analysts. Everything else remaining equal, therefore, if information about the company is disseminated suggesting that earnings will rise, the stock price will increase. Conversely, the stock price will decrease whenever earnings forecasts are revised downward. The same directional logic applies to investor views about the

company's growth rate. As estimates of this figure rise, so too does the stock price. And, accordingly, if growth earnings estimates decline, the stock price will also decline. Notice that it is expectations that matter as opposed to news relating to something that has already taken place. Such news will only be relevant to the extent it is indicative of future events. Not recognizing this, those who do not actively follow the stock market invariably become perplexed when share prices react opposite to what a recent earnings announcement would seemingly imply. Take a company's announcement that its earnings are up for the quarter. The stock price may still go down on the announcement if those earnings were not as high as expected. For this new information could prompt investors to lower estimates for future time periods.

As can also be deduced from Gordon's equation, R's correlation with the stock price is inverse. In other words, higher R entails lower stock prices; lower R entails higher stock prices. The required rate of return that R represents is also known as the cost of equity. This cost can be broken down into three components: the time value of money, the expected rate of inflation, and the risk premium. The first is the prevailing rate at which future money is being discounted in foregoing its present use; the second is what investors estimate will be needed to make up for the loss of purchasing power over the period of the investment; the third is the compensation that investors demand for assuming the risk entailed by the stock. Unlike E_1 and G, both of which can often be approximated from published consensus analyst forecasts, R is not directly observable. True, the time value of money plus the rate of expected inflation is often equated to the yield of a government bond deemed to be a riskless asset. Yet the central bank can artificially influence this so-called risk-free rate away from the market rate that, were the forces of credit supply and demand left free to operate, would authentically reflect the average time preference in society. Even accepting government bond yields at face value, the risk premium would still remain a number that, at best, can be surmised.

At first blush, the rate at which the future is discounted, R that is, would appear to be the variable through which politics has the greatest bearing on the stock market. That is indeed very much the case. Central banks are able to influence interest rates and governments can stoke or douse inflation. Public policies impacting the level of order and stability in society can certainly affect the riskiness of the environment in which companies have to operate. Nevertheless, due credit must be given to E, namely, to earnings. In the main, market forces determine the rate of profit in a particular line of business. Even so, the rate of profit is something which the

state is capable of altering as a result of its regulatory activity and industrial strategies. Its effect here, though, is apt to be localized to specific areas of the economy. The provision of a subsidy to airplane manufacturers, for example, will tend to support their share prices. By implication, the elimination of that subsidy will put downward pressure on prices. Confirming this effect, Todd Sinai and Joseph Gyourko examined a 1997 change surrounding a tax subsidy to the US real estate industry.[28] They found that those firms that were negatively impacted by the new law had lower share prices than others in the industry not affected by the legislation. Another study focused on tax incentives given to residents of the Canadian province of Quebec permitting them larger deductions when they bought into the IPOs of designated companies.[29] The authors determined that these IPOs had higher issue prices than the newly issued shares of non-designated firms.

Scholars have further corroborated this phenomenon by taking advantage of natural experiments offered up by singular political events. In the 2000 US presidential election campaign, a very close vote in Florida led to a series of recounts and court cases that delayed the declaration of the victor by 36 days. During this period, the shifting win probabilities of the two candidates, George W. Bush and Al Gore, were reflected on the Iowa Electronic Market. This is a venue in which individuals can buy and sell securities whose final value is determined by the winner of the election. Brian Knight tracked these shifting probabilities against the prices of two groups of shares. One of these groups was made up of companies likely to be favored by a Bush victory. The other group consisted of those companies apt to be helped by Gore emerging as the winner.[30] Knight discovered a connection between candidate prices on the Iowa market relative to the set of firms that each of their candidacies favored. This relationship was not statistically significant—Knight surmises that the market had factored in a Bush victory early on in the recount process—but it was consistent with what he uncovered over the six-month period before the election. On

[28] Todd Sinai and Joseph Gyourko, "The asset price incidence of capital gains taxes: evidence from the Taxpayer Relief Act of 1997 and publicly-traded real estate firms", *Journal of Public Economics* 88, no. 7–9 (2004), 1543–1565.

[29] Jean Bédard, Daniel Coulombe, and Suzanne M. Paquette, "Tax Incentives on Equity and Firms' Cost of Capital: Evidence from the Quebec Stock Savings Plan", *Contemporary Accounting Research* 24, no. 3 (2007), 795–824.

[30] Brian Knight, "Are policy platforms capitalized into equity prices? Evidence from the Bush/Gore 2000 Presidential Election", *Journal of Public Economics* 91, no. 1–2, (2007), 389–409.

the whole, Knight calculated a 9 % differential in returns between Bush and Gore companies, with tobacco companies most positively impacted by the Republican victory. Alternative energy companies and competitors to Microsoft were mostly negatively affected. The price action in the software firm reflected an outstanding anti-trust case against Microsoft which the Justice Department in the prior Democratic administration had vigorously prosecuted.

Four years later, the subsequent US presidential campaign furnished another natural experiment. On the day of the 2004 election, exit polls became the subject of market chatter that Senator John Kerry, the Democratic Party candidate, would defeat George W. Bush. As it turned out, the exit polls were mistaken and Bush was re-elected. Matthew Hood and John R. Nofsinger compared the share price performances of firms that had contributed to the Democratic Party through political action committees versus those that had given money to the Republicans.[31] Stocks representing these two sets were contrasted over the day of the election and the next day. Democratic Party beneficiaries did better on election day Tuesday, as rumors swirled that Kerry was going to win. Their Republican counterparts, however, traded more positively on Wednesday when the Bush victory was known. Obviously, the presumption in this study is that corporate campaign contributions proxy for who is going to be advantaged by a particular candidate. To the extent that the stock market evidences the validity of such a proxy, it is insinuating that companies can effectively buy policies that advance their interests through the democratic political process. Interestingly enough, this runs counter to a widespread view in the academic literature that political donations have little effect on legislative outcomes.[32] This is another instance, alongside a point about the foreseeability of World War I mentioned in the previous chapter with respect to historical bond price performance, where scholars and markets clash.

Turning now to the greater political part played by the discount rate (R) in the stock price equation, its import comes into view either in tandem with expected earnings (E) or by itself. It can be hard to disentangle the relative influence of the discount rate and earnings expectations whenever

[31] Matthew Hood and John R. Nofsinger, "Corporate PACs and the Stock Market. The Case of the 2004 Presidential Election", *The Journal of Wealth Management* 11, no. 2 (2008), 93–103.

[32] See the review of the literature set forth by Jeff Milyo, "Stock Market Reactions to Political Events: What Can We Learn about the Efficacy of Political Connections", *Mercatus Center Working Paper*, no. 12–15 (2012), 3–5.

the two variables combine to move stock prices. In fact, it is a challenge even to distinguish when the discount rate acts independently. The clearest example of the latter relates to the risk premium portion of the discount rate, which the government can affect not merely through specific executive and legislative acts. It can also do so through its statements and policies in forming the institutional environment, the rules of the game as it were, in which individuals and firms pursue their economic goals in both the stock market and the economy in general. Anything along these lines that raises the probability that companies will suffer major losses, such as a civil war or a justice system that cannot be depended upon to consistently recognize property rights, will tend to heighten the risk premium and so lower stock prices. Conversely, whatever lowers that probability, such as the development of an institutional setting more respective of shareholder rights, will lower the risk premium and so increase stock prices. Also influencing the discount rate is the degree of uncertainty generated by political events and institutions. The more uncertainty there is, the greater is the discount rate; the more certainty there is, the lower the discount rate. Accordingly, it has been statistically argued that a sustained commitment to privatization in emerging market nations tends to augment equity returns there, as investors factor in the consolidation of market reforms in the political structure.[33] Likewise, news items relating to the prospect of Quebec separating from Canada has historically impacted the volatility of stock prices in that country, including the 1995 referendum held in its Francophone majority province.[34] In 27 Organization for Economic Co-operation and Development (OECD) nations, the variability of local stock indices went up during the week surrounding an election, a time in which political uncertainty is apt to be near its height in stable democracies.[35] In another analysis of 15 parliamentary democracies that focused on

[33] Enrico C. Perotti and Pieter van Oijen, "Privatization, political risk and stock market development in emerging economies", *Journal of International Money and Finance* 20, no. 1 (2001), 43–69.

[34] Marie-Claude Beaulieu, Jean-Claude Cosset, and Naceur Essaddam, "The impact of political risk on the volatility of stock returns: the case of Canada", *Journal of International Business Studies* 36, (2005), 701–718; Marie-Claude Beaulieu, Jean-Claude Cosset, and Naceur Essaddam, "Political uncertainty and stock market returns: evidence from the 1995 Quebec referendum", *Canadian Journal of Economics* 39, no. 2 (2006), 621–642.

[35] Jedrzej Białkowski, Katrin Gottschalk, Tomasz Piotr Wisniewski, "Stock market volatility around national elections", *Journal of Banking and Finance* 32, no. 9, (2008), 1941–1953.

stock price direction, rather than volatility, it was found that the market was more apt to fall during election campaigns than at other times.[36]

In countries with parliamentary systems, an election does not necessarily settle the matter as to who will control the government going forward. If none of the contenders wins an outright majority, then the party that received the most votes or seats in the legislature (the two may differ depending on how the number of votes gets translated into political representation) enters a negotiation with other parties in order to form a government with a working majority. Very often, the bargaining revolves around the allocation of ministerial offices. Isolating historical instances of this, William Bernhard and David Leblang determined that stocks perform noticeably different in cabinet formation periods than is normally the case.[37] Share prices tend to go down, unless there is a "strong party" at play with a preponderance of leverage in the negotiations. When this happens, as it is fairly predictable how the composition of government is going to turn out, the stock market is unaffected. Clearly, investors take politics into account and view any uncertainty there as a risk factor requiring lower share prices.

After the identity of the ruling party or coalition is clarified, does it matter for the stock market who holds power? One might expect right-wing governments to be associated with better times for stock investors than left-wing governments. With a right-wing party or coalition in power, one would foresee policies involving lower taxes and less government interference with business. With a left-wing administration, investors would be looking at the prospect of higher taxes and greater regulation of business. But as is invariably noted around election time, the American experience has gone contrary to this prediction. On the day after the election, to be sure, the popular perception has held: a Republican win has produced superior stock returns than when the Democrat wins. Yet when we consider their whole tenure in office, doing so for all administrations between 1888 and 2006, the DJIA went up 10.85 % on average per year under Democratic rule, compared to 8.59 % under Republicans.[38] The numbers

[36] William Bernhard and David Leblang, *Democratic Processes and Financial Markets: Pricing Politics* (Cambridge: Cambridge University Press, 2006), 67.
[37] William Bernhard and David Leblang, *Democratic Processes and Financial Markets*, 49–86.
[38] For these and the remaining figures in this paragraph, see Jeremy Siegel, *Stocks for the Long Run: The Definitive Guide to Financial Market Returns and Long-Term Investment Strategies*, 4th ed. (New York: McGraw Hill, 2008), 229.

since 2006 have continued to favor the Democrats, as the market declined from 2006 to 2008 under George W. Bush and has risen from the day Barack Obama was elected in 2008 to his re-election in 2012. As I write this in September 2016, the market has continued its upward trajectory under President Obama.

However, the comparison looks quite different when inflation is taken into account. From 1888 to 2006, real equity returns have been slightly higher during Republican presidencies at 6.91 % per year on average versus 6.49 %. This corresponds to the conventional wisdom that those on the right of the political spectrum prefer hard money policies, while those on the left advocate a softer line. Yet even this pattern has not held in the post-World War II period, during which Democratic presidents outperformed Republicans in the stock market by a whopping 5.5 %, whether in nominal or real terms. From 1948 to 2006, the annual inflation rate has averaged 3.7 % and been virtually identical under both parties. Aside from indicating a political consensus in favor of inflationary policies, this postwar history suggests that by moving toward the Democratic position on the money question, the Republicans have ceded their main contribution to shareholder fortunes.

None of this, it should be stressed, convincingly demonstrates any correlation between the nature of the reigning political ideology and the direction of the stock market. Someone statistically minded would point out that the sample size is too small to make any reliable conclusions, made up as it is of only 21 presidents over the 1888–2006 time frame. What is more, a political party cannot be necessarily tied to a specific ideology. There have been right-wing and left-wing Democrats in the White House, just as there have been right-wing and left-wing Republicans. Indeed, a good argument could be made that some Republican administrations have tilted relatively more to the left, on economic policy at least, than certain Democratic ones and vice versa. To cite the most obvious example from recent times, during the Bill Clinton presidency balanced and surplus budgets went hand in hand with a firm monetary policy. Meanwhile, the second Bush administration witnessed escalating deficits and very low interest rates. Richard Nixon, too, imposed wage and price controls on the same day that he announced the closing of the Bretton Woods gold window in August 1971. Then there is the fact that presidents can switch direction within their term of office. President Jimmy Carter went from tolerating the easy money ways of William G. Miller, who he appointed to the Fed in 1978, to replacing him with Paul Vocker

a year later. Volcker was arguably the most hawkish Fed chairman in American central bank history.

Complicating all the calculations as well is that the markets may well factor in the likelihood of a newly incoming president months before the election. Not only that, it can take months, if not years, for an administration's policies to impact the economy. To see how the latter can dramatically alter the comparison between Republicans and Democrats, let us suppose we must wait one year to gauge the fruits of a president's decisions. As such, the stock market would be tabulated beginning from one year after their inauguration to the year after their departure. If the inflation-adjusted DJIA is used as the measure of the stock market from 1897 to 2007, the results are these: if one had invested in stocks only during times that a Republican was in office, an initial $10,000 commitment would have grown to $79, 976; had one invested only when Democrats reigned, that same $10,000 would have turned to just $15,674 or 80 % less than in Republican administrations. Even the huge post-war advantage held by the Democrats is wiped out once a one-year delay is factored into the equation. From 1946 to 2007, investing with the Republicans one year after inauguration would have transformed $10,000 into $35,936 in real terms, whereas siding with the Democrats would have left one with $13,206.[39] As if all this were not enough to cloud the picture, an analysis of 27 countries from 1980 to 2005, encompassing 173 different administrations, was unable to uncover any

[39] These figures were produced thanks to an interactive demonstration at Wolfram Alpha, which allows users to play with different starting dates and return assumptions. See *Wolfram Demonstrations Project*, "Stock Market Returns by Party", http://demonstrations.wolfram.com/StockMarketReturnsByParty/. We should not, as a default hypothesis, expect Democrats and Republicans to return the exact same amount, since the latter have held the presidency for a longer period between 1946 and 2007. The president was a Republican in 35 of those years, while a Democrat occupied the White House for 26. That suggests a default 1.35 ratio in returns favoring Republicans over Democrats, though the effect of compounding would increase that number somewhat even assuming the same annual rates of return. Similar considerations apply to the longer 1897–2007 period where the duration differences between Republican and Democratic administrations point to a default return ratio of 1.45 for the Republicans—though, again, that has to be adjusted somewhat higher to reflect the impact of compounding. Even taking this time of office differential into account, the actual return ratios between Republicans and Democrats, taking one year into office as the starting point, still make the former shine relative to the latter.

difference in the local equity market's performance between right-wing and left-wing governments.[40]

It must also be admitted that not every significant political event has been followed by a reaction in the stock market. In a 1989 article by David M. Cutler, James M. Poterba, and Lawrence H. Summers, the authors endeavored to identify which kinds of news stories happen to move equity prices.[41] After determining that economic news could not fully explain the fluctuations in shares, they decided to consider various non-economic items—that is, political events listed as important by the *World Almanac*, highlighted as the lead story in *The New York Times*, and mentioned by that newspaper's business section as having influenced stock traders. Some of the events they isolated are indeed associated with larger than usual price changes. For example, Harry Truman's surprise comeback victory over Thomas Dewey in the 1948 election led to a 4.6 % decline in the S&P 500 index. President Eisenhower's heart attack in 1955 set off a 6.6 % drop, John F. Kennedy's assassination in 1963 brought about a 2.8 % fall, while Ronald Reagan's defeat of Jimmy Carter in the 1980 election was followed by a 1.8 % rally. Yet a not insignificant number of events were seemingly brushed off by the markets. The Soviet invasion of Afghanistan in 1979 was received with a mere +0.1 % change. In 1961, the Bay of Pigs operation in Cuba only elicited a +0.5 % move. The failed 1980 attempt to save the American hostages in Iran had just slightly more of an impact at +0.7 %, while the US invasion of Grenada in 1983 saw equity prices travel a mere +0.2 %. In fact, of the top ten daily price movements ever recorded on the DJIA (see Table 5.2), only five can be definitively linked to a particular news story, all of which are ultimately political—though for one of those, the fracas over currency levels between US and German government officials on the weekend prior to the 1987 crash, it is far from obvious it caused the full extent of the stock price movement.[42]

[40] Jedrzej Bialkowski, Katrin Gottschalka, and Tomasz Piotr Wisniewski, "Political orientation of government and stock market returns", *Applied Financial Economic Letters* 3, no. 4 (2007), 269–273.

[41] David M. Cutler, James M. Poterba, and Lawrence H. Summers, "What Moves Stock Prices", *Journal of Portfolio Management* 15, no. 3 (1989), 4–12.

[42] Jeremy Siegel, *Stocks in the Long Run*, 224–225; Amélie Charles and Olivier Darné. "Large Shocks in the Volatility of the Dow Jones Industrial Average Index: 1928–2010" *Lemna Working Paper*, no. EA4272 (2012), http://hal-audencia.archives-ouvertes.fr/docs/00/67/89/32/PDF/LEMNA_WP_201207.pdf

Table 5.2 Ten largest daily % changes, Dow Jones Industrial Average, 1928–2015

Rank	*Date*	*% Change*	*Related news item*
1	Oct. 19/1987	−22.61	Fear of US dollar falling because of discord between USA and Germany on monetary policy (however, causes of 1987 crash remain contested).
9	Mar. 15/1933	+15.34	National bank holiday imposed by President F. Roosevelt ends
3	Oct. 6/1931	+14.87	President Hoover calls for fund to support banks
4	Oct. 28/1929	−12.82	Nothing definite
5	Oct. 30/1929	+12.34	Nothing definite
6	Oct. 29/1929	−11.73	Nothing definite
7	Sep. 21/1932	+11.36	As the Democratic candidate in 1932 election, F. Roosevelt allays anxiety on Wall Street about his policy aims
8	Oct. 13/2008	+11.08	Governments around world coordinate to inject liquidity in financial system
9	Oct. 28/2008	+10.88	Nothing specific, though expectations of Fed loosening policy
10	Oct. 21/1987	−10.74	Nothing definite

Source: Jeremy Siegel; Amélie Charles and Olivier Darné

Still, what this says is that equities often move for reasons that cannot be easily fathomed. A 2013 article following up on Cutler et al.'s original research corroborated this conclusion, while insisting that the mysteriousness surrounding the causes of large market movements has actually deepened in the two and a half decades since.[43] Yet when those moves can be fathomed, political phenomena of one kind or another tend to figure prominently. As a whole, the political events identified by Cutler et al. corresponded to an average absolute (either up or down) change of 1.46 % per day in the S&P 500 index. That compares to an absolute daily average of 0.56 % for all days since 1941 through to 1987 at the end of the period they studied. The differential here would actually be larger if some news items had been winnowed out because of limited relevance to the stock market or the strong likelihood of its having already been factored into prices prior to the day in question. Candidates for removal on these grounds would include Franklin D. Roosevelt's defeat

[43] Bradford Cornell, "What Moves Stock Prices: Another Look", *Journal of Portfolio Management*, *39* no. 3 (Spring 2013), 32–38.

of Dewey in the 1944 election. Also worth excluding would be Lyndon Johnson's landslide victory over Barry Goldwater in 1964 and Ronald Reagan's similarly lopsided win over Walter Mondale in 1984. The same goes for the vote in the House of Representatives in support of the 1986 tax reform law.

Seminal events that have occurred since Culter et al. published their article in 1989 have tended to underline the impact of politics. While on the day after the Berlin Wall came down in November 1989, the S&P 500 rose a rather inconsequential 0.8 %, it must be remembered that the full implications of that revolutionary act were very much in question at the time (and arguably still are, more than two decades later). The consequences would become clearer by 1991, and specifically in August of that year, when a coup attempt to overthrow Mikhail Gorbachev's reformist government failed. The S&P 500 reacted to this pro-democratic turn of events in the former Soviet Union by jumping 2.9 % on August 21, 1991, the day that the coup fell apart. And as is pointed out immediately below, equities reacted strongly to the downside in the wake of the 9/11 terrorist attacks.

Looking at broader movements much greater than one day, the role of politics enters more clearly to the fore. Consider the difference in long-term stock returns between countries. In politically stable and developed nations, equity returns have been positive and above those from government bonds and treasury bills.[44] This is in line with the theoretical expectation that the assumption of additional risk should be compensated. Conversely, the long-term performance of stocks has been negative in countries ranging from Egypt, Venezuela, Colombia, and Argentina with volatile political histories.[45] The stock market disappeared for decades in Russia (after 1917) and China (after 1949) due to the combination of revolutions, nationalizations, and confiscations. Anyone who held shares in those countries before those occurrences would have basically had to swallow a –100 % return on investment. Even among the advanced industrialized nations, the variation in equity market returns is significant, ranging from an inflation-adjusted 1.9 % in Italy to 6.1 % in New Zealand over

[44] See Credit Suisse, *Credit Suisse Global Investment Returns Yearbook 2015* (February 2015), https://publications.credit-suisse.com/tasks/render/file/?fileID=AE924F44-E396-A4E5-11E63B09CFE37CCB

[45] Philippe Jorion and William N. Goetzmann "Global Stock Markets in the 20th Century", *Journal of Finance* 54, no.3 (1999), 953–980.

the 1900–2014 period. US stocks were in the upper range of performance in producing an average 6.5 % real annual rate of return.[46]

The possibility arises here as well that political factors account for this difference. Plausible alternatives include the degree of economic freedom permitted as well as legal protections granted to shareholders. To test this last factor, Marco Pagano and Paolo Volpin analyzed the experience of 47 countries over the 1993–2002 period.[47] They showed that greater levels of shareholder protection—exhibited by laws and regulations hindering managers from exploiting their position to shirk their duties to the company's owners and direct corporate resources to their personal advantage—generated a virtuous circle. That is, the stock market became more frequently utilized as a financial intermediary and this, in turn, created a firmer basis of political support for shareholder protection measures. A more developed equity market, to be sure, does not necessarily generate larger returns on share investments. On this, the evidence seems to cut both ways, though shareholder protection in the form of the rule of law and the quality of the justice system does correlate with higher share prices.[48]

Not so conflicting, however, is the effect of economic freedom on equity returns. The more economic freedom there is in a country—in the sense of fewer restrictions and uncertainties on the ability of anyone to contract as well as keep and use their property—the better that stocks perform.[49] Recognizing this, investors are willing to pay more to participate

[46] Credit Suisse, *Credit Suisse Global Investment Returns Yearbook 2015* (February 2015), 35–58, https://publications.credit-suisse.com/tasks/render/file/?fileID=AE924F44-E396-A4E5-11E63B09CFE37CCB

[47] Marco Pagano and Paolo Volpin, "Alfred Marshall Lecture: Shareholder Protection, Stock Market Development and Politics", *Journal of the European Economic Association* 4, no. 2–3 (2006), 315–341.

[48] Davide Lombardo and Marco Pagano, "Legal Determinants of the Return on Equity" in *Corporate and Institutional Transparency for Growth in Europe*, ed. Lars Oxelheim, 235–270 (Oxford: Elsevier, 2006).

[49] Kai Li, "What Explains the Growth of Global Equity Markets?" *Canadian Investment Review*, 15 (2002), 25–30; Marshall L. Stocker, "Equity Returns and Economic Freedom", *Cato Journal* 25, no. 3 (2005), 583–594. For a more qualified view concerning the relevance of economic freedom to equity returns, see Carl R. Chen and Ying Sophie Huang, "Economic Freedom, Equity Performance, and Market Volatility", *International Journal of Accounting and Information Management* 17, no. 2 (2009), 189–197. They argue that economic freedom does not so much produce higher returns as it does lower volatility. In this way, it leads to better risk-adjusted returns, that is, the ability to obtain similar gains as elsewhere but with lower variations in the portfolio from one time period to the next.

in portfolios of countries with higher levels of economic freedom.[50] In North Africa and the Middle East, each 1 % increase in a nation's position on the Economic freedom index calculated by the Fraser Institute translated to a 3 % improvement in equity returns.[51] Within the USA, too, differences in economic freedom between states correspond positively to the performance of the shares of companies chiefly operating there.[52]

As for the connection between political freedom, typically maximized in democracies, and the stock market, this is a topic which has been relatively neglected among scholars. One study focusing on Africa notes that indicators of democratization in that continent correlate with a deepening of the equity market.[53] Another study hypothesized that the level of democracy—proxied by the number of veto holders in the political system—increases the valuation of stocks by enhancing policy stability. The empirical data bore out this hypothesis.[54] Beyond this, all we have to go upon are the various analyses that have been completed on the relationship between democracy and economic growth, a literature that has up to now failed to convincingly demonstrate a causal agency running from the former to the latter.[55] Assuming that equity returns reflect economic growth via the earnings (E) and growth (G) variables in our adjusted Gordon

[50] Samuel Kyle Jones and Michael D. Stroup, "Closed-end country fund premiums and economic freedom", *Applied Financial Economics* 20, no. 21 (2010), 1639–1649.

[51] Kamal Smimou and Amela Karabegovic, "On the relationship between economic freedom and equity returns in the emerging markets: Evidence from the Middle East and North Africa (MENA) stock markets", *Emerging Markets Review* 11, no. 2 (2010), 119–151.

[52] Robert A. Lawson and Saurav Roychoudhury. "Economic freedom and equity prices among US states". *Credit and Financial Management Review* 14, no. 4 (2008): 25–35.

[53] Simplice Anutechia Asongu, "Democracy and Stock Market Performance in African Countries" *University Library of Munich*, Germany, 2012.

[54] Layna Mosley and David Andrew Singer. "Taking Stock Seriously: Equity-Market Performance, Government Policy, and Financial Globalization". *International Studies Quarterly* 52, no. 2 (2008): 405–425.

[55] For a sampling, see Robert J. Barro, "Democracy and Growth", Journal of Economic Growth 1, no. 1 (1996), 1–27; John Gerring, Philip Bond, William T. Barndt, and Carola Moreno. "Democracy and economic growth". World Politics 57, no. 3 (2005), 323–364. Charles Kurzman, Regina Werum, and Ross E. Burkhart. "Democracy's effect on economic growth: a pooled time-series analysis, 1951–1980". *Studies in Comparative International Development* 37, no. 1 (2002), 3–33; John F. Helliwell, "Empirical Linkages Between Democracy and Economic Growth", *British Journal of Political Science*, 24, no. 2 (1994), 225–248; Dani Rodrik, "Democracy and Economic Performance", (1997), http://homepage.ntu.edu.tw/~kslin/macro2009/Rodrik_1997.pdf

stock price model, one is left to tentatively conclude that, by itself, democracy has a negligible, at best modest, impact on share performance.

The most fateful thing a state, democratic or otherwise, can ever undertake is war. In political life, nothing else presents a higher level of uncertainty and economic cost. This cost has sometimes been doubted, particularly by economists given to a Keynesian worldview. This group of economists is disposed to argue that war, being an instance of greatly increased government spending, can promote economic growth. Such reasoning lies behind the popularly expressed notion that World War II was what finally took the USA out of depression. But if war is good for the economy, it ought to show up in the form of higher share prices. In evaluating how war affected these prices, Yakov Amihud and Avi Wohl came up with the ingenious idea of examining Saddam Hussein contracts on Tradesports.com. Now defunct, this was an online exchange in which people traded contracts whose value was predicated on whether or not certain political events would take place. Tradesports was similar to the aforementioned Iowa Electronic markets but went beyond election results.[56] The Hussein contracts each paid $10 if Iraq's dictator was deposed prior to a specified date and $0 if he was still recognized as the country's leader. In the meantime, the contracts traded between $0 and $10 at a price reflecting the market's assessment of Hussein's chances of being overthrown. The USA, as it will be remembered, was intent on regime change in Iraq and it obviously possessed the military power to accomplish that goal. As such, the Hussein contracts served, prior to hostilities, as an indicator of the odds of war occurring and then, after its initiation, the odds of its ending within a certain time frame. What Amihud and Wohl found was that stock prices declined to the extent that the chances of war rose before it started. Afterwards, prices rose to the extent that the chances of a quick cessation of hostilities increased.

A similar pattern is to be observed in other conflicts. Examples here are World War II, the Vietnam War, the 1990 Gulf War, along with the US invasion of Afghanistan in 2001. In these instances, it is not always obvious that the stock market rallies which occurred after the start of the war can be accounted for by the probability of a quick victory. That argument makes most sense with respect to the Gulf War. Within the first 24 hours of

[56] Yakov Amihud and Avi Wohl. "Political news and stock prices: The case of Saddam Hussein contracts". *Journal of banking & Finance* 28, no. 5 (2004), 1185–1200.

invading Iraq, it was evident that the USA was overwhelming its military opposition. Similarly, with the Afghani conflict, where the Talibani regime that was being targeted for overthrow was no match for the American-led coalition of forces. The connection between quick victory and a higher stock market becomes thornier with World War II. Hardly anyone at the time expected that conflict to end rapidly. Even so, there was a 2.8 % rise in the DJIA over the five-day period after the war's commencement on September 3, 1939 in response to Germany's invasion of Poland. That can be attributed to the combination of investor confidence in an eventual victory and reduced ambiguity as to the political situation going forward. More tellingly, the stock market subsequently moved up and down in line with varying prognoses of the Allies' situation at key junctures and turning points in the global conflict.[57] Firming up the case that war is damaging for equities is the market's reaction to unexpected conflict. If war were intrinsically beneficial for the economy, shares would surely rise on such occasions if the initiation of hostilities were seen as a pleasant surprise. Yet share prices always fell. It happened on the day after Pearl Harbor. So it was too in response to North Korea's invasion of South Korea in 1950 and Iraq's incursion into Kuwait in 1990. Nor was there an exception to this pattern when shares resumed trading after Al Qaeda's attacks on Washington and New York on September 11, 2001. The S&P 500 fell by 4.9 % on September 17 before eventually declining 11.6 % over the ensuing week. War is not welcomed by stock markets. But once it begins, traders will cheer any hint of its ending.

Bear Markets: The Impulse for State Meddling

In the twentieth century, war has been a leading force driving the growth of the state.[58] When it comes to the government's role in the world of equities, the equivalent of war has been bear markets. Consider the panic of 1907, during which J.P. Morgan was called upon to save the financial system after the collapse of a stock-manipulation scheme. That panic led to the establishment of the Pujo Committee five years later. This Congressional body produced a report calling for a raft of government

[57] Taufiq Choudhry, "World War II events and the Dow Jones industrial index". Journal of Banking & Finance 34, no. 5 (2010), 1022–1031.
[58] Robert Higgs, *Crisis and Leviathan: Critical episodes in the growth of American government* (New York: Oxford University Press, 1987).

regulations of stock market activity. Much of this had to wait for implementation until a more vicious and prolonged bear market changed the political equation. Before that occurred, the 1920's witnessed a historic bull market, which saw the DJIA rally from 63.90 in mid-1921 to a high of 381.17 in September 1929. Mirroring a pattern seen in previous market manias, such as the Mississippi and South Sea Bubbles, the upward trend in prices became nearly vertical in the latter stages of the move. The DJIA skyrocketed from the 154 level in early 1927, more than doubling over the next two-and-a-half years. As everyone knows, the 1920's bull market ended with a crash in October 1929. This actually occurred over two days, on the 28th and 29th of that month, with the DJIA falling a total of 24.6 %. Not until the Black Monday crash of October 1987, during which the DJIA dropped 22.5 % in a single day, would an equally spectacular meltdown be repeated.

It is telling that after the 1987 crash, the government's response was limited to the addition of a few regulations. Most notable was the introduction of circuit breakers mandating a temporary halt of trading whenever the DJIA either rises or drops a certain amount from the previous day's close, a threshold initially set at 250 points and 500 points. These circuit breakers, as they are called, are now triggered when the S&P 500 falls 7 %, 13 %, and 20 %. The minimal political fallout from the 1987 meltdown suggests that it was not the 1929 crash as such which caused the far greater fallout that occurred afterwards. For what differentiated the 1929 and 1987 crashes was that the second was followed by a sustained recovery in stock prices, while the first was not. To be sure, the stock market managed to make up about half the losses suffered over the fall of 1929, as the DJIA closed as high as 294.07 in April 1930. During this phase, the political pressure on Wall Street had noticeably abated. But then a brutal negative trend set in which eventually took the DJIA down 89 % from the pre-crash high. To this day, the 1929–1932 bear market stands as the largest peak-to-trough decline in American stock market history.

Of course, this descent paralleled the Great Depression, then at its most acute stage in ravaging world economies. At the time, however, there was also a widespread belief among politicians and the public that the stock market prompted the sharp downturn in economic activity, instead of simply reflecting it. It is now widely agreed by economists that the 1929 crash did not cause the Great Depression. This view is borne out by the fact that a recession was not a part of the immediate aftermath of Black Monday in 1987. Still, in trying to account for causes in human affairs, we must recall

that it is does not suffice to consider objective factors. We must also attend to, and indeed place explanatory priority upon, the subjective factors of experience. Human action is always driven by interpretations of what is, and what ought to be. Recognizing this, we avoid the mistake of concluding that the occurrence of a major bear market, in and of itself, calls forth a political reaction against Wall Street. The DJIA suffered a 49 % decline in 1937–1938 as well as 46 % drop in 1973–1974 without eliciting a major increase in government regulatory oversight of the markets.

Indeed, one of the more remarkable characteristics of the regulatory structure is its relative stability. When an alteration does occur, it tends to be large and implemented in one fell swoop. The previous equilibrium of political interests, it seems, can only be shaken up by a dramatic event. Only then can the forces for change seize the opportunity provided by the discrediting of the status quo. As the 2000–2002 and 2007–2009 downtrends confirmed, both of which were followed by significant state intervention, the rise preceding the fall has to be widely perceived as manifesting a laissez-faire approach to economic affairs before pro-regulatory forces are able to obtain political leverage. Accordingly, for many in the 1930s, the reality of the stock market as they saw it was that it epitomized the failings of the free market vision that held sway under the Calvin Coolidge and Herbert Hoover administrations. Their ideological shortcomings were taken to justify not merely a stricter regulation of the markets by the government, but that of the entire economy. As Franklin Delano Roosevelt said in his 1933 inauguration speech: "our distress comes from no failure of substance … the rulers of the exchange of mankind's goods have failed, through their own stubbornness and their own incompetence, have admitted their failure, and abdicated. Practices of the unscrupulous money changers stand indicted in the court of public opinion".[59]

The fundamental lineaments of the regulatory structure governing the American equity market, a good deal of which is mirrored around the world, were established in the wake of the 1929–1932 bear market. Among the pieces of legislation passed in Roosevelt's famous 100 days was the 1933 Securities Act. This requires that any shares offered for sale to the public be registered with the SEC and that full disclosure be made by the issuer of all information that could materially impact investor

[59] Franklin D. Roosevelt, "Address by Franklin D. Roosevelt, 1933", *Joint Congressional Committee on Inaugural Ceremonies*, (1933), http://www.inaugural.senate.gov/swearing-in/address/address-by-franklin-d-roosevelt-1933

decisions. Instead of *caveat emptor*—Latin for let the buyer beware—securities regulation enshrines the principle of *caveat vendor*, let the seller beware. To ensure that everything disclosed is true, the act prohibits fraud and misrepresentation by security issuers even if a deceived investor did not rely on any disclosures provided by the company. This is a more stringent standard for sellers than that traditionally required by the courts. In 1934, the Securities and Exchange Act created the SEC (before that, the Federal Trade Commission was briefly charged with enforcing federal securities laws). At the same time, legislation was passed banning manipulative trading practices, limiting the use of margin credit to buy stock, and mandating firms to publish periodic reports of their financial performance. The worldview guiding this intervention effectively likens the stock market to a game favoring both corporate elites and investment professionals. Stock market regulation is thus mostly about neutralizing the perceived unmerited advantages of these two groups with a view to evening the playing field between them and the general investing public. An egalitarian spirit—so congenial with democracy—animates the entire regulatory enterprise.

The cardinal principle of securities regulation is the primacy of disclosure. Consequently, the main advantage which the government deems unmerited in the hands of an investor has to do with superior access to information. In its supervision of the markets, the government does not intend to certify the quality of securities for investors. Rather, the government seeks to ensure that investors receive all the information they need to make an informed decision whether to buy, sell, hold, or abstain.[60] As I pointed out earlier, the provision of limited liability is a way to allay the informational disadvantage that investors face vis-à-vis the management of the companies into which they entrust their money, a disadvantage arising from the fact that investors are not privy to the company's day-to-day operations. Governments have concluded, though, that limited liability does not suffice to address what economists refer to as information asymmetries. Nor, apparently, does the shareholders' right to vote for board directors and sell one's shares at any time one is dissatisfied with the company. Management must be compelled to tell what they know. The state's reasoning is that managers could otherwise influence the price of the firm's shares so as to advance their own interests. Managers could

[60] Louis Loss and Joel Seligman, *Fundamentals of Securities Regulation*, 5th ed. (Aspen Publishers, 2004), 36–39.

delay the dissemination of any bad news to give themselves time to sell their own shares before the company's poor condition becomes widely recognized. They could even prevent good news from being divulged so that they can buy shares before the investing public's discovery of the fact raises the stock price. Managers might even want to keep the good news from coming out all at once so that it can instead be revealed in smaller dollops so as to create the impression of consistently good performance. Not only the managers, but anyone they talk to in the course of their jobs could also gain an informational edge. For this reason, securities regulation covers people like lawyers, investment bankers, stock brokers, and equity analysts—indeed, it can go so far as to embrace anyone receiving material information not already in the public domain.

Nicely illustrating the egalitarian–democratic impulse behind this is a rule instituted in 2000 pertaining to equity analysts. The rule goes by the name of Regulation FD. It requires that any information that management offers to equity analysts be simultaneously provided to the general run of investors. While fears that it would reduce the general quantity of information supplied by companies have not materialized, there is evidence that Regulation FD increased the costs of capital for smaller firms.[61] Because such an increase is associated with greater uncertainty about the firm's situation, a higher discount rate (R) in other words, analysts became more apprehensive about covering their stocks and hence talked less with managers of entrepreneurial companies. These companies are left with far fewer options than larger firms of getting their story out to investors. Regulation FD has certainly democratized the markets by reducing the impact that analyst reports have upon release. Shares move noticeably less than they did before, which means investors are now sharing with analysts the task of assimilating information into prices.[62] The disparity between analysts with the highest forecast accuracy and those with the lowest has also narrowed.[63] One group that has gained, though, has been the

[61] Jefferson, Duarte, Xi Han, Jarrad Harford, and Lance Young. "Information asymmetry, information dissemination and the effect of regulation FD on the cost of capital". *Journal of Financial Economics* 87, no. 1 (2008), 24–44.

[62] Andreas Gintschel and Stanimir Markov. "The effectiveness of Regulation FD". *Journal of Accounting and Economics* 37, no. 3 (2004), 293–314; William J. Kross and Inho Suk. "Does Regulation FD work? Evidence from analysts' reliance on public disclosure". *Journal of Accounting and Economics* 53, no. 1 (2012): 225–248.

[63] Scott Findlay and Prem G. Mathew. "An examination of the differential impact of Regulation FD on analysts' forecast accuracy". Financial Review 41, no. 1 (2006): 9–31.

bond rating agencies. Exempted from the equal information provisions of Regulation FD, the market's reaction to their downgrades and upgrades of company debt has magnified.[64] If the government does not certify the quality of corporate shares, it has delegated that task, at least with respect to corporate debt, to the bond raters.

Overrated Regulation

Nowadays, only the regulation of food and drugs goes as unquestioned as the government's oversight of the stock market. Encomiums of securities regulation often appear in the financial press, whether markets are flourishing or under stress. Whenever they are flourishing, government superintendence is lauded for nurturing confidence among investors in the fairness and integrity of the markets. Whenever they are under stress, it is seen as a cure for whatever has assailed the markets, even when regulators were already in place and charged with patrol duty at the time trouble was brewing. Nothing can happen, it seems, that can falsify the principle that the state should be involved in supervising the markets. This represents a violation of Karl Popper's criterion of a valid theory, according to which a scientific hypothesis must specify an event that could possibly falsify it. The flouting of this criterion should lead us to scrutinize the thesis that securities regulation is an indisputable political good. For just as serious questions can be raised about the performance of agencies like the Federal and Drug Administration, so too can one justly wonder whether the SEC has lived up to its promise.

After all, it is not as if companies have no incentive whatsoever to inform investors of their doings and prospects. To the extent that greater investor knowledge reduces the rates at which a firm's future cash flows are discounted, its share prices rise. That, in turn, lowers the cost of equity capital for firms, which they have an obvious interest in realizing when first going public and afterwards for secondary offerings of shares. Even where neither of these is on the horizon, corporate executives are incentivized to proffer relevant information. Their pay, after all, is often tied to the performance of their company's shares. If they are nevertheless tempted to slight these incentives out of a short-sighted impulse

[64] Jorion, Philippe, Zhu Liu, and Charles Shi. "Informational effects of regulation FD: evidence from rating agencies". Journal of Financial Economics 76, no. 2 (2005): 309–330.

to make a big one-time killing, the courts are there to deter them with the prospect of civil lawsuits and criminal fraud charges. George Stigler, a renowned economist, discovered that the returns of investing in IPO firms were no different before the onset of mandated disclosure in 1933 than afterwards.[65] Certainly, the IPOs that passed SEC muster, but which nevertheless burned investors in the 1990's dotcom boom, lend credence to Stigler's contention. In this connection, one need only recall pets.com and boo.com. Several studies completed by George Bentson, Greg Jarrell, and Carol J. Simon after Stigler published his seminal 1964 paper verified his assessment.[66] True, a multinational comparison of disclosure laws suggests that more stringent regulations correspond to smaller levels of IPO underpricing and, thus, a lower cost of equity for companies going public.[67] One cannot, however, invoke this finding to support mandated disclosure finding without also considering the costs of producing the additional information that the law requires. Only if this is less than the gain implicit in a lower cost of equity does compelling firms to divulge information make economic sense from a social point of view. Yet, if this condition is satisfied, companies will find it beneficial to voluntarily undertake the extra effort of giving investors more details of its present condition and prospects. To the critics of leaving disclosure to market forces, it must also be granted that, after the original passage of the US securities laws, the volatility of stocks subsequently declined. But this implies that smaller firms, the ones that display larger variances in their share prices, were shut out of the market by the regulation, thus hindering a key source of economic dynamism.

That securities regulations adversely affect small companies was acknowledged in the aftermath of Sarbanes-Oxley. This was a major reform of accounting rules passed by Congress after the 1990's bull market collapsed. It was the last time that a bear market, which extended

[65] George J. Stigler, "Public regulation of the securities markets". *Journal of Business* (1964), 117–142.

[66] George J. Benston, "Required disclosure and the stock market: An evaluation of the Securities Exchange Act of 1934". *The American Economic Review* 63, no. 1 (1973), 132–155; Gregg A. Jarrell, "The Economic Effects of Federal Regulation of the Market for New Security Issues" *Journal of Law and Economics* 24 (1981), 613–675; Carol J. Simon, "The effect of the 1933 Securities Act on investor information and the performance of new issues". *The American Economic Review* (1989), 295–318.

[67] Charles Shi, Kuntara Pukthuanthong, and Thomas Walker. "Does Disclosure Regulation Work? Evidence from International IPO Markets" *Contemporary Accounting Research* 30, no. 1 (2013): 356–387 Contemporary accounting research 30, no. 1 (2013): 356–387.

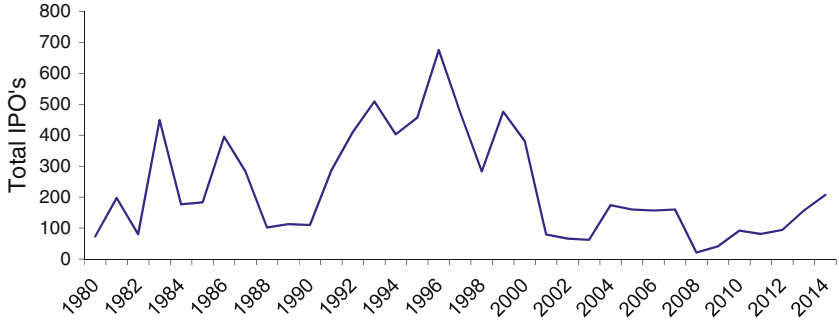


Fig. 5.3 Number of US IPOs, 1980–2014. *Source*: Jay Ritter

from 2000 to 2002, gave rise to a major addition to the regulatory edifice for stocks.[68] In an admission that Sarbanes-Oxley went too far, President Obama signed legislation in 2012 that temporarily excuses small companies from the accounting strictures of Sarbanes-Oxley. In doing so, his administration effectively yielded to a conclusion frequently arrived in studies concerning section 404 of the law. In requiring assurances that adequate internal financial controls are in place, that part of Sarbanes-Oxley confronts smaller firms with formidable compliance costs.[69] There is also reason to suspect that Sarbanes-Oxley may have tipped the regulatory equation to the point where becoming a publicly traded company, or even remaining one, makes little sense for a large swath of companies. On average, there were 311 IPO's per year from 1980 to 2000. Since then, through to the end of 2014, the average per year has fallen to 112 (Fig. 5.3).[70]

[68] Admittedly, the steep downtrend of 2007–2009 was followed by the passage of Dodd-Frank in 2010. But as the financial stresses to which this legislation responded were seen as having originated outside the stock market, the rules surrounding the trading and issuance of equities were left relatively untouched. The only notable exception was a provision allowing the SEC to require brokers to treat their customers with a fiduciary duty of care. As it turned out, in 2015, it was the US Department of Labor that instead proposed such a fiduciary standard for investment advisors.

[69] Peter Iliev, "The effect of SOX Section 404: Costs, earnings quality, and stock prices". *The Journal of Finance* 65, no. 3 (2010), 1163–1196; Ehud, Kamar, Pinar Karaca-Mandic, and Eric Talley, "Sarbanes-Oxley's Effects on Small Firms: What is the Evidence?" *USC CLEO Research Paper*, no. C07-9 (2007).

[70] Data from Jay Ritter, "Initial Public Offerings, Update Statistics" (April 20, 2015), http://bear.warrington.ufl.edu/Ritter/IPOs2014Statistics.pdf

Flourishing in the meantime has been the private equity category, made up of investment funds that take positions in limited liability companies whose shares do not trade on the markets. These companies save on the expenses incurred in having to abide by the securities regulations, including the requirement to periodically supply financial reports to investors. Freed of this obligation, companies can focus more on the long-run and less on meeting short-term quarterly expectations set by analysts and the investing public. Critics of capitalism often complain that firms are given to myopia. Yet what is almost always forgotten is that a short-term perspective is encouraged by the regulations. Were companies not obligated to provide financial reports on a quarterly basis, market forces would encourage companies to issue such reports at intervals that would accommodate the unique time pressures of their line of business and the needs of shareholders to know the condition of their investment. From Lowe's Joint Stock Companies Act greatly facilitating the publicly traded corporation, we seem to be heading back in the direction of the Bubble Act, which greatly restricted that form of economic organization. Should this trend continue, the democratization in the ownership of the means of production that we have witnessed over the past half century or so is liable to being reversed.

Very much worth observing as well is the overwhelming evidence that mandated disclosure laws in general do not improve people's decision-making. Surveying a variety of industry and institutional contexts, Omri Ben-Shahar and Carl E. Schneider found that mandated disclosure fails in banking, insurance, foods, health care, auto sales, real estate, vocational schools, and the justice system.[71] Despite all the information that people receive, the majority do not comprehend the terms of a mortgage or the implications of alternative medical treatments. Nor do they understand the nutritional value of different food products or even the rights they are informed of when they become criminal suspects. The problem is the sheer quantity of the disclosures that legislators require. Too much information is provided for individuals to cognitively process. As the disclosures accumulate, individuals respond by ignoring them.

[71] Omri Ben-Shahar and Carl E. Schneider. "The Failure of Mandated Disclosure", *University of Pennsylvania Law Review* (2011): 647–749. The authors expand on their case in *More than You Wanted to Know: The Failure of Mandated Disclosure* (Princeton: Princeton University Press, 2014).

Once again here, democracy is the source of the dilemma. Whenever a public outcry is raised after an individual buyer has been harmed by a seller, elected politicians have an interest in being seen as doing something to fix it. In a democracy, that fix must respect the principle of individual freedom. Legislating the provision of information satisfies this dual imperative. The individual is not coerced away from purchasing a good or service they might desire. At the same time, the information that is forced upon them can be portrayed as helping them make a better decision for themselves—in other words, as an enhancement of their freedom. John Stuart Mill, the nineteenth-century British thinker, finessed the matter in this very manner in his hugely influential defense of freedom, his essay *On Liberty*: "when there is not a certainty, but only a danger of mischief, no one but the person himself can judge … he ought, I conceive, to be only warned of the danger".[72] Democratic politicians have taken that recommendation to warn and have fulsomely expanded on it.

Anyone who has tried going to the SEC's Edgar website to look up the filings of a publicly traded company will soon find out that the quantity of information problem also applies to the stock market. Certainly, the avalanche of disclosures has done nothing to turn the ordinary person into a better investor. Figure 5.4 shows how the average investor performed against a set of asset classes from 1995 to 2014. Their returns were worse than if they had just held on to stocks, bonds, or gold throughout that time frame. The average investor barely beat the rate of inflation. It is hard to fathom how they could have fared worse if companies were free to disclose whatever the marketplace demanded.[73]

As if all that were not enough, securities regulation has completely failed to fulfill one of its original purposes. When the legal framework was built in the 1930s, the prevailing assumption was that 1920's bull market reached unsustainable heights due to the combination of a plethora of culprits. Among these were excessive margin lending to investors in addition to pump and dump schemes. Blamed, too, was the painting of stocks in pollyannaish strokes by investment bankers, stock brokers, and corporate executives, not to mention the operation of investment pools

[72] Mill, John Stuart. *On Liberty and Other Essays*. ed. John Gray (Oxford: Oxford University Press, 2008), 107.

[73] BlackRock, "Investment and Emotions: The Ups and Downs of the Market" (2015), https://www.blackrock.com/investing/literature/investor-education/investing-and-emotions-one-pager-va-us.pdf

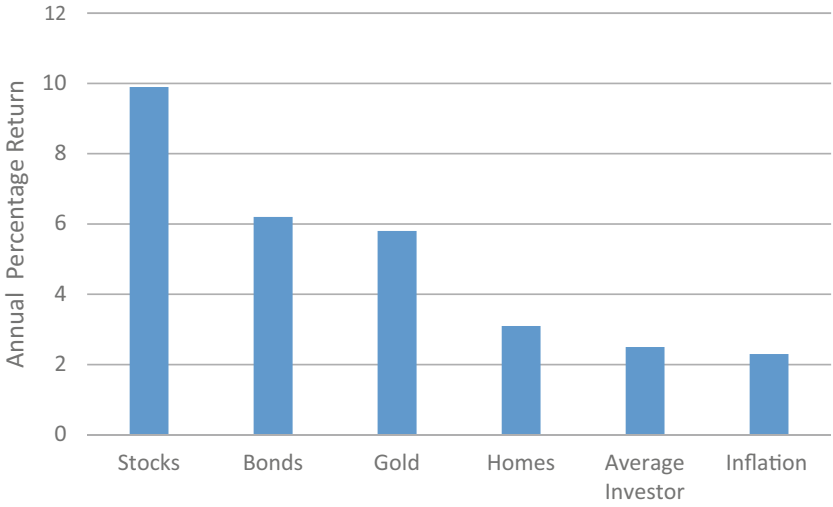


Fig. 5.4 Ordinary investor performance versus Major Asset Classes, 1995–2014. *Source*: Black Rock

in which individuals would combine to rig the price of a stock. By containing all these, securities regulation was supposed to prevent mania and crash sequences from recurring. Obviously, that has not happened. Partly, this is because government regulators have little incentive to appear as worrywarts and wet blankets by spoiling the party when markets are bubbling higher. Not only that, standing athwart a raging bull market requires a contrarian frame of mind, a willingness to go against the crowd that only a few human beings are capable of mustering. It is hardly to be expected that such rare souls will be concentrated in government agencies.

Other notable regulations that arose out of the 1929–1932 bear market included restrictions on short selling. This is the attempt to profit from a decline in the price of a stock. More the province of sophisticated and active traders than ordinary investors, this type of trade is executed by selling shares first and then buying them afterwards. Those who first hear about short selling immediately wonder how one can possibly sell shares that one does not already own. To sidestep this dilemma, the shares are initially borrowed from someone who owns them, a service performed on behalf of the short seller by their broker. The borrowed shares are then

immediately sold. Later, the shares have to be returned, which the short seller hopes to do by buying them on the market at a lower price than that at which they were first sold. If this happens, the short seller earns the difference; otherwise, they lose money. Even before Roosevelt came into office and the Pecora commission became a political force, short sellers were made the villains of the market's relentless descent in the early 1930s. President Herbert Hoover continually railed against short sellers, alleging that they were "destroying public confidence" and engendering "discouragement to the country as a whole".[74] Short selling restrictions eventually came in the Roosevelt administration when the SEC instituted the uptick rule. This only allowed short selling at prices that were higher than that at which the stock previously traded. Heeding the counsel of economists, the SEC finally abolished the uptick rule in 2007. Still, it imposed a temporary freeze on short selling of financial stocks in 2008, as did a number of other countries in a bid to stem the financial tsunami. Naked short selling, in which the shares bet against are not borrowed, was banned in 2004 by the SEC and continues to be illegal. Elsewhere around the world, restrictions on ordinary short selling in the form of an uptick rule continue in force in a few countries like Canada, Russia, and Hong Kong. Blanket prohibitions of naked short selling are less common than those limited to financial stocks.[75]

Setting aside short selling of the naked variety, one does find economists questioning the imposition of limits on ordinary forms of short selling. Little evidence exists, they point out, that short selling exacerbates market declines. A recent study verifying this is a New York Fed paper that examined the impact of the short selling prohibitions that were placed on financial stocks during the recent crisis.[76] Limiting that trading strategy also reduces liquidity on the stock exchange along with an important source of demand for shares amid a falling market. After all, the person who sells short must eventually buy the shares back. And when these are

[74] Hoover quoted by Perino, Michael, *The Hellhound of Wall Street* (New York: Penguin, 2010), 16–17.

[75] Jain, Archana, Pankaj K. Jain, Thomas H. McInish, and Michael McKenzie. "Worldwide reach of short selling regulations". Journal of Financial Economics 109, no. 1 (2013), 181–183.

[76] Robert Battalio, Hamid Mehran, and Paul Schultz, "Market Declines: Is Banning Short Selling the Solution", *Federal Reserve Bank of New York Staff Reports*, no. 518 (2011), http://www.newyorkfed.org/research/staff_reports/sr518.pdf

declining sharply, he or she will be among the few traders willing to step in amid the maelstrom and purchase stock. In this way, short selling minimizes volatility. Short sellers, too, help keep stocks from climbing too far above what the fundamental prospects of the company dictate, particularly when investors happen to be in an overly exuberant mood. Perhaps the greatest service offered by short sellers to society is their ability to detect fraudulent accounting at companies—a talent no doubt cultivated by their interest in uncovering overpriced shares. Other than employees, nobody does a better job of ferreting out wrongdoing at companies than short sellers. Luigi Zingales and his colleagues examined 216 instances of corporate fraud from 1996 to 2004. What they discovered is that while whistle-blowers detected the chicanery in 17.1 % of the cases, short sellers came a close second at 14.5 %. The SEC came in last at 6.6 %, well behind financial analysts and the media.[77]

Another cornerstone of securities regulation is the prohibition of insider trading. This was first highlighted as a political issue when Samuel Untermyer, a lawyer who had served as counsel in the House of Representatives, testified before the Pujo Committee in 1912. Insider trading was subsequently targeted in the 1934 Securities and Exchange Act. The legislation only specifically proscribed short-term trading profits by those holding a greater than 10 % stake in the company's shares on the assumption that such parties are likely to be insiders. Using its rule-making authority, while invoking the anti-fraud provisions of the Securities and Exchange Act, the SEC subsequently enlarged the scope of forbidden insider trading. This effort was largely sustained in a series of key Supreme Court rulings used in gauging when a violation has actually occurred.[78] The result is that insider trading is now generally defined as taking place whenever an individual buys or sells securities while in the possession of material information that is not publicly available.

While numerous rationales are put forward to support insider trading laws, two are especially common. One of these appeals to the concept of fairness by maintaining that insider trading permits the better informed

[77] Alexander Dyck, Adair Morse, and Luigi Zingales. "Who blows the whistle on corporate fraud?" *The Journal of Finance* 65, no. 6 (2010), 2213–2253. Also see Jonathan M. Karpoff and Xiaoxia Lou. "Short sellers and financial misconduct". *The Journal of Finance* 65, no. 5 (2010): 1879–1913.

[78] Stephen Bainbridge, "Insider Trading" in *The Encyclopedia of Law and Economics*, 773–777, http://encyclo.findlaw.com/5650book.pdf

party to exploit their lesser informed counterpart. The second argument relies on the observation that the financial markets rely heavily on the participation of ordinary investors. They are liable, so the argument goes, to abandon investments in stocks if they ever came to the conclusion that the trading and pricing of securities was rigged against them. Of all the elements of securities law that can be defined as peculiarly American in origin, the prohibition of insider trading would certainly have to be among them, as the USA largely originated the approach and has seen it spread around the world.

But it is a questionable export.[79] To the overwhelming majority of market observers, the immorality of insider trading seems as obvious as that of theft and murder. Under examination, though, the arguments in favor of prohibiting the practice run into both logical contradictions and empirical objections. Consider first the claim that it is wrong for a person to take advantage of superior information at their disposal vis-à-vis another. Outside the confines of the stock exchange, this kind of informational asymmetry is commonly allowed in commercial transactions. Imagine that an art dealer comes across an original Claude Monet painting at a flea market and is asked $50 for it by the vendor. Were the dealer to buy the painting at the quoted price, indeed even if he or she were to haggle it down to $30, no judicial authority would lay civil or criminal charges. A real instance analogous to this came to light in a seminal 1968 US court case, SEC v. Texas Gulf Sulphur Company. In their ruling, the federal circuit justices sustained a conviction of company executives that were found guilty of trading on their knowledge of an ore discovery in Canada.[80] Yet the executives of Texas Gulf Sulphur were legally permitted to use their non-public information in an attempt to buy adjacent land. To avoid the contradiction here, the defender of insider trading laws might counter that the art dealer and the mining company are entitled to take advantage of their private knowledge because they invested time and effort to acquire it. Otherwise, individuals would have little incentive to make commer-

[79] The classic exposition of the case against insider trading laws is Henry G. Manne, *Insider Trading and the Stock Market* (New York: Free Press, 1966). My arguments against insider trading elaborated over the next several pages were initially stated by myself in George Bragues, "Why Insider Trading Should be Legal", *Financial Post* (February 13, 2002).

[80] Securities and Exchange Commission vs. Texas Gulf Sulphur Company, 401 F.2d 833,1968 U.S. App.Fed. Sec. L. Rep. (CCH) P92,251; 2 A.L.R. Fed. 190 401 F.2d 833,1968 U.S. App.Fed. Sec. L. Rep. (CCH) P92,251; 2 A.L.R. Fed. 190.

cially important discoveries. This is an entirely compelling argument. But it also applies to the financial markets. After all, people who come to possess non-public information about a stock often do so as a consequence of working to produce that information by, for example, arranging a takeover deal or running a company.

Theft and murder clearly leave someone worse off than they were before. But who exactly is harmed by insider trading? Suppose a takeover of XYZ Corporation is set to be announced at $100 per share, well above the current price of $70. Trading on this information prior to the announcement would bring XYZ's stock price closer to $100, perhaps to $80. That would leave investors to trade at levels that better reflect the truth about the circumstances of the company. Is not encouraging stock prices to mirror objective reality what securities regulation is supposed to be primarily about? Granted, buyers will have to pay more for the stock than would otherwise be the case. But, then again, sellers will also receive more. Why the interests of the buyer should be given priority over the seller is far from evident, especially when it would involve preserving a less than truthful state of pricing affairs. Admittedly, the possibility exists that the insider trading generated rise to $80 will induce some XYZ shareholders to sell their stock before the acquisition is publicized. In that case, they would lose out on an additional $20 per share profit. It is also plausible, however, that momentum investors will be prompted to buy the stock as it moved toward $80. They will end up with the additional $20 profit. And once again this would raise the question why those provoked into selling by the initial assimilation of the takeover information should have their concerns granted precedence over those stimulated to buy. To repeat, the cause of truth in pricing would actually be served by favoring the latter. Should it be said that the previous owners of XYZ ought to be rewarded for their longer commitment to XYZ, the response can be made that anyone who sold the stock on a quick $10 jump is not likely to have been the model of a loyal shareholder in the first place. Such individuals will not actively trade the stock. This serves to remind us that the interests most furthered by insider trading prohibitions are those of professional traders, who have more than enough savvy to fend for themselves. Take away insider trader laws and what would happen is that sudden price changes would be watched more closely for their significance than they already are.

Nor is there much to fear with respect to a loss in investor confidence of the equity markets. Historically, insider trading has been enforced less rigorously in Europe, Canada, and Japan (where it only became illegal in

1988). This, by the way, is arguably no coincidence. Europe has an aristocratic tradition, Canada's democracy is historically marked by its relative lack of populism, while Japan did not become democratic until after World War II and is still characterized by a hierarchical culture. In these less than democratic climes, it ought to be no surprise that insider trading has been viewed as less of a moral threat than in the more democratic USA. In any case, the fact is that Europe, Canada, and Japan have not taken the same puritanical approach to insider trading that America has and it has not hampered the functioning of their markets.

Note, too, that if the prevalence of insider trading were a cause of reduced public trust, then one would have expected the market to have performed poorly after a series of 1980s scandals related to the practice. These ensnared Ivan Boesky, R. Foster Winans, Denis Levine, and Michael Milken. Boesky was a takeover arbitrageur who sought to profit from the price differentials generated by mergers and acquisitions activity. His character was partially the basis for the character of Gordon Gekko in the film *Wall Street*. Winans was a journalist for the *Wall Street Journal* found guilty of profiting from companies he wrote about in the paper's influential "Heard on the Street" column. Levine and Milken worked at Drexel Burnham when that investment firm was a leader in junk bonds. Despite all these figures alerting the investing public to the prevalence of insider trading on Wall Street, the US markets still went on to perform strongly during the ensuing decade of the 1990s. It is true that a more quantitatively exact parsing of the empirical evidence has shown that the enforcement of insider trading laws is associated with anywhere from a 0.3 % to a 7 % reduction in the cost of equity capital.[81] This implies that companies are apt to invest greater amounts in more projects because these can be financed more affordably in the stock market. Even assuming that figure is at the higher portion of a very wide range, 4–7 % is not an especially alarming amount, particularly in a low interest rate environment. That number must also be considered against the price of enforcing insider trading laws, in terms of higher taxes and the opportunity costs of deploying the money elsewhere. There are also the allocative inefficiencies entailed in not having stock prices trading closer to levels reflecting all the potentially available information. By obstructing this, the ban on insider trading reduces the

[81] Utpal Bhattacharya and Hazem Daouk. "The world price of insider trading". *The Journal of Finance* 57, no. 1 (2002): 75–108.

quality of the signals the markets send about which industries have the most and least promise.

None of this is to say that insider trading should in no way be restricted. It can, but, ideally, the task is best left to companies. After all, the information at issue with insider trading belongs to them insofar as it is the outcome of the labor of their employees and investments they have undertaken. Where the use of that information for investment purposes would jeopardize the corporation's interests, by, for example, harming its reputation or raising the price of an acquisition target, it should be allowed to prohibit insider trading among its employees. Where the use of the firm's private data to trade the company's stock is deemed to be a suitable means of rewarding employees for their efforts, the shareholders should be free to allow insiders to take advantage of this compensation mechanism with a view to better aligning the interests of the owners and management. Only when insider trading takes the form of short selling is government interdiction truly justified. Otherwise, corporate executives would have incentives to worsen the company's performance. All this being said, we cannot expect this more flexible and nuanced approach to insider trading to be adopted anytime soon. In a democracy, with its commitment to equality, any prerogative held by a group is automatically suspect. And whatever the larger benefits and moral logic of deregulating insider trading, its toleration looks, from a democratic view, like the granting of a special advantage to highly paid CEOs, investment bankers, and portfolio managers.

The best that one can hope for is to tame the excesses in the definition and prosecution of insider trading. The US Congress has never specifically defined that conduct for prosecutors, thus leaving the latter free to make a name for themselves by seeking to convict people on everbroader conceptions of insider trading. The most recent instance was the theory put forward by Preet Bharara, the US attorney for the Southern district of New York. Playing to the post-financial crisis resentment of Wall Street, he obtained numerous convictions on the notion that insider trading occurs whenever someone benefits from non-public information, even if they do not know that it is not public.[82] Here we see the egalitarian impulse driving the moral interpretation of insider trading taken to its fullest extent. The simple possession and use of informational superiority over another becomes an offense. The Second US Circuit Court of Appeals in New York

[82] *The Wall Street Journal*, "Review and Outlook: Another Preet Defeat", (April 6, 2015).

rejected Bharara's definition and he was subsequently forced to dismiss the charges he had laid.[83] Though the judicial branch did well here, the legislative branch needs to assume its rightful role in defining insider trading, take it away from the courts, and define insider trading in accord with traditional legal principles of criminal responsibility. As such, insider trading should only consist of the buying and selling of securities where one proceeds knowingly, or recklessly disregards knowing, while acting upon information which is not available to the public.[84]

Looking at the entire securities regulatory structure from a broader pointer of view, what is most worrisome is how it exhibits the drift in our liberal democracies toward rule by administrators. Legislators elected by the people are supposed to make laws and policies, while executive officials similarly elected are supposed to implement them. But as the state over the past century has grown in size and scope to watch over even the minutest details of economic life, the legislative branch has been compelled to delegate a good deal of its rule-making authority to regulatory agencies, at the same time that the executive branch has had to cede some of its enforcement authority to these same agencies. Of the three branches of government, the judicial branch has been least affected by this development as the courts are generally empowered to review regulatory actions and rulings. Indeed, this is one of the arguments used to defend regulatory agencies from the charge of unconstitutionally undermining the separation of powers. Another is that the top officials in those bodies have to be appointed by elected officials and are only granted limited tenure. Thus, at the SEC, its five rule-making commissioners are selected by the US President, confirmed by the Senate, and given a five-year term. Not only that, to avoid either of the two political parties from dominating the securities regulator, no more than three of the five regulators can either be a Democrat or a Republican.[85] The mistake in thinking that this suffices is in assuming that constitutionality is simply a matter of ensuring the

[83] Aruna Viswanatha, "Court Decisions Foils Insider Trading Cases", *The Wall Street Journal*, (April 4, 2015).

[84] This is the definition proposed in a bill introduced in the US Congress by Representatives Jim Himes and Steve Womack. See Andrew Ackerman and Aruna Viswanatha, "Lawmaker Proposes Bipartisan Insider Trading Ban", *The Wall Street Journal*, (March 25, 2015), http://www.wsj.com/articles/lawmaker-to-propose-federal-ban-on-insider-trading-ban-1427292645

[85] SEC, "Current SEC Commissioners", (September 17, 2013), http://www.sec.gov/about/commissioner.shtml

ultimate accountability of regulators to the people. But the separation of powers that is a fundamental part of the design of liberal democracy, particularly its Anglo-Saxon variant, is primarily meant to prevent the same body from making, executing, and judging the laws. Like other regulators, the SEC performs all three tasks. Besides formulating new rules and implementing them, its staff also issues interpretations of existing regulations. Granted, these are not legally binding, but any prudent firm will heed those interpretations so as not to come under the sights of the regulator. As for the accountability mechanisms provided by the appointment power of elected officials and court oversight—which, alas, several provisions of the 2010 Dodd-Frank Act threaten[86]—these have the baleful consequence of distancing the business of government from the people further than our representative system already does.

Politically Influenced Bull and Bear Market Cycles

Before leaving the topic of stocks, I would be remiss if I did not treat the biggest skewing of markets that governments regularly perpetrate: the kindling of bull and bear market cycles. This part played by government is widely recognized among the plethora of stock market guides eagerly read by investors. Of the select group of these books that have managed to attain something more than an ephemeral influence is *Winning on Wall Street*.[87] Authored by Martin Zweig, who became a financial celebrity by predicting a "vicious decline" on the Friday before the October 1987 Wall Street crash, the book features a series of monetary indicators recommended as part of a market timing system. Among those is a Fed indicator. It is tabulated from a starting point of zero. Then one counts positively any recent moves by the central bank to relax monetary policy and one counts negatively any decisions to tighten. Zweig figures that this measure will typically vary from −5 to +7. Numbers at the top of this range are a good omen for stocks, while a score toward the bottom augurs ill. Testing the signals given by the Fed Indicator from 1958 to 1988, Zweig found that S&P 500 was up 23.5 % per year when it was high. If one

[86] C. Boyden Gray and Jim R. Purcell, "Why Dodd-Frank is Unconstitutional", *Wall Street Journal* (June 22, 2012), A17.
[87] Martin Zweig, *Martin Zweig's Winning on Wall Street* (Grand Central Publishing, 1986).

Table 5.3 US Fed response to bear markets, 1946–2009

Bear market period	*When –20 % threshold hit*	*Fed action (+/–3 months)*
1946–1947	August 1946	None
1948–1949	June 1949	None
1956–1957	October 1957	Lower discount rate by 0.5 %
1961–1962	May 1962	None
1966	August 1966	None
1968–1970	January 1970	None
1973–1974	November 1973	None
1980–1982	February 1982	Lower discount rate by 1 %
1987	October 1987	Lower Fed funds by 0.5 %
2000	March 2001	Lower Fed funds by 1.75 %
2007–2009	July 2008	Lower Fed funds by 1 %

had simply been invested only during those times the indicator was at these levels, a $10,000 investment would have turned into $73,261. This would have been more than the $66,010 that would have been accrued by simply buying and holding over the 1958–1988 period, despite the fact one would have been in the market exposed to its risks only 30 % of that time. However, as often happens when a trading methodology is evaluated against out of sample data, the Fed indicator did not fare so well when it was subsequently tested in a 1996 article.[88] From 1955 to 1989, decreases, as opposed to increases, in the Fed funds rate had always been followed by a better performance on the S&P 500. That pattern, though, reversed from 1990 to 2006. Afterwards, had an investor bought into the market after the first series of cuts in the Fed funds rate enacted during the fall of 2007, their portfolio would have been scathed by the tumble in share prices that occurred amid the financial crisis.

This should not be taken to mean that the Fed has ceased to be a critical player in determining stock prices. Consider the table below (Table 5.3).

Clearly, since 1980, the Fed has become noticeably more sensitive to the development of bear markets, defined as a minimum 20% decline in the S&P 500 Index. Only once prior to 1980, during the 1956–1957 downturn, did the Fed counter by reducing its key rate. After 1980, it always cut rates. The first instance in 1982 can be accounted for on purely macroeconomic grounds. At that time, Fed was coming off a phase of

[88] Roger C. Vergin, "Market-Timing Strategies: Can You Get Rich?" *The Journal of Investing* 5, no. 4 (1996), 79–86.

severe monetary tightening during which the discount rate had been taken up to a record level of 14 %, so there was a long period that needed to be taken for it to be progressively brought back down.

Part of the reason why following its interest rate adjustments is no longer such a profitable strategy is that those are more quickly discounted and assimilated into share prices. More people have gotten onto the Fed. If everyone knows that a rate cut (increase) is a predictor for the stock market to be up (down) a year from now, investors will immediately buy (sell) on any sign that a monetary policy change is likely to come. The result is that the stock market will arrive at its forecast point closer to the time that a rate move is announced rather than later. One piece of evidence for this is that the advantage of being invested in the market after a loosening of money policy, as opposed to a tightening, was greater in the 1990s the shorter the time frame. However, the disadvantage was smallest in the 2000–2006 period over the subsequent three-month window.[89] Another likely explanation why following the Fed no longer works so well is that it has lately become more proactive in countering the business cycle. Inasmuch as the stock market is a barometer of general economic activity, such a proactive stance would be revealed if the Fed were found to react to changes in share prices. And it has been calculated that, since 1985, the probability of the Fed raising its benchmark rate goes to 57 % whenever the S&P 500 index rises 5 %. The same probability of its lowering rates prevails whenever that index declines 5 %.[90] This means that the Fed is more apt to tighten monetary conditions in the earlier stages of bull markets, in which case, more time is left for stocks to rise in the wake of rate increases. It also means the Fed will be more liable to relax conditions during the initial phases of bear markets, in which case, more time is left for stocks to fall subsequent to rate decreases.

Complicating matters further is that the Fed lowered its benchmark interest rate to virtually zero in late 2008 and kept it there for seven years before finally raising it by 0.25 % in December 2015. When the Fed funds rate was at zero, it was not a viable tool to provide additional monetary

[89] Jeremy Siegel, *Stocks for the Long Run*, 4th ed. (New York: McGraw Hill, 2008), 197.
[90] Roberto Rigobon and Brian Sack. "Measuring The Reaction of Monetary Policy to the Stock Market". *The Quarterly Journal of Economics* 118, no. 2 (2003), 639–669.

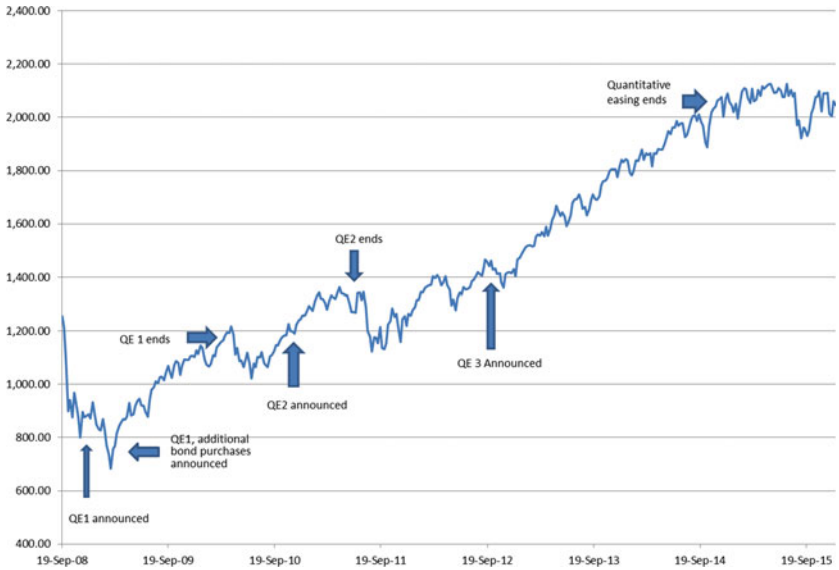


Fig. 5.5 S&P 500 Index and quantitative easing, 2008–2015. *Source*: Yahoo Finance

stimulus, there being little prospect (negative interest rates had not yet been seriously contemplated) of America's central bank taking it below zero. In an attempt to energize the economy out of the anemic recovery that set in after 2009, the Fed undertook quantitative easing (QE). With QE, instead of targeting a certain interest rate, the central bank injects a set amount of money into the financial system. It does so through the purchase of debt securities in the bond and money markets, in the hopes that the funds will eventually radiate throughout the economy and increase spending. By the time QE came to an end in 2014, there had been three QE campaigns, all of which correlated with upward trends in equities. Notice, too, that with the end of QE, the stock market was basically flat in 2015 (Fig. 5.5).

Though using different means than before, the Fed continues to affect equity prices. Its direct impact, of course, is on the interest rate variable in the stock price equation. But it can also influence earnings and growth

via interest rates. In fact, it is in this way that the Fed can be suspected of generating bull and bear market cycles. If this suspicion is valid, what we have is an organ of the government bringing about the very conditions that generate added layers of regulation from other elements of the state apparatus—proving what Milton Friedman once said, namely that government intervention generates problems to which further intervention is proffered as a solution. What can be done to evade this vicious circle in a democratic context must be left to the last chapter to elaborate. Until then, there are other financial markets and instruments whose political significance must still be plumbed.

CHAPTER 6

The Derivatives Markets

Try reading any of the leading academic finance journals—you will immediately be hit with an avalanche of equations. Why all the math? A major reason is derivatives, an astonishingly motley assortment of securities ranging from a simple promise to engage in a subsequent transaction to the most fiendishly complex package of contingent rights and obligations ever conceived by the human mind. Since the 1970s, we have witnessed a prodigious increase in the trading of derivatives, whether in the form of futures, forwards, options, and swaps. Associated with this has been an alteration in the culture of the financial markets. Derivatives involve sophisticated quantitative models to price them. That brought a cavalcade of engineers, physicists, and mathematicians to Wall Street. As a result, the financial markets have gone from being a place that held up intuition and prudence as the most admirable capacities to a place that increasingly prizes analysis and science.

Culture is not the only thing that derivatives have changed. The rise of derivatives has also had political repercussions. Derivatives are the most levered instruments in the financial universe. Should any large, well-connected player make a mistake or be reckless in their use of derivatives, it can adversely impact the stability of the financial system as a whole—obviously, something in which public officials inevitably take an interest as part of the modern democratic state's role in managing the economy. Add to this leverage the complexity that derivatives embody. Less-schooled investors

G. Bragues, *Money, Markets, and Democracy*,
DOI 10.1057/978-1-137-56940-0_6

are left vulnerable to exploitation, particularly at the hands of those who create and market derivatives. Naturally, this stirs up traditional regulatory concerns regarding the maintenance of transactional fairness. By definition, too, the leverage that derivatives involve enables traders and investors to take a position on an asset with a smaller amount of capital. In this way, derivatives make it easier for speculative activity to take place that causes the prices of socially vital goods, like oil, to deviate from the underlying economic fundamentals. Indeed, that speculative activity can take prices toward levels that alter the geopolitical balance and spark political unrest.

Nowhere are the excesses of finance more evident than they are with derivatives. Yet nowhere are such excesses more commonly misunderstood. Warren Buffet's famous rebuke of derivatives as "weapons of mass financial destruction"[1] surely overstates their systemic risks. No doubt, derivatives have done harm to society, but it cannot simply be chalked up to a mixture of financier greed and mathematical hubris. Some of this harm, as I shall endeavor to show with the options embedded in the CDOs related to the sub-prime mortgage crisis, was the product of a widespread forecast error made in pursuit of an otherwise risk-averse investment strategy. Some of this harm, though, has also been perpetrated by governments using derivatives to make their finances look better than they really are. Nor can derivatives be properly described as the main culprits for large swings in the prices of essential commodities. Granted, much of what passes for derivatives trading is no different from sports betting. But we cannot neglect the role of democracy in encouraging derivatives. Besides chipping away at the moral animus against gambling, democracy has advanced the cause of derivatives by its having removed the last vestiges of the gold standard in the early 1970s. By generating a heap of uncertainty and volatility, this transition to a pure fiat money regime is the chief reason why derivatives have grown from a small corner of the financial markets to a humungous block.

As risk management tools, however, derivatives are perfectly justifiable. They are suitable means of grappling with the perils and difficulties to which both nature and the requisites of social co-operation subject us. Their usefulness, however, becomes regrettable when the risks they are supposed to hedge against are unnecessarily generated by public policy—as indeed these have been within our democracies.

[1] Warren Buffet, "2002 Chairman's Letter" in *Berkshire Hathaway 2002 Annual Report*, 15, http://www.berkshirehathaway.com/2003ar/2003ar.pdf

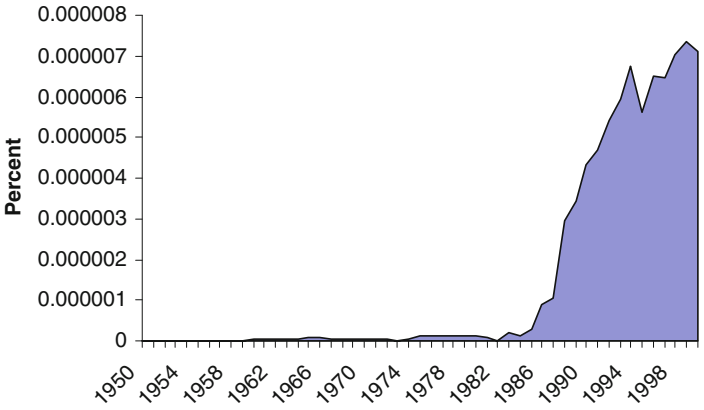


Fig. 6.1 Usage frequency of "derivative security" in English Language Books, 1950–2000. *Source*: Google Ngram

The Incredible Rise of Derivatives

The term derivative is a relatively new term to describe contracts that have, in one form or another, been around for almost 4000 years. Input the phrase "derivative security" at Google Ngram Viewer, a website displaying the percentage frequency of word usage in the search engine's database of scanned books, and the result is the graph depicted in Fig. 6.1[2].

The line is essentially flat near the 0 % level from 1950 to 1970. It then starts to rise gently in the 1970s through to the early 1980s, before sharply inclining upward from the mid-1980s to the late 1990s. The N-Grams graph nicely testifies to the explosion in derivatives trading during the last 40 years. Yet it also indicates how that market acquired a distinctness vis-à-vis the rest of the financial realm, a distinctness that required a new general word to capture both what derivative securities had in common with one another as well as what made them unique in comparison to other instruments. Thus, derivatives are called what they are because, irrespective of what specific type they are, their value always derives from something else.

[2] Google Ngram Viewer, http://books.google.com/ngrams/graph?content=derivative+security&year_start=1950&year_end=2000&corpus=15&smoothing=3&share=

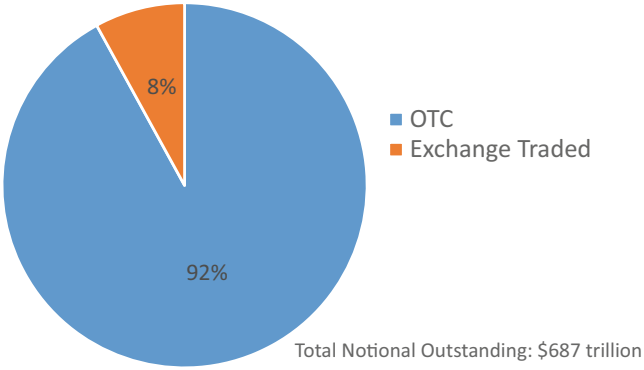


Fig. 6.2 OTC versus exchange-traded derivatives, notional amount outstanding, 2014. *Source*: BIS

This something else can be a specific asset, a group of securities, or even just a state of the world.

Similar to bonds and stocks, derivatives are traded both on exchanges and OTC. Of the two, the OTC market is the much larger. A standard metric for the size of the derivatives market is the notional amount outstanding, equivalent to the total value of the securities upon which existing derivative contracts are based. At the end of 2014, that notional amount was $629 trillion in the OTC arena compared to a relatively paltry $58 trillion on exchanges.[3] Putting these together, in 2014, derivatives constituted a $687 trillion market (Fig. 6.2).

In 1998, the earliest year for which the Bank for International Settlements (BIS) has data, the notional amount outstanding was $80.3 trillion. This means that the entire derivatives market has grown by a compounded rate of 14.5 % per year since then. According to the International

[3] OTC data from Bank of International Settlements, "Semiannual Derivatives Statistics" (November 5, 2015), http://www.bis.org/statistics/d5_1.pdf; Exchange-traded data from Bank for International Settlements, "Exchange Traded Derivatives Statistics" (September 13, 2015), http://www.bis.org/statistics/d1.pdf. It should be noted that the BIS data on exchanged-traded derivatives is limited to financial derivatives and does not include commodity futures and options. Hence, the $58 trillion that BIS reported for year-end 2014 understates the totals for exchange-traded derivatives.

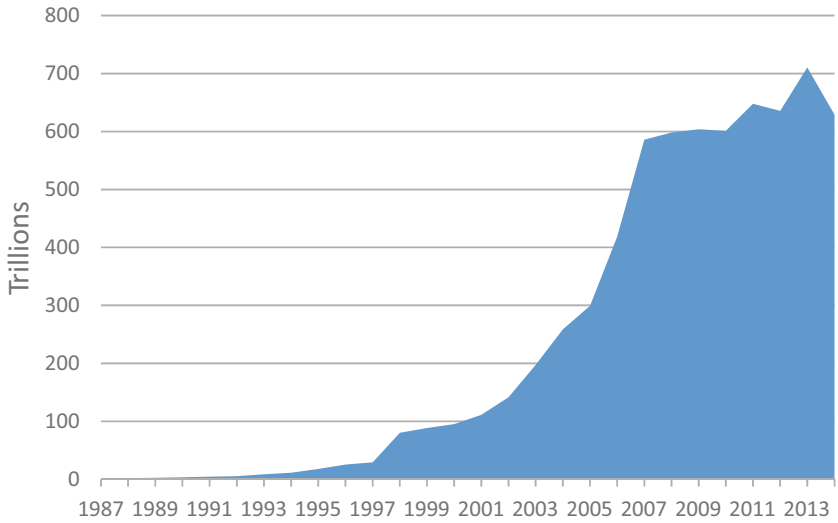


Fig. 6.3 OTC derivatives market, notional amount outstanding, 1989–2014. *Source*: BIS and ISDA

Swaps and Derivatives Association (ISDA), which has notional data based on surveys of its members going further back in time (incorporated along with the BIS numbers in Fig. 6.3), the growth rate is a more impressive 33 % when measured from 1987 to 2014.[4] No matter what the data source, it is obvious that the derivatives area has undergone a revolutionary transformation.

Of the various categories of OTC derivatives, those based on interest rates are by far the most actively traded. At the end of 2014, these made up 75 % of the total notional value outstanding. Currency derivatives came in second at 11 %. It is certainly understandable why the latter are among the leading instruments, given that currency rates have been subject to incessant fluctuations since the end of the Bretton Woods system in the early 1970s. Such volatility enormously complicates long-term planning for companies that significantly rely on international trade. It has become

[4] ISDA, "ISDA Market Survey Data", http://www.isda.org/statistics/pdf/ISDA-Market-Survey-historical-data.pdf

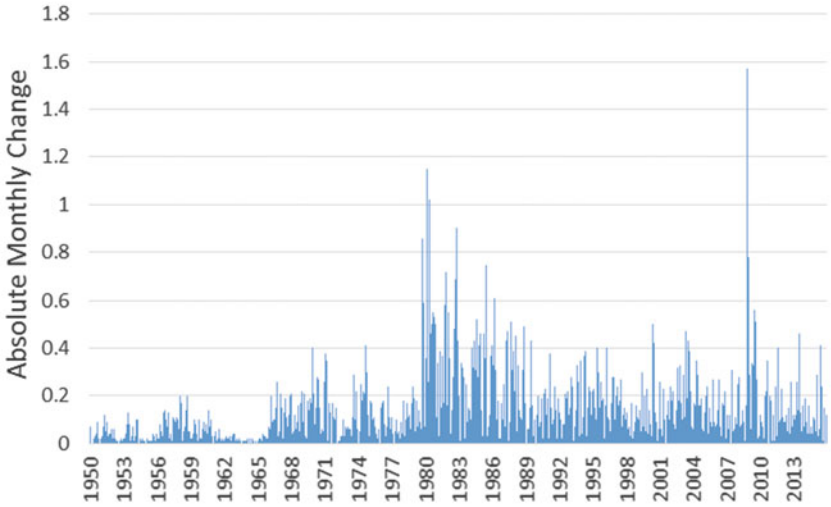


Fig. 6.4 Absolute value of monthly changes in Moody's Baa Corporate Bond Yields, 1950–2015. *Source*: St. Louis Fed

harder to figure out how much, in local currency terms, they will wind up paying for imported inputs and receiving on exported goods. Derivatives bring a measure of certainty to these calculations amid the uncertainty generated by the abandonment of a gold-based international monetary system. Though not so often noticed, interest rates have also become more volatile since that regime change, explaining the huge popularity of interest rate derivatives as firms seek to hedge their borrowing costs. Figure 6.4 depicts the absolute value of monthly changes in the yields on Moody's Baa-rated corporate bonds. Such yields reflect the interest rate at which a typical company in good financial condition, posing only moderate risk of non-repayment of their debt, could borrow.

Admittedly, volatility begins to perk up in the mid-1960s. Yet that is when Bretton Woods began to be fatally undermined by the easy money strategy adopted by the Fed to help finance the combination of the Vietnam War and the Great Society. After the early 1970s, there is a discernible pattern of larger monthly changes in interest rates. Even the so-called Great Moderation between the mid-1980s to mid-2000s, when the discretionary monetary approach is thought to have attained its greatest successes, displays a higher volatility profile than the period from

1950 to the mid-1960s. That was the period before Bretton Woods came under pressure from American policymakers operating under democratic exigencies to privilege domestic political issues over the country's international financial responsibilities.

Futures and Forwards

Of all the securities dealt with in this book, the one that readers will most likely benefit from a primer is derivatives. When it comes to derivatives, the general incomprehension surrounding those instruments was nicely captured by a member of US Congress when he said: "What is a derivative? I wouldn't know one if it hit me in the face".[5] It is best to begin our primer with the most basic derivative instrument: the futures contract. This consists of the obligation to either buy or sell a specified amount of an underlying asset at a specified point in the future. The price, however, is set at the time the contract is initiated. As such, the party that buys a futures contract—who is said to go long—agrees to take delivery of the underlying asset at the stipulated date and price. Conversely, the party that sells a futures contract—who is said to go short—agrees to make delivery of the underlying asset at the stipulated date and price.

To illustrate this, consider gold. Futures on the yellow metal are most actively traded on the Commodity Exchange Inc. (COMEX) division of the New York Mercantile Exchange (NYMEX). Each gold futures contract represents 100 troy ounces. At any one time, there will be a series of contracts available for different delivery months. Now imagine that it is late 2015 and that the December 2016 gold is trading at $1070 per ounce. Anyone, then, who buys that gold futures contract assumes the obligation to pay $1070 per ounce for 100 ounces of gold when December 2016 arrives (the exact date is defined by the exchange) to the seller of the contract. The latter, in turn, assumes the obligation to come up with the precious metal and deliver the stipulated amount at the initially agreed price.

Hence, a future contract—and this is the same with every derivative instrument—is effectively created out of thin air by two traders willing to take opposing sides of a prospective exchange. Unlike a stock or a bond,

[5] Quote from Luke Zubrod, "Four Years Later: Dodd-Frank and Derivatives", *Unconventional Wisdom* (August 1, 2014), at http://www.institutionalinvestor.com/blogarticle/3367200/four-years-later-dodd-frank-and-derivatives/asset-management-regulation.html#.VkS7FnarTcs

there is usually no organization, such as a company or governmental body, which originates the security and ultimately grounds its value over time. With derivatives, the distinction between the primary market (where organizations issue securities to investors) and the secondary market (where investors trade securities among themselves) disappears. It is replaced by that between the futures and spot market. The latter is where the asset underlying a derivative, like gold, is traded for immediate delivery. Arbitrage tends to keep the spot and futures prices of the asset aligned, with the difference between the two reflecting the risk-free interest foregone in fully paying for the asset now in addition to the cost of carrying it in terms of storage and any other payments associated with holding it.[6]

Despite the arbitrage link that ties futures to their respective spot markets, very few who trade these derivatives instruments end up taking part in the delivery process. Indeed, some futures contracts, those on stock indices for instance, entirely dispense with the delivery requirement. These are settled on a cash basis via a payment of the difference in the value of the underlying asset between the initially set price and that at the expiration of the futures contract. Even where settlement ultimately involves delivery, anyone with a futures contract is able, prior to maturity, to transfer their delivery obligations to someone else. Where they have been long, they would sell their contracts; where they have been short, they would buy them. When the party on the opposing side of such a trade is also liquidating their position, the result is that both sets of obligations to engage in a subsequent spot transaction are canceled. The futures contract literally disappears. When it comes time for delivery, the only parties typically left with a position are those who have a direct commercial interest in the underlying asset. In our gold example, these would include miners of the precious metal and jewelry makers.

So where does the huge leverage involved with futures trading come from? Since the vast majority of market participants avoid delivery, brokerage firms are under no pressure to demand that future traders demonstrate ownership of the underlying asset on entering a short position. Similarly for those entering a long position. Brokers do not need assurance that buyers of futures contracts have the money needed to purchase the underlying asset. Instead, futures traders are expected to make a margin deposit in opening a trade, enough to cover adverse changes in the value of the

[6] John Hall, *Options*, *Futures*, *and other Derivatives*, (Upper Saddle River, NJ: 2009), 118.

deliverable good throughout the duration of the position. While this is open, trades are marked to market on a daily basis. Hence, whenever the futures price has risen, the brokerage accounts of the longs are credited by the daily appreciated value of their positions, while the shorts are equivalently debited—and the opposite whenever the futures price has declined for the day. The initial margin requirement to cover the entry into a futures trade is usually less than 10 % of the value of the underlying asset and, indeed, is often in the 2–5 % range. If one considers that the margin for stocks in the USA is typically 50 %, one can begin to grasp where the huge leverage in futures comes from. To continue with our gold example, the initial margin required on the COMEX was $3750 per contract in late 2015, which works out to 3.5 % of the $107,000 which 100 ounces of gold were worth at the time. If someone buys a gold futures contact at $1070 per ounce and then, a month later, sells it at $1170, the profit is $10,000 ($100 price change X 100 ounces) less commissions. The trader more than doubles their initial investment. Had they simply bought the same amount of actual gold in the spot market, and then sold it at the same price a month afterwards as well, the profit would still be around $10,000. But the initial outlay would have been higher at $107,000. The percentage rate of return would only have been 9.3 %, instead of being 167 %. Needless to say, if gold had gone down $100, rather than up, then the futures trader would have lost their entire margin deposit plus an additional $6250. By contrast, the spot market participant would have only lost 9.3 % of their investment.

Forwards are structurally similar to futures. They also comprise obligations to either buy or sell a certain asset at a presently agreed upon price with delivery set for a later date. The difference is that forwards are not standardized in the way that futures are by the exchanges with respect to the quantity and nature of the underlying asset as well as the scheduled delivery time. Forward contacts thus have the advantage of being customizable to fit user needs. If a mining company needs gold delivery set for a month for which the exchange does not offer a liquid contract, then it is best off going to the forward market. Another difference is that futures prices and transactional volumes are more transparent to the public than those negotiated in the forwards markets. There, data availability tends to be confined to private dealer networks. But the most significant distinction between the two—precisely where recent proposals to regulate derivatives have been directed—is that a clearing house guarantees that the required cash disbursements are made on futures contracts. With forwards, there

is no such third party. In that market, traders must rely on the good faith and financial resources of their counterparties, whereas futures eliminate the risks of non-compliance entailed by this dependence.

The first recorded instance of a forward contract occurred in Mesopotamia during the nineteenth century BC. Wood was the underlying asset of this maiden derivative trade. The terms of the trade were written down on a tablet, involving someone named Ashak-shemi promising to deliver 30 planks to a Damqanin at an unspecified future date.[7] Later, the ancient Greeks legally proscribed derivatives, which suggests at the very least that these were being illicitly transacted. Still, they tolerated forwards in grain to facilitate imports of this key commodity from Egypt. While following the Greeks in initially prohibiting derivatives, the Romans eventually allowed contracts for future delivery.[8] Later in the medieval era, forward contracts were commonly negotiated at fairs and in the carry trade.[9] Such contracts featured prominently in the Tulipmania of 1636–1637, becoming the main vehicle by which speculation was conducted on tulip bulbs.[10] Around the same time, futures contracts on rice with standardized terms began to be traded in Japan. In the USA, the Chicago Board of Trade (CBOT), founded in 1848, introduced grain futures in 1865. It was soon followed by the Chicago Produce Exchange in 1874 specializing in butter and eggs. Out of this organization, a splinter group formed the Chicago Butter and Egg Board before becoming the Chicago Mercantile Exchange (CME) in 1919.[11] Agricultural products continued to dominate futures trading until the 1970s when the derivatives market was revolutionized by the CME's introduction of currency

[7] Ernst Juerg Weber, "A Short History of Derivative Security Markets". In *Vinzenz Bronzin's Option Pricing Models: Exposition and Appraisal*, eds. Wolfgang Hafner and Heinz Zimmerman (Berlin: Springer, 2009), 434.

[8] Ernst Juerg Weber, "A Short History of Derivative Security Markets". In *Vinzenz Bronzin's Option Pricing Models: Exposition and Appraisal* (Springer, 2009), 436–437.

[9] Edward J. Swan, *Building the Global Market: A 4000 Year History of Derivatives* (London: Kluwer, 2000), 113–126.

[10] Charles Mackay, *Extraordinary Popular Delusions and the Madness of Crowds*, 95–96; For a discussion of futures and forward trading beyond tulips that took place in Amsterdam, see Oscar Gelderblom and Joost Jenker, "Amsterdam as the Cradle of Modern Futures and Options Trading, 1550–1650", in *The Origins of Value: The Financial Innovations That Created Modern Capital Markets*, eds. William N. Goetzmann and K. Geert Rouwenhorst, 189–206, (Oxford: Oxford University Press, 2005).

[11] Donald Spence, *Introduction to Futures and Options*, (Cambridge, UK: Woodhead Publishing, 1997), 24–26.

futures in 1972. Soon afterwards, a flurry of additional contracts based on financial instruments was inaugurated, such as Treasury bill futures in 1975, bond futures in 1979, equity index futures in 1982, and Eurodollar futures in 1983.[12] Besides the CME, other leading trading marts today include the Swiss–German based EUREX, London International Financial Futures Exchange (LIFFE), and London Metals Exchange.

Anyone first coming across the list of available futures contracts cannot help but be impressed by the diversity of the assets traded. The agricultural segment that historically grounds the futures markets encompasses contracts on corn, wheat, soybeans, sugar, orange juice, cotton, rice, milk, live cattle, and lean hogs. Pork bellies, long a symbol in the popular mind of the oddball activity that takes place on futures exchanges, was discontinued in 2011. Then there is the metals category, embracing gold, silver, platinum, steel, zinc, aluminum, and copper. Crude oil futures, in both its West Texas Intermediate and Brent variants, lead the energy sector that came to the fore beginning in the 1980s, a sector which also includes contracts on natural gas, heating oil, and gasoline. The most actively traded area of all, though, are the financial futures, with the most significant contracts there being those on the S&P 500 index, Eurodollars, US ten-year Treasury notes, and Euro currency. In the forward markets, the financials also reign. Beyond these four major sectors, the futures exchanges have been inventive of late, devising contracts based, not on an asset but on events. Thus, there are futures on the weather in which payoffs can depend on the temperature in a specified place, or the occurrence of rain, snow, frost, and hurricanes.

Overcoming the Moral Animus Against Gambling

The public interest rationale advanced for permitting all this derivative activity is obviously not that it provides a venue for affluent people to gamble on the direction of the Japanese yen rather than at poker. It is justified on the argument that futures and forwards allow individuals and firms to insure themselves against risk. Returning to our gold example, imagine that a mining company has known reserves of 100,000 ounces. It expects to extract 20,000 ounces in each of the next five years. In a world without

[12] Franklin Allen and Douglas Gale, *Financial Innovation and Risk Sharing* (Cambridge: MIT Press, 1994), 27.

futures and forwards, the company would have to wait until it actually mined the gold before it could be certain of its revenues. Between now and then, after all, the gold price can change. Of course, gold can rise from its present level, which would be positive for the mining company. But the price can also fall. Thanks to futures and forwards, however, the company can eliminate this uncertainty. It can do so by entering separate contracts to deliver 20,000 ounces over each of the next five years at a price set now. Afterwards, at each of the scheduled delivery dates, the company would simply hand over the gold they mined over the past year to their counterparties in the forward or futures contracts. These counterparties could be jewelry manufacturers that have estimated the need for 20,000 ounces of gold in each of the next five years to transform into bracelets, necklaces, and rings. The latter, too, will have been able to remove a business risk, though for them it is on the cost as opposed to the revenue side of their operations.

So where does the much-cited speculation of futures trading come in? The truth is that our gold example is highly idealized. Hedgers do not always find other hedgers with which to trade. Very commonly, hedgers have to contract with a speculator—that is, someone who is not trying to create an opposite cash flow scenario to that which their commercial interests otherwise subject them. In contracting with speculators, hedgers enter into a pact with someone looking to make money by correctly forecasting prices. As such, the standard justification for tolerating speculators is that they are necessary to provide the markets with sufficient liquidity for hedging purposes.

One can legitimately wonder, though, how this justification managed to gain social acceptance in the face of a long history of moral suspicion concerning gambling. In the derivatives markets, after all, it is not just speculators trading with hedgers. Very often, it is speculators trading with other speculators. Though it is actually pretty difficult to draw a sharp line between investment and gambling—in both cases, skill can be applied in an attempt to profit from a successful forecast—the trading of a derivative contract in which one has no prior interest in the underlying asset is as close as one can get to the financial equivalent of a casino game. Like a gambling transaction, a speculative derivatives trade culminates in the transfer of funds from one party to another. It is a zero-sum game. An element of this also exists in the secondary market for bond and stocks, in that the gain obtained by person A that originally bought a stock at $30 monetarily comes from person B to whom they sell at $40. But at least

with stocks and bonds, such activity is part of a larger effort on the part of companies and governments to finance the purchase of human and physical resources. And all of this, more importantly, with the aim of creating goods and services of higher value to people than those currently being produced. Where, though, exactly is the value creation that comes from derivatives? How do these instruments advance the public interest?

Precisely because the answer to these questions is not obvious, the history of derivatives features an ongoing battle to evade the application of gambling laws. Early on, traders were not always successful in that effort. This was evidenced by a Dutch court's decision after the Tulipmania of 1636–1637 came to an end with a crash in prices. In a judgment that spared those who were long tulips from having to pay high prices for delivery, the court ruled that the futures contracts constituted gambling and, therefore, were not enforceable by the state.[13] The tradition of English common law, reflected in American jurisprudence, adhered to this interpretation. As a condition of government sanction, the common law insisted that at least one of the parties to a derivatives contract have a pre-existing economic interest in the underlying asset—that they be a hedger, in other words.[14] This still left the option of trading derivatives on a venue offering private enforcement of contracts. When the futures exchanges emerged in the nineteenth century, they provided this service. Members of those organizations collectively insured traders against reneging by counterparties. Popular at the same time in the USA were bucket shops, which offered contracts for difference on stocks as well as the agricultural commodities in which the futures exchanges initially specialized. Like cash-settled futures, the payout on a contract for difference is calculated by subtracting the buy price from the sell price at which entry and exit vis-à-vis the position occurred. The futures exchanges lobbied against bucket shops, launching a lawsuit against them for using their price quote data. They succeeded, as the bucket shops were illegalized as forms of gambling. Derivative trading outside exchanges was consigned to private enforcement mechanisms, the latter codified in the 1936 Commodity Exchange Act. It is not clear whether the exchanges were motivated in their campaign by the competitive threat posed by bucket shops or by the concern that their continued existence would tar all derivatives trading with the stigma of gambling, or

[13] Charles Mackay, *Extraordinary Popular Delusions and the Madness of Crowds*, 96.
[14] Lynn Stout, "Derivatives and the Legal Origin of the 2008 Credit Crisis". *Harvard Business Law Review* 1 (2011), 12.

a combination of both.[15] Whatever the case, the futures exchanges would not have been able to grow had they not succeeded in distancing themselves from gambling. Later, they fell victim to their own success in morally legitimizing the derivatives field, as the Commodity Exchange Act was amended in 1992 to allow exemptions from the requirement that trading be limited to exchanges. The same exemption was duly granted the next year to the burgeoning OTC market in swaps. Thanks to this legislative change as well, OTC derivatives trading was rendered immune to state gambling prohibitions.[16]

However one might morally view gambling, what cannot be doubted is that the climate of opinion toward it has changed dramatically over the past half-century. Whereas once lotteries were illegal, governments now sponsor them, inundating the airwaves with advertisements trying to entice people to buy tickets with the prospect of winning a life of leisure and luxury. Around the world, too, governments have shown a greater openness to sports betting, online poker, video lottery terminals, slot machines, and casinos. In no small part, this shift in moral attitude has arisen because of the declining influence of religion in public life. This is something which liberal democracy encourages with the neutral stance it takes toward religion in public life. It must not be forgotten that the old moral animus against gambling was very much fueled by Christian beliefs, especially those of Protestant denominations.[17] The ideal of individual freedom that animates the thinking of democratic citizens also tends to favor the normalization of gambling. People deduce from the principle of freedom that the burden of proof lies with those who hold that the state should be in the business of restricting the pleasures that people can voluntarily choose. Another factor is the increasing need of governments for revenue, which gambling is able to conveniently provide without the political cost of raising taxes. Underlying this hunger for funds, as we saw in Chap. 3, is the propensity for the state to expand in a democracy beyond what taxpayers are willing to contemporaneously fund. Given all this, it would now

[15] Reuven Brenner and Gabrielle A. Brenner, *Speculation and Gambling: A Theory, a History, and a Future of some Human Decisions* (Cambridge: Cambridge University Press, 1990), 92.
[16] Financial Crisis Inquiry Commission, *The Financial Crisis Inquiry Commission Report*; Lynn Stout, "Derivatives and the Legal Origin of the 2008 Credit Crisis", 19–20.
[17] Jim Cosgrave and Thomas R. Klassen, "Gambling against the State: The State and the Legitimation of Gambling", *Current Sociology* 49, No. 5 (2001), 3.

be hypocritical for the government to condemn derivatives as immoral. In our democracies, the regulation of derivatives has become a technical problem. It is treated as a matter best dealt in terms of its impact on economic activity rather than as a moral issue.

The Golden Barometer

For thousands of years, gold served as money. Today, gold has mostly been relegated to the futures market. Yet this has not stopped the yellow metal from acting as a measuring rod of the government's management of its fiat currency. A foreshadowing of this occurred well before the complete abandonment of the gold standard in 1971. It was during the American Civil War (1861–1865) when the North, leery of raising taxes, summoned the money-printing press to finance the conflict against the seceding Southern states. Soon after suspending species redemption in January 1862, Congress passed the Legal Tender Act. By this legislation, the Union government was authorized to create notes that could be used to legally discharge private and public debts. Meanwhile, an active market developed in New York to trade the new paper money, popularly referred to as Greenbacks, against gold.[18] The gold price of Greenbacks trended downward on the whole, reflecting the market's judgment that the Union government was heavily relying on the printing of money to pay for the war. Within this prevailing trend, though, the price oscillated with the twists and turns of the war (Fig. 6.5)[19].

It was widely expected that species redemption would be restored after the end of the war. As a result, battlefield events that raised the probability of a Northern victory, and hence a cessation of hostilities, caused the gold price of Greenbacks to rise. Conversely, events that lowered the probability of a Northern victory caused the price to fall. Thus, the battles of Gettysburg and Vicksburg, each of these triumphs for the North, were associated with a large upward move, 31 %, in Greenbacks over their respective subsequent 100-day trading time frames.

[18] Kristen L. Willard, Timothy W. Guinnane, and Harvey S. Rosen. "Turning Points in the Civil War: Views from the Greenback Market". *American Economic Review* 86, no. 4 (1996): 1001–18. I have relied on this article for the discussion immediately below.

[19] Yale School of Management: International Centre for Finance, "Greenbacks: 1862–1878", http://icf.som.yale.edu/sites/default/files/financial_data/greenbacks.xls

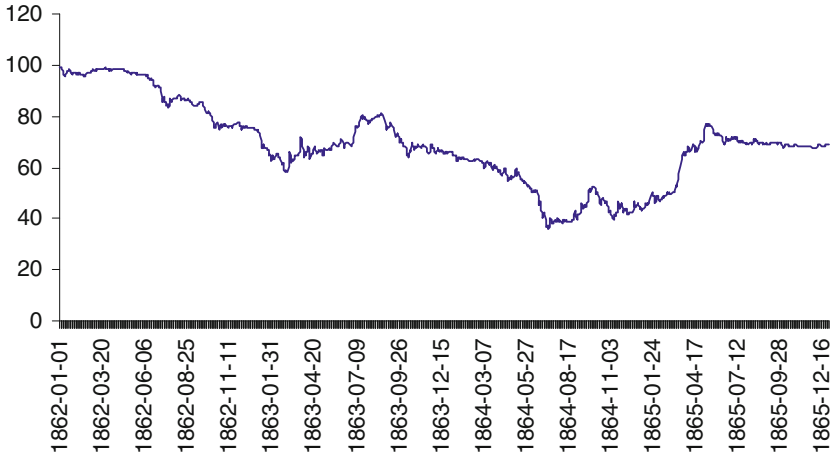


Fig. 6.5 Gold price of Greenbacks, 1862–1865. *Source*: Yale—International School of Finance

Interestingly, too, events not considered significant by historians in affecting the course of the Civil War were interpreted differently by the gold market of the day. Exemplifying this was the decision of Confederate General Jubal Early to call off a threatened raid on Washington, a retreat that caused the largest daily percentage change in the Greenback price witnessed during the conflict. More interesting still is that the Emancipation Proclamation, in which President Abraham Lincoln declared the freedom of the slaves living in the Confederate states, led to a noticeable drop in the Greenback. Figuring that this expansion of the war's objectives would prolong hostilities, by precluding a negotiated settlement and requiring a complete surrender by the South, the gold market priced in the prospect of additional money printing.

Though less studied than its Northern counterpart, a gold market also operated in Richmond, valuing the South's own inconvertible money, the Grayback.[20] Not surprisingly, given the South's relatively weaker economic

[20] Marc D. Weidenmier, "Turning points in the US Civil War: Views from the Grayback market". *Southern Economic Journal* (2002): 875–890.

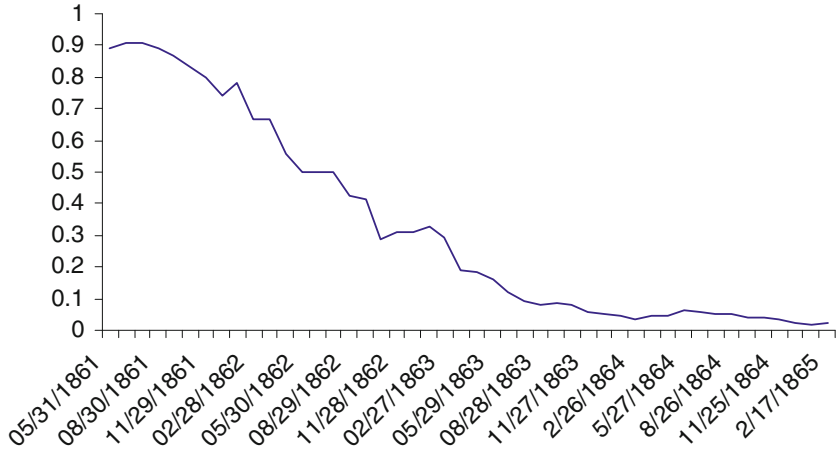


Fig. 6.6 Gold dollar price of Graybacks, 1861–1865. *Source*: Marc D. Wiedenmier

base and ultimate defeat, the downtrend in the gold price of Graybacks is more severe. The market gauged that the Confederate states were highly reliant on inflationary financing. It also factored in that the prospect of the money ever being redeemed for species was becoming dimmer by the month. Mirroring the greenback market, Grayback prices dropped in response to the Emancipation Proclamation, Gettysburg, and the Battle of Antietam, the latter accelerating the decline in the South's paper currency (Fig. 6.6).

The barometer of the government's money policies that the gold market represented briefly during the Civil War became a permanent gauge upon the early 1970s' collapse of Bretton Woods. There has been a marked decline in the value of the world's fiat currencies vis-à-vis the yellow metal since that time. This whole trajectory has served to confirm the judgment of liberal democracy's seventeenth- and eighteenth-century architects. That is, governments will tend to abuse a power—in this case, over money creation—if not checked by a countervailing force. Within the overall trend of gold prices, three distinctive phases since 1971 can be distinguished that illuminate that market's political significance. These can be seen in the COMEX gold futures contract, which did not actually premiere until 1974. That was when a 1933 executive order issued by President Franklin D. Roosevelt prohibiting gold ownership by American

Source: St. Louis Fed

Fig. 6.7 Troy ounces of gold per 100 US dollars, 1971–2015. *Source*: St. Louis Fed

individuals and firms was repealed—although gold had already been trading freely internationally in an OTC market centered around London.[21] By 1974, gold had already leapt into the $100 range, well above the $35 level at which gold had been set by the US government for sale to the world's central banks prior to President Nixon's closing of the gold window. As exhibited in Fig. 6.7, this uptrend in the price of gold, equivalent to a downtrend in the gold price of the US dollar (which is how the relationship is displayed below to highlight the declining purchasing power of the greenback), persisted with the onset of futures trading. Gold eventually reached a high of $875 per ounce, or 0.11 ounces per $100, in January 1980.

Afterwards, though not without some lengthy rallies, the general tendency in gold prices was down through to August 1999. At that nadir, the yellow metal touched $250 per ounce, or 0.4 ounces per $100. From

[21] Jerry W. Markham, *A Financial History of the United States: From the Age of Derivatives into the New Millennium*, Vol. 3 (Armonk, NY: M.E. Sharpe, 2002), 43.

here, the third and most recent pattern begins of a sustained ascent in prices, a tendency which has seen gold overtake the 1980 highs on its way to the $1920 per ounce level in September 2011, or just 0.05 ounces per $100. Since then, gold has undergone a correction of its large upward move from 1999, trading around the $1100 per ounce level as of late 2015, or 0.09 ounces per $100

Among market practitioners, gold is seen as a safe haven and an inflation hedge. Econometric analyses of the factors driving gold prices tend to support that view. In other words, gold increases in value whenever bond and stock prices suddenly collapse and whenever inflation, whether measured by the consumer price index (CPI) or the GDP price deflator, is on the rise.[22] Inasmuch as inflation is the result of excess liquidity provided by the central bank relative to the demand for money, the sensitivity to changes in the general level of prices is clearly the gold market's way of judging monetary policy. While not so obvious, even the stock and bond price factor can be reduced to a monetary appraisal. This is because rapid declines in the stock and bond (particularly, corporate) markets are almost always followed by a dramatic injection of liquidity on the part of the central bank to calm nerves and relieve stresses in the financial system. Nor is it uncommon for the government to undertake fiscal policy stimulus, rendering it more likely that the central bank will eventually be pressed to monetize the resulting addition to the public debt. In accounting for these possibilities, the gold price naturally climbs.

Granted, this need not always happen. Should the crisis be sufficiently great, it can raise the question as to whether the central bank might be powerless to inject liquidity from its position at the base of the money creation process. If, amid the turbulence, commercial banks reduce their loans in an attempt to shore up their balance sheets, the consequences will be twofold. First, the supply of money will fall. Second, the demand for money among individuals and firms suddenly disposed to exchange real

[22] Thomas Conlon, Brian M. Lucey, and Gazi Salah Uddin, "Is Gold a Hedge Against Inflation? A Wavelet Time-Frequency Perspective", *SSRN Working Paper*, (October 6, 2015), http://ssrn.com/abstract=2670896; Dirk G. Baur and Brian M. Lucey. "Is gold a hedge or a safe haven? An analysis of stocks, bonds and gold". *Financial Review* 45, no. 2 (2010), 217–229; Natalie Dempster and Juan Carlos Artigas. "Gold: Inflation hedge and long-term strategic asset". *The Journal of Wealth Management* 13, no. 2 (2010), 69–75; David Hillier, Paul Draper, and Robert Faff. "Do precious metals shine? An investment perspective". *Financial Analysts Journal* (2006), 98–106.

goods for cash will rise, as they seek to make payments to creditors, workers, and suppliers.

This threat of a credit crunch is precisely what impacted the markets from July to October 2008, when gold itself tumbled, and conversely the dollar in terms of gold shot up. Not until the Fed assured the markets in November of that year that it would exercise all the powers at its disposal to inject liquidity through QE did gold resume its upward trajectory. Subsequently accelerating this upward trend was the Fed's implementation of three additional rounds of direct bond purchases. By the time the third round was implemented from 2012 to 2014, the gold market anticipated the end of the Fed's QE campaign. Those expectations accelerated the correction in the gold price from its $1900 per ounce high set in September 2011.

None of this is to deny that the gold market may have sometimes gone beyond what the political realities suggested would be a reasonable price level. However, abstracting the short-term gyrations in viewing the larger picture, the three major trends all make sense. The 1971–1980 bull market in gold reflects the removal of all constraints on the central bank's ability to print money, quickly realized in the loose, and inflation-inducing, monetary policies of that decade. The 1980–1999 bear market attests to the relatively tighter monetary policy regime forcefully initiated by former Fed chairman Paul Volcker and continued by Alan Greenspan in the first dozen years of the latter's tenure. True, the high economic growth experienced over the 1980s and 1990s helped matters by raising the supply of goods relative to money. Yet this prosperity was arguably the result of the freer market policies followed by governments during those decades. As for the bull market that started in 1999, this can be attributed to the easy money stance adopted by Greenspan after the popping of the dotcom bubble and carried on by Bernanke in the wake of the 2007–2009 financial crisis.

Oily Politics

As happens in the case of gold, the price of oil is primarily set in the futures markets. Oil is often referred to as black gold and it is even more enmeshed in politics than the yellow metal. This is mostly owing to the fact that the supply of oil happens to be concentrated in countries subject to political instability. Moreover, their relations with Western countries are often chilly, if not outright hostile. Of the ten nations possessing the greatest

amount of proven crude oil reserves as of 2015, only one, Canada, is a stable Western democracy. Among the others in the top ten are Saudi Arabia, Venezuela, Russia, Libya, Iraq, Iran, and Nigeria.[23] Certainly, significant price increases have ensued upon revolutions and wars in these countries. Think of the 1973 Yom Kippur War and the 1979 overthrow of the Shah in Iran and its replacement by an Islamic theocracy. Also worthy of mention here is the eruption of the Iran–Iraq War in 1980, Iraq's 1990 invasion of Kuwait, along with the 2003 invasion of Iraq led by the USA. After that, there was the so-called Arab Spring, the movement toward democracy that began with the 2011 overthrow of Zine El Abadine Ben Ali in Tunisia. Later spreading to Libya, where Western powers intervened to effectively back rebel forces against the Muammar Gaddafi regime, this phase of the Arab Spring caused a spike in oil prices. The ideal of democracy proved then to be a disruptive element in the oil arena, as ruling elites forcefully resisted challenges to the status quo unleashed by the Arab Spring. Nowhere was this more evident than in Syria, where the Bashar al-Assad government brutally repressed opposition forces. By 2015, amid all the devastation created by four years of civil war, waves of Syrians had left the country, sailing in rickety vessels and walking thousands of miles to seek refuge in Europe.

Indeed, a strong case can be made that the abundance of oil in the Middle East is precisely what makes it harder for democracies to consolidate themselves there. Impeding any transition to democracy is the resource curse. Countries plagued by this curse sit on valuable and plentiful natural assets. Yet precisely because of this, they are more likely to experience lower economic growth than nations not so well-endowed.[24] Nature's bounty acts as a magnet that pulls political elites into a ferocious competition to seize control of the country's resources. Whoever wins this battle can use the wealth acquired to capture the state apparatus and maintain control over it by rewarding supporters. The ruling group that emerges from this struggle can then proceed to reduce political competition by using the state's coercive power to neutralize threats to their authority. Though the country may still exhibit the appearances of lavish wealth, particularly in its capital city, the result is that the economy winds

[23] Central Intelligence Agency, *The World Factbook* (January 2015), https://www.cia.gov/library/publications/the-world-factbook/rankorder/2244rank.html

[24] Jeffrey D. Sachs and Andrew M. Warner. "The curse of natural resources". *European Economic Review* 45, no. 4 (2001), 827–838.

up performing less than optimally. For investment decisions are made with a view to the political interests of the governing class, rather than on the basis of profit expectations. In addition, too much effort is put into resource extraction at the expense of other industries, as politicians direct the gains toward their personal coffers, pet projects, military forces, and constituencies. By equipping their soldiers with good pay and sophisticated weaponry, the regime is able to win the loyalty of those who enforce the state's authority, furnishing them the means of beating down political opponents. No doubt Syria's oil wealth, though not especially sizable by world standards, has helped the Bashar al-Assad government do just that in that country's civil war. Consider as well that by using the revenues generated by oil to offer a generous array of government jobs, social benefits and subsidies within a framework of low taxes, ruling elites ensure the quiescence of the populace. This is a tactic that was successfully used by Saudi Arabia's monarchy in raising public sector pay and housing subsidies as protests against autocracy spread throughout the Middle East in 2011.[25]

The resource curse can be avoided. The condition is that the institutional setting maintains property rights and contracts. Necessary, too, is an institutional system of checks and balances that aligns the incentives of politicians closer toward policies favoring economic efficiency and growth maximization.[26] This explains why countries like Canada and Norway have demonstrated a greater immunity from the resource curse than elsewhere. Even so, as the experience of these nations attest, good institutions have to be already in place for the resource curse to be contained. As a general matter, the negative correlation between oil and democracy is strong. According to one quantitative study, a 100 billion barrel discovery of oil tends to reduce a country's level of democracy, as measured by the Polity index, by 20 percentage points below trend over a three-decade period. In line with the exceptions to this pattern in Canada and Norway, the negative effect of oil is more pronounced to the extent that democracy

[25] Michael Ross, "Will Oil Drown the Arab Spring", *Foreign Affairs* 90, no. 5 (2011), 2–7. For an argument that the ability to buy support with oil money contributes more to regime stability than the ability to finance an army that can quell opposition, see Benjamin Smith, "Oil wealth and regime survival in the developing world, 1960–1999". *American Journal of Political Science* 48, no. 2 (2004), 232–246.

[26] Halvor Mehlum, Karl Moene, and Ragnar Torvik. "Institutions and the Resource Curse" *The Economic Journal* 116, no. 508 (2006), 1–20; James A. Robinson, Ragnar Torvik, and Thierry Verdier. "Political foundations of the resource curse". *Journal of Development Economics* 79, no. 2 (2006), 447–468.

was not present when the oil find was made.[27] Alternatively, one can use the Freedom House Rights index as a measure of democracy. Variations in this measure further confirms the inhibiting effects of oil, according to an analysis of up to 156 countries from 1972 to 2002.[28] In the Middle East, oil both impedes democracy and is destabilized by the prospect of it—though it we must recognize that the oil futures markets in and of themselves are not responsible for any of this. The fact that oil is priced where it is by the markets does make it a resource valuable enough to work as a curse among nations amply endowed with it. But in setting the price, traders of the West Texas Intermediate and Brent crude contracts are only reflecting the demand and supply conditions of oil.

Obviously, OPEC (Organization of Petroleum Exporting Countries) cannot go unmentioned in a political accounting of the oil market. While the 12 nation cartel holds 80 % of the world's proven oil reserves, its ability to control the price of oil has diminished since the 1970s, when its actions generated the largest daily percentage price change in the history of the commodity.[29] On January 1, 1974, OPEC single-handedly took the price of oil from $4.31 to $10.11 per barrel, a 135 % increase. In 1979, it raised the price twice by 15 % on the way to oil hitting a high of $39.50 per barrel a year later. Afterwards, though, the cartel's power waned, only reviving somewhat in the late 1990s, when it helped resuscitate the oil market from the doldrums of traversing the $10 per barrel zone.[30] News that OPEC is about to meet and possibly negotiate new production limits can still move the oil market, but the intergovernmental organization has largely succumbed to the fatal vulnerability of cartels: each member has an incentive to free ride on the production limits the others are following by supplying more than its assigned quota to the marketplace in order to take advantage of the artificially high price. Once a sufficient number of members attempt to cheat like this, the supply of the good increases

[27] Kevin K. Tsui, "More oil, less democracy: Evidence from worldwide crude oil discoveries", *The Economic Journal* 121, no. 551 (2011): 89–115.
[28] Silje Aslaksen, "Oil and democracy: More than a cross-country correlation?" *Journal of Peace Research* 47, no. 4 (2010): 421–431.
[29] OPEC, "OPEC Share of World Crude Oil Reserves 2014", http://www.opec.org/opec_web/en/data_graphs/330.htm
[30] Wilfrid L. Kohl, "OPEC behavior, 1998–2001" The *Quarterly Review of Economics and Finance* 42, no. 2 (2002), 209–233.

enough to drive prices back down toward market levels, thereby nullifying the cartel's efforts.

Consequently, whenever oil prices now rise to the point of eliciting the ire of the consuming public and the politicians coveting their votes, attention is no longer drawn so much to OPEC, or even the big oil companies, but rather to the energy futures markets. Why the black liquid sparks such anger is the result of its correlation with the price that individuals pay to fuel their vehicles at the pump, unleaded gasoline being refined out of crude oil. Other forms of energy such as heating oil, diesel, kerosene, and jet fuel are also made from crude oil. As a result, the oil price ends up representing a major cost that firms must ultimately cover to produce goods and services. With any upward movement in crude oil prices thus squeezing both consumer wallets and corporate profits, it is no surprise that a 10 % increase has been estimated to have a statistically significant impact of anywhere from –0.3 % to –0.6 % on US GDP over a 12-month period. World Bank simulations suggest that a $50 rise is associated with a decline of greater than 1 % in annual GDP.[31] Ever since energy markets became more volatile in the mid-1970s, every recession has been preceded by a significant increase in the price of crude oil.

It should be noted that this effect only holds for importing countries. Those countries which export generally gain from price increases, particularly developing nations heavily reliant on the oil industry. But as the leading oil futures markets are located in Western developed countries where the weight of export sector is either zero or relatively smaller—the Brent Crude contract trades on the Intercontinental Exchange (ICE) in London whereas the West Texas Intermediate Light Sweet futures are transacted on the NYMEX—political and regulatory pressure there will reflect the power of consumer interests. Accordingly, in 2008, a dramatic ascent in NYMEX crude oil futures that saw these go from $87 to $146 per barrel in a matter of six months was met by US Congressional hearings into charges that speculators were causing a bubble.

Again, in early 2012, after a run up in NYMEX oil from $75 to $110, members of US Congress demanded that the regulatory body overseeing

[31] Rebeca Jiménez-Rodríguez and Marcelo Sanchez. "Oil price shocks and real GDP growth: empirical evidence for some OECD countries". *Applied Economics* 37, no. 2 (2005), 201–228; World Bank, "Global Economic Prospects" (June 2012), http://siteresources.worldbank.org/INTGLBPROSPECTSAPRIL/Resources/box_6.html?iframe=true&width=580&height=550

the US futures markets, the Commodity Futures Trading Commission (CFTC), reduce the number of contracts that traders are each allowed to assume, a proposal that was later nixed in the courts, a ruling then followed by another proposal.[32] The underlying premise in the call for position limits is that large players drive oil prices well above what the economic fundamentals would imply by flooding the market with a huge influx of buy orders.

Since the 2008 rally, a number of academic and public policy studies have explored the claim that speculative forces caused the price spike. Testing historical price movements against models that specify the correct range for oil given the factors known to impinge on its value, a few analyses suggest that speculation played a role in lifting prices.[33] Corroborating media accounts at the time, a well-publicized report favorably cited by various members of US Congress lent support to the bubble thesis. It pointed to the correlation between money flows into commodity index funds and the upswing in oil prices. The report also noted that supply and demand figures were relatively unchanged during the 2008 acceleration of the rally.[34] In sharp contrast, the CFTC issued its own report on the oil market, detailing how growing demand consistently had outpaced supply since the early 2000s. This is a finding buttressed by scholars associated with the Centre for Economic Policy Research. They explain the entire upward trend from mid-2003 to mid-2008 as a function of global economic growth projections continually being surpassed by better than expected performance in Asia's emerging markets.[35] Moreover, the bubble theory only makes sense if a private inventory of oil was

[32] Shahien Nasiripour, "US court scraps CFTC position limits rule", *Financial Times* (September 29, 2012), http://www.ft.com/intl/cms/s/0/be191d8e-09a8-11e2-a424-00144feabdc0.html#axzz2F380q5gX; CFTC, "Statement of Support by Chairman Gary Gensler: Aggregation Provisions for Limits on Speculative Positions", November 5, 2013, http://www.cftc.gov/PressRoom/SpeechesTestimony/genslerstatement110513c

[33] Marco J. Lombardi and Ine Van Robays. "Do financial investors destabilize the oil price?" *ECB Working Paper*, no. 1346 (2011); Luciana Juvenal and Ivan Petrella. "Speculation in the oil market". *Federal Reserve Bank of St. Louis Working Papers* (2011).

[34] Michael W. Masters and Adam K. White, *The Accidental Hunt Brothers*, *Act 2*, (September 10, 2008), http://www.fpma.org/upload_library/200808HuntBrothersPartII.pdf

[35] CFTC, "Interim Report on Crude Oil", (July 2008), http://www.cftc.gov/ucm/groups/public/@newsroom/documents/file/itfinterimreportoncrudeoil0708.pdf; Lutz Kilian and Bruce Hicks. "Did unexpectedly strong economic growth cause the oil price shock of 2003–2008?" *Journal of Forecasting*, forthcoming.

accumulated and deliberately kept off the market. Otherwise, the high prices being transacted on the futures market would have attracted new supply and hindered the rally. But no such inventory has ever been conclusively identified. Other scholars have noted the lack of a consistent relationship between commodity index trading activity and commodity price movements. While oil was on the rise, a wide assortment of agricultural goods simultaneously experienced sizable price increases. With respect to some of these goods, index traders had taken no positions or were unable to do so owing to the lack of a futures market for those commodities.[36] Making index investors the culprit can only be justified if their trading activity were present across all the commodities that spiked upward in price—logically speaking, X can be assigned as the cause of Y, only if X is found to be operating in all instances of Y.

Around the time oil was nearing its peak, James D. Hamilton, a leading scholar of the black liquid's price dynamics, modestly observed that a definite judgment about the speculative nature of the rally would have to wait until the passage of time disclosed whether the price rise stuck.[37] By this standard, the bull market in oil may have gone a bit too far, inasmuch as prices collapsed in the second half of 2008, eventually hitting a low of $30 per barrel in December of that year, a staggering 79 % drop from the $146 high point established about six months before. Still, as the demand for oil rises and falls in tune with the pace of general economic activity, this precipitous decline can be explained by the ominous deepening of the financial crisis during this period and the resulting expectations among market participants of a deep recession ahead. After the economy subsequently revived, oil prices eventually found their way back above $100 per barrel by 2011 and 2012 before ending the latter year in the $80 range. A couple of years later, oil did collapse spectacularly in price, eventually settling in the $35–40 zone by the end of 2015. But that was hardly telling of anything about the prior run-up in prices. That drop had taken place, after all, at a minimum seven years proceeding the run-up from 2003 to 2008. Oil fell toward $35–40 because of an increase in US oil production.

[36] Scott H. Irwin, Dwight R. Sanders, and Robert P. Merrin. "Devil or angel? The role of speculation in the recent commodity price boom (and bust)". *Journal of Agricultural and Applied Economics* 41, no. 2 (2009), 383–384.

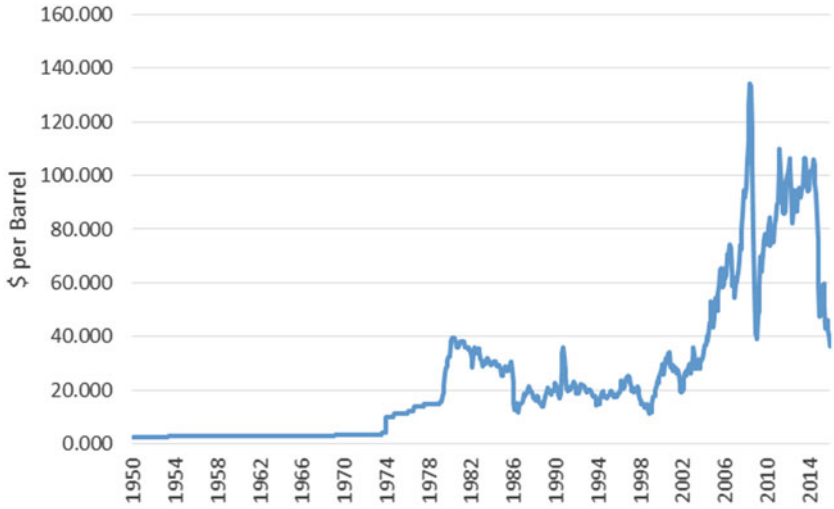
[37] James D. Hamilton, "Understanding Crude Oil Prices", *University of California Energy Institute Working Paper* (June 2008), http://www.academia.edu/157011/Understanding_Crude_Oil_Prices

This, in turn, was mostly due to the application of new fracking techniques that make it possible for oil to be drilled from otherwise inaccessible rock formations. Also contributing to oil's decline was the decision by Saudi Arabia, the leading member of OPEC, not to cut production in an attempt to shore up prices. Further adding to the pressure on oil prices was the growing obviousness of a slowdown in China's economy. Tellingly, amid this steamroller of a bear market, charges that speculative excesses in the futures markets had taken the price of oil beyond its true value were notably absent. This is despite the fact that the crumbling of oil during 2014–2015 was analogous in speed and magnitude to the accelerated shoot upward in price that provoked so much outcry in 2007–2008. The only difference was that in 2014–2015, the price traveled in a direction that favored the interests of voters in the USA and much of the developed world. Noting this discrepancy, a fair-minded observer is taught to look skeptically on politically charged assertions of market mispricing.

None of this, however, is to deny the remarkable volatility of oil prices over the past several decades. So remarkable have those gyrations been that to explain them one is compelled for an explanation that goes beyond real factors, namely authentic variations in the supply and demand for oil, and consider monetary factors instead—that is, the money made available by the financial system to buy and sell oil. Among orthodox economists, the connection between oil prices and the money supply is generally seen to only possibly go in one direction: from a rising oil price to a tightening of monetary policy, as the central bank endeavors to stanch the inflationary implications of higher energy costs. But consider the graph below (Fig. 6.8) depicting oil prices both before and after the early 1970s.

As James D. Hamilton once observed: "One's first thought might be that someone has pasted together two or more radically different series".[38] Throughout the 1950s and 1960s, indeed up until 1973, the crude oil price appears on the graph as an essentially flat line, trading as it did between $2–3 per barrel. Afterwards, the price suddenly takes off and zigzags a lot more. The usual explanation for this is that, starting with the 1973 Yom Kippur War, OPEC began to use its control of oil prices as a political weapon against Western support of Israel. This is usually combined with a story about the inelasticity of oil supply exacerbating the short- to medium-term price effects of shifts in demand. According to this

[38] James D. Hamilton, "Understanding Crude Oil Prices", 2.



Source: St. Louis Fed

Fig. 6.8 Crude oil prices, 1950–2015. *Source*: St. Louis Fed

story, these effects have become all the more magnified with the rising economic fortunes of the developing world. The flaw, however, in this conventional narrative is that it neglects how the value of the instrument in which oil is priced worldwide, namely the US dollar, came unhinged in the early 1970s. True, one can attempt to obviate this problem by looking at the real, or inflation-adjusted, price of oil. This figure is calculated by discounting the nominal price of oil by the CPI. Like all price indices, though, the CPI is a less than perfect gauge. Nobody "average" actually exists that purchases the basket of goods used to calculate the monthly inflation measure.[39] Nor can a numeric series take changes in product quality into account. A more illuminating means of interpreting the oil market is available. As already mentioned, it has a record of tracking changes in the tenor of monetary policy. It also has a long history as a medium of exchange. I am speaking, of course, of gold.

As Fig. 6.9 shows, oil looks very different when priced in terms of gold. From 1950 to 1971, oil trades within a tight range of 10.5–13 barrels per

[39] Murray Rothbard, *Man, Economy, and State with Power and Market*, 2nd ed. (Auburn, AL: Ludwig von Mises Institute, 2009), 846.

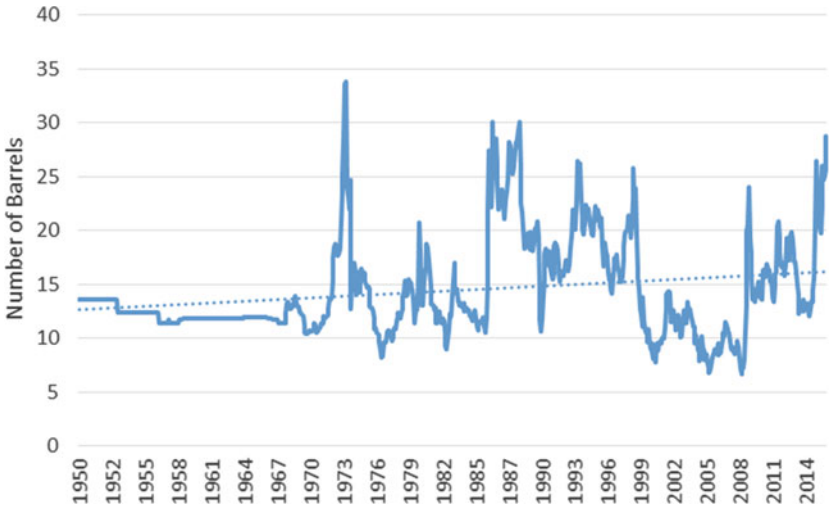


Fig. 6.9 Barrels of crude oil per troy ounce of gold, 1950–2015. *Source*: St. Louis Fed

ounce of gold. After closing at 12 barrels per ounce in August 1971, oil then breaches its previous range, quickly reaching the 33 barrels per ounce level in mid-1973.

This meant that oil-producing countries now had to give up almost three times as much of their precious black liquid in return for an ounce of gold. Oil's decline in value here is more numerically evident if we consider its gold price. That oscillated between the 0.07 and 0.09 ounces per barrel range from 1950 to 1971, before declining to a low 0.029 in mid-1973. Even before the Yom Kippur War gave it a convenient excuse to raise the oil price, OPEC had already been complaining about the losses induced by the dollar's devaluation and continued to do so throughout the 1970s.[40] Indeed, US President Jimmy Carter's 1979 decision to replace William G. Miller with the more hawkish Paul Volcker as chairman of the Fed occurred, perhaps not so uncoincidentally, after OPEC threatened to unload the American dollars it had accumulated selling oil and to proceed

[40] David Hammes and Douglas Wills, "Black Gold: The End of Bretton Woods and the Oil-Price Shocks of the 1970's", *The Independent Review* 9, no. 4 (2005), 506–507.

pricing oil in another currency.[41] As such, the broadly prevailing force guiding OPEC pricing decisions was not Middle East politics. It was the desire to preserve the exchange value of its oil assets from being eroded by the easy money policies of an America no longer constrained by Bretton Woods.[42] By end of the 1970s, OPEC had succeeded in this task, having brought oil closer to the pre-1971 range vis-à-vis gold. Afterwards, the oil per ounce of gold price continues to swing dramatically.

Interestingly enough, a linear regression line drawn to most closely fit all the monthly price points from 1950 onwards reveals a very slight upward trajectory in the number of barrels necessary to obtain an ounce of gold. This longer-term trend gauge shows oil going from about 13 barrels to 15 or, equivalently, 0.077 to 0.066 ounces per barrel. That oil has tended to decline when measured against a stable unit of value whose quantity cannot be augmented at will is precisely what one would expect during a period of economic growth. Through increased productivity and the more efficient use of inputs, economic growth increases the quantity of goods available, thus lowering their price, everything else remaining equal. That oil has only trended slightly downward testifies to the political risk premium that has been built into the black liquid. It also testifies to the evolution of a more delicate supply–demand dynamic. Not surprisingly, other less politically contentious, and more renewable, commodities like corn, soybeans, wheat, and cotton show larger declines when priced in gold over the same time frame. Even if against the backdrop of a stable long-term trend, it must still be acknowledged that the crude oil market has been marked by greater near-term volatility. But a good part of the reason for these undulations includes the uncertainty created by the state's assumption of complete discretion over the money supply.

[41] Barry Eichengreen, *Exorbitant Privilege*: *The Rise and Fall of the Dollar and the Future of the International Monetary System* (Oxford University Press, 2011), 65–66.

[42] For statistical evidence that oil price jumps in the 1970s followed upon increases in the money supply, and hence devaluations in the US dollar, see Max Gillman and Anton Nakov. "A Monetary Explanation of Oil and Gold Prices During Postwar Stagflation and Recovery: 1957–1999", *Central European University Working Paper*, no. 5/2000, (2000), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=253318

Options: Characteristics and History

The rocket scientists of finance are far more likely to be found in options rather than futures and forwards. Given the obligatory delivery and cash settlement rules of futures and forwards, these instruments pose the same financial consequences of having actually bought or sold the underlying asset. Figuring out, then, the appropriate price for those contracts is simply a matter of consulting the going market rate for the underlying asset and then adjusting for the fact that it is still to be either delivered or monetarily settled. However, options involve the right, and not the obligation, to engage in delivery or settlement in the future at a price established beforehand. Now, rights need not be exercised. So the question in pricing an option becomes whether or not delivery or cash settlement is apt to take place and, if so, what the terms might be. To make this calculation, one needs to have some idea of where the price of the underlying asset might travel between now and the expiry date of the option. It turns out that this requires a fair bit of statistics, probability, and calculus. Illustrating this is the Black and Scholes option pricing formula, a model that won a Nobel Prize in economics for its creators.[43]

Options are divided into calls and puts. Differentiating these is the fact that calls involve the right to buy an underlying asset at a pre-determined level, whereas puts involve the right to sell an underlying asset. That predetermined level is called the strike price. Option rights at this strike price can be exercised either through delivery of the asset or a cash settlement, similar to forwards and futures. Options are also time limited, usually in two ways. Where one can exercise the right either at expiry, or any time up to that point, we have an American-style option; where the right can only be exercised at expiry, we have a European-style option. Whichever type we are talking about, the rights embedded in options have value because of the potential to lock in a better price for the underlying asset than that prevailing in the marketplace. Hence, options trade at a price, which is known as the premium. For both calls and puts, this premium will partly be a function of the time remaining on the option. The premium will also depend on the expected volatility of the underlying security. All this is because time and volatility each add to the probability that the option will

[43] The article that originally laid out the model is: Fischer Black and Myron Scholes. "The pricing of options and corporate liabilities". *The Journal of Political Economy* (1973): 637–654.

eventually end up "in the money"—to wit, at a level where the stipulated buy or sell point is attractive relative to the going market rate of the deliverable security. With calls in particular, the premium will be higher to the extent that the underlying asset price rises. This is owing to the fact that the option becomes more likely to expire "in the money". With puts, the premium will be higher to the extent that that the underlying asset price declines. For that raises the chance of the put options ending up "in the money". Calls thus represent a bullish bet, whereas puts are a bearish bet.

Concretizing all this with a couple of examples, consider first a December 110 call option on Disney. Suppose that the premium, or price, of that option is quoted at $4.50. With equity options, each contract represents 100 shares of the stock. Hence, one call option on Disney would cost $450 ($4.50 × 100 shares). To buy this call, then, is to obtain the right to buy 100 shares of Disney at $110 per share. Since it is an American-style option, one can exercise that right to buy prior to or at the December expiry (normally the third Friday of the month). From whom exactly can we buy these shares? It is not from Disney. Companies do offer options on their own account to compensate and incentivize employees, but these are not exactly the same as exchange-traded options. As a mode of seeking financing, companies also sometimes issue warrants, which are effectively call options with especially long life spans. But as we are dealing with traded options, the shares underlying an exercised call would have to be bought from someone who originally wrote that option. Once again, like futures and forwards, options are created from nothing but the mutual willingness of two parties to take opposing sides of a prospective exchange. As for an illustration of a put option, consider the December 110 strike on Disney quoted at $4.50. Everything about the purchase of such a put is the same as with the call except that the right acquired will be that to sell 100 shares of Disney. The party obligated to buy it from them consists of anyone who originally wrote a put.

Let us now travel forward in time near the option expiry time in December. If Disney then is at $130 per share, the December 110 call option will be in the money. It will be worth $20. Meanwhile, the December 110 put will be out of the money and so worth nothing. The value of the call reflects the fact that someone could buy the call, exercise the right to buy Disney at 110, and then immediately sell the shares at the going $130 rate to net a $20 profit. Any other price for the call would not last very long because it would create an arbitrage opportunity to earn a riskless profit. As for the put, that is now worthless inasmuch as there

would be no point buying that option and then exercising the associated right to sell the shares at $110. After all, one can fetch a better price to sell at $130 by simply trading in the shares market. Conversely, if Disney were to end up at $90 per share, the call option would be zero, while the put option would in the money by $20. Arbitrage would again ensure such a price would prevail near the expiry date of the option.

One of the earliest instances of an option is mentioned in Aristotle's *The Politics*. Even two-and-a-half millennia ago, the political significance of options was glimpsed. Aristotle, to be sure, did not use the term options to denominate the commercial transactions he described. The description arises when Aristotle attempts to demonstrate how securing a monopoly is the key to reaping huge profits. Secondarily, the description is also put forward to show that philosophers can make money if they apply themselves. Thus, Aristotle relates how Thales, a thinker known for his metaphysical claim that all things are reducible to water, used his knowledge of the heavens to gauge that it would be a good year for olives. It being still winter when Thales made this assessment, he was able to put down small deposits to secure the rights to the use of all the oil presses in Miletus and Chios. When summer came, and his forecast proved correct, he was able to sell his usage rights over the presses at a pretty price.[44] In effect, Thales bought oil press calls and then subsequently sold them to those willing to exercise the rights to use them in making olive oil. Closer to our epoch, we find Joseph de la Vega, the Jewish writer who recounts the seventeenth-century Dutch financial scene in his *Confusione de Confusiones*, describing options as better way than shares to bet on the fortunes of the Dutch East India Company.[45] By the nineteenth century, American advertisements were referring to puts and calls, as an OTC market overseen by the Put and Call Dealers Association took shape.[46] After surviving a brush with a legal ban after the 1929 crash, the options market was a sleepy business after World War II. What changed that was the founding of the Chicago Board Options Exchange in 1973. Other exchanges, including the AMEX

[44] Aristotle, *The Politics*, trans. T.A. Sinclair, (London: Penguin, 1992), 90.
[45] Joseph de la Vega, *Confusion of Confusions*, trans. Sen McGlinn and Mike Gould (Arnhem, Netherlands: Sonsbeek Publishers, 2006).
[46] Joseph P. Kairys and Nicholas Valerio. "The market for equity options in the 1870s". *The Journal of Finance* 52, no. 4 (2012), 1707–1710; Geoffrey Poitras, "From the Renaissance Exchanges to Cyberspace: A History of Stock Market Globalization" in *Handbook of Research on Global Stock Markets*. ed. Geoffrey Poitras (Cheltenham, UK: Elgar, 2012), 105.

and Philadelphia Stock Exchange, soon followed as the emergence of listed options trading gave a boost to the OTC market. At $63 trillion notional outstanding value, the OTC arena is about double the size of the $32 trillion exchange-traded market.[47] Options are traded on just about everything for which there is a futures contract. Indeed, there are even options on futures—a derivative that derives from another derivative.

Collateralized Debt Obligations: Embedded Options, Misguided Forecasts

Options are behind some of the biggest losses that companies have suffered since the 1990s. Nick Leeson famously brought down Baring Brothers bank in 1995, a British financial institution that had been in existence since 1762. It is true that Leeson precipitated this collapse mostly by trading stock index futures on Japan's Nikkei 225 index. But by using options as well, Leeson was able to temporarily hide the losses he was amassing on his Japanese stock market wager. What he did was sell (i.e. write) options on the Nikkei 225 index and used the proceeds to meet the margin calls on his losing futures positions.[48] Options were also implicated in a $269 million loss taken in 1991 by Allied-Lyons, a British food and drinks company. Its treasury department drifted from hedging FX exposure with options into outright speculative bets on the volatility of currencies. It created these bets by simultaneously writing puts and calls.[49] Though these option trading disasters were publicized in the financial press, options did not gain political significance until Collateralized Debt Obligations (CDOs) came asunder in the sub-prime mortgage crisis of 2007–2008. These derivative instruments were at the center of the sub-prime mortgage crisis.

[47] BIS, "Semiannual Derivatives Statistics" (November 5, 2015), http://www.bis.org/statistics/derstats.htm. Also, see BIS, "Exchange Traded Derivative Statistics" (September 13, 2015), http://www.bis.org/statistics/d1.pdf. It ought to be noted that the BIS numbers undercount the notional value of exchange-traded options as it does not include data on stock and commodity options. Unfortunately, the World Federation of Exchanges (WFE) does not provide a complete set of notional value data on exchange-traded options.

[48] Laurent L. Jacque, *Global Derivative Debacles: From Theory to Malpractice* (Singapore: World Scientific, 2010), 161–168.

[49] Laurent L. Jacque, *Global Derivative Debacles*, 115–121.

The name of this security may not suggest it, but CDOs contain options as one of their essential ingredients. A CDO is made up of a collection of loans or mortgages that are divided up into various tranches. These are defined by their priority over the cash flows—that is, the repayments of the debt—generated by the loans and mortgages. The senior tranche is the first to receive its share of the payments made by borrowers. Usually, next in line to receive their contracted amount is the mezzanine tranche. If there are any monies still left after the other cohorts have collected, then the equity tranche is assigned the residual. Because it has first rights over the cash flows, the senior tranche is the least risky. For this reason, it is offered the lowest return. The mezzanine tranche is somewhat riskier given its later position in the sequence of payments. So in exchange, it is granted the prospect of a somewhat higher return than the senior portion. Given their status as final claimants, the equity tranche holders are exposed to the greatest hazard. But they also have the chance to garner the greatest return of all the CDO investors.

By parceling out the expected cash flows into various tranches, CDOs come to embody a series of option positions. The senior tranche is effectively equivalent to being long a bond, made up of the loan and mortgage assets, and simultaneously short a series of call options on the bond. Each of these options can be viewed as being cash-settled. Not only that, each of the options can be viewed as expiring around the time a periodic payment is to be made to the CDO investors. These calls carry a relatively low strike price. The option strike is effectively set at level representing a slight premium to the value the bond will have immediately after a periodic payment is set. What happens, then, is this: every time funds are distributed on the CDO, the senior tranche holders can be conceived as first receiving all of the money, owing to their long bond position. Moreover, they can be seen as having to make a cash settlement on the call options they have written. Suppose there is $7 available to be immediately disbursed, and that the set of future cash flows are worth $100. Prior to payment, the bond will be worth $107. The senior tranche holders can be conceived as having written a call with a strike price of, say, $102.[50] Just before payment, the call expires and the senior tranche must pay $5 ($107 – $102)

[50] In writing the call, to whom does the senior tranche sell that option? The answer is the next mezzanine tranche. These in turn sell calls with a higher strike price to the equity tranche. In the end, the equity tranche holders are left with the riskiest situation, a simple long call position at the highest possible strike price, $105 in my illustration.

to those long that option. But it keeps the remaining $2 ($7 received minus $5 to defray the option). Notice that the senior tranche keeps this $2 even if the payments about to be made were $5, $3, or $2, wherein the bond would have been worth $105, $103, and $102, respectively. This is because the strike price is close to the post-payment value of the bond.

Breaking a CDO down like this allows us to see where exactly matters went awry in the sub-prime mortgage arena. What especially brought the financial system under stress in 2008 was the senior tranche of CDOs. This tranche contained individually high-risk mortgages that were nevertheless seen as safe fixed-income investments by the insurance companies, pension funds, and banks which purchased them. Corroborating this judgment were the bond-rating agencies that graded CDO tranches. When a bevy of financial institutions had to write down their CDO assets and slash the ratings on them, derivatives came under assault as a species of financial alchemy. The scientific and mathematical veneer of derivatives, so the charge went, deluded even sophisticated investors into thinking a dicey package of housing loans could be magically transformed into a triple-A-rated rated security. But once it is recognized that the senior tranches are equal to being long a bond plus short a call on that same bond, it becomes plain that the losses were owing to a drop in the bond position as opposed to the option. By itself, a short call trade is a bearish bet on the underlying security. However, the gains are limited to the premium received in writing the option. Because of this cap, the short call position cannot fully hedge against a fall in the bond's price. Neither is the reduction of risk achieved by the CDO's derivative element mere hocus-pocus. In the jargon of the options world, that element is part of a covered call writing strategy. This is commonly used by conservative investors to lower the break-even point on a stock at the price of constraining their returns on an appreciation of the shares (Fig. 6.10).

What covered call writing, and hence senior tranches of CDOs, cannot defend against are mammoth declines in the value of the underlying asset. Underestimating the probability of such an extreme event is essentially what led to the downfall of the CDO sector in 2007–2008. Crucial to that miscalculation, as Peter J. Wallison has well observed, is that both Fannie Mae and Freddie Mac failed to disclose how many sub-prime mortgages they actually had.[51] Since they held a huge portfolio of such mortgages, that lack

[51] Peter J. Wallison, *Hidden in Plain Sight: What Really Caused the World's Worst Financial Crisis and Why It Could Happen Again* (New York: Encounter Book, 2015), Chap. 10.

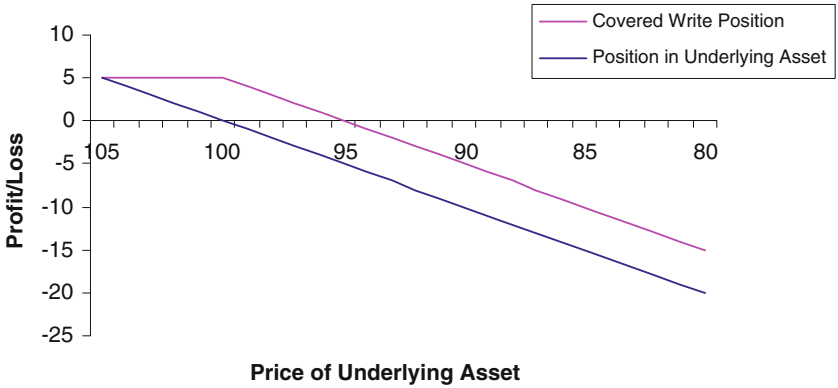


Fig. 6.10 Payoff profile of a covered call write strategy versus purchase of underlying asset

of forthrightness made it difficult for traders and investors to gauge how precarious the entire housing market stood. It was more of a knowledge problem than it was a financial instrument design flaw.

Nevertheless, the implosion of CDOs predictably led to calls for greater regulation of derivatives. Many of the demands were met with the 2010 passage of the Dodd-Frank Act. Given the knowledge problem faced not only by derivatives traders but also by anyone trying to assess risk, it is hard to fathom how strengthening regulation is going to help avoid a future CDO-type implosion. For this to work, government bureaucrats will need to possess a better mode of predicting future asset prices than what the markets unimpeded can do on their own. To say to an investor, after all, that a derivative is not suitable for them or that they are liable to wreak havoc on the financial system is to say that your own forecast is better than theirs. Markets do have the advantage of quickly assimilating the wide diversity of insights and opinions of the investing crowd.

Let us engage in a historical thought experiment. In the mid-2000s, regulators could have stopped CDOs from proliferating. Regulators could have kept CDOs out of the portfolios of socially critical players like pension funds and insurance companies. But officials would have had to gauge that the probability of a housing collapse was greater than what the market was calculating. In making this estimate, officials would have also had to adjust for the extent to which the government's actions may have been clouding the market's calculations. That means they would have to take

into account the Fed's low interest rates policy. This is not to mention the numerous laws and inducements that the government had adopted to encourage people to buy houses. Nobody of influence in government did any of this. Going forward, can we expect this to be different? Can the government be counted upon to regularly engage individuals with the necessary forecasting skills to consistently outperform the market's outlook? Can the government regularly secure people capable of mustering the courage to go against the prevailing view? No doubt, the state might occasionally be able to employ individuals having a unique discernment and intuitive knack for the markets. But it is never prudent to build laws and regulations whose efficacy depends so heavily on the rare virtues of those enforcing them. For that is to effectively rely on luck. Besides, such individuals are likely to be hired away by financial institutions. The private sector is very willing and more able to pay individuals with unusual predictive talents.

Perhaps one might think that regulators can be equipped with the latest quantitative–statistical models. But if the recent financial crisis has taught us anything, it is that the success of mathematics in the natural sciences cannot be replicated in our understanding of the human things. People do not display the regularity of behavior that planets do. Unlike planets, too, people learn from their experience. Doing so, they change in ways that prevents scientific observers from making anything more than statistically informed guesses about what a group of people are going to do based on they have done before. Nor should it be forgotten that causal factors impinging on human affairs are extremely variegated and complex. This often makes it difficult to uncover previous instances similar in all decisive respects to the subsequent phenomena one is trying to explain and predict. I will grant that the imposing mathematical edifice surrounding derivatives has done much to impart an excessive confidence among market professionals. Too many have become convinced of their oracular powers in the belief that the path of human activity can be mapped out. Too many have succumbed to the delusion that what Niccolo Machiavelli called *fortuna* has been conquered by quantitative modeling.[52]

Yet such fallacies are not simply a phenomena of the financial markets. As Alexis de Tocqueville observed over a century and a half ago,

[52] Niccolo Machiavelli, *The Prince*, trans. Harvey C. Mansfield, Jr. (Chicago: University of Chicago Press, 1985), Chap. 25.

democracies can be gullible to applications of science that promise to make people more materially affluent.[53] Precisely because science has so conspicuously lived up to this promise, anything seemingly embodying its characteristic elements will engender sentiments of awe and respect among democratic peoples. This includes the cavalcade of equations put forward to explain the pricing of derivatives. It even extends to subject matter beyond the realm of physical nature to human affairs, where the success of scientists have been limited. More than any other realm of human existence, financial markets corroborate David Hume's famous philosophical point about the rational tenuousness of induction—namely, that it is ultimately a matter of faith to think that the future will be like the past.[54] Still, we do well to recall the relative success of prediction markets in foreseeing everything from elections, sporting outcomes, movie box office receipts, and court cases. The price system of the market, not the policymaking apparatus of the state, is the best means we have available to confront the abyss of the future.[55]

Swaps and Their Political Abuses

The last of the three main types of derivative securities go back, not thousands of years as futures and options do, but to 1981. Market data on swaps only extends back to 1987, when their notional value was estimated at $865.6 billion. Unfortunately, the BIS does not separate swaps and forwards in its statistical data on the size of the derivatives space. Nonetheless, it can be safely deduced that the swaps market was in excess of $405 trillion by 2014, a minimum 467-fold increase over a 27-year period.[56] While some exchanges have swaps available, those contracts are overwhelmingly

[53] Tocqueville, Alexis de *Democracy in America* pp.459–465.

[54] David Hume, *A Treatise of Human Nature*, ed. Peter Nidditch (Oxford: Oxford University Press, 1978), 86–94.

[55] For an overview of the efficacy, promise, and limits of prediction markets, see my "Prediction markets: The practical and normative possibilities for the social production of knowledge". *Episteme* 6, no. 1 (2009), 91–106. For a more recent overview of prediction markets, see Erik Snowberg, Justin Wolfers, and Eric Zitzewitz. "Prediction Markets for Economic Forecasting", *Centre for Economic Policy Research Discussion Papers*, No. D9059 (July 2012), www.cepr.org/active/publications/discussion_papers/dp.php?dpno=9059

[56] ISDA, "ISDA Market Survey Historical Data", http://www.isda.org/statistics/historical.html; BIS, "Semiannual OTC Derivatives Statistics" (November 5, 2015), http://www.bis.org/statistics/d5_1.pdf

traded on OTC markets. Indeed, BIS data indicates no exchange-traded swaps whatsoever in which the underlying asset is a financial instrument.

What is a swap? It is an agreement to periodically trade cash flows. The two most actively traded categories are interest rate and currency swaps. The simplest interest rate product is known as the plain vanilla swap. It involves two parties exchanging interest charges on a predefined principal amount. One of them agrees to pay a floating rate, while the other agrees to pay a fixed rate. For example, a swaps dealer might arrange a five-year, $10 million principal contract on behalf of companies A and B. Under the terms of the swap, A pays B a fixed rate of 5 % semi-annually. At the same time, B pays A a floating rate equal to six-month LIBOR plus 1 %. LIBOR stands for the London Interbank Overnight Rate. Serving as a benchmark, it is used as a reference point from which to adjust the borrowing terms of mortgages along with a wider variety of financial contracts. Now assuming LIBOR is 1.5 %, the actual amounts swapped twice a year would be $500,000 from A to B and $250,000 from B to A. Initially, the price of this plain vanilla swap is zero. But it will alter subsequently as interest rates change on the bond market. To the extent that short-term LIBOR rates decline relative to longer-term yields, the price will move in favor of the party that is paying floating rates. After all, they will now be paying less to receive the same $500,000 from the counterparty. They will naturally demand a price in exchange for allowing someone else to take over their side of the swap. Conversely, the swap price will move against them, and in favor of the fixed rate payer, should LIBOR increase in relation to longer-term yields. They must now make a higher interest payment in return for the same $500,000. Should they choose to exit the swap, they will not have to compensate someone else to take over their side of the payments.

A currency swap is somewhat different in that the principal is also exchanged. In a typical transaction, a securities dealer might arrange for an American firm to initially provide $10 million in return for €11 million from a French company. Assuming it is a three-year deal, the American company might agree to pay 2 % on the Euro principal to their French counterpart firm, while the latter delivers 1 % on the American dollar principal. At the end, the American company returns the €11 million it originally received, while the Swiss company gives back the $10 million. Here, the swap price will vary over its three-year span with interest rates in Europe and the USA as well as the Euro/US dollar exchange rate. Say that rate goes above the $1.10 per Euro price set for the exchange of principal at the end of the swap. In that instance, the price will move in favor of the

French side. Were the Euro to trend below $1.10, the opposite would be the case, as the price would move in favor of the American company.

Swaps can be used to speculate, but their chief use is to allow organizations to manage their interest rate and currency risks. Swaps can also be used to exploit differences in the way that companies are treated by banks and regulators. A company may be able to borrow more cheaply in its home currency than a foreign firm. With a currency swap, it can trade this advantage to a foreign company in return for gaining a similar edge by accessing lower interest costs abroad. Likewise, an entrepreneurial firm may only be able to receive a floating rate loan from a bank at an affordable rate. At the same time, a more established company is able to obtain a relatively low fixed rate. If the entrepreneurial firm wants to minimize its credit risk by fixing its interest payments, and the established company is willing to shoulder the credit risk in order to secure a lower rate, both parties can enter a plain vanilla swap.

Or perhaps a country is trying to lower its official debt levels. Perhaps the country is seeking this because it wants to become part of a new continental currency regime. Perhaps, too, the country wants to join this club to lower its interest costs going forward. Let us say this government has already borrowed in Japanese yen and US dollars by issuing bonds denominated in those currencies. A swap could be arranged in which the dollar and yen principal received for these bonds is traded for euros at a higher rate than that prevailing in the currency market. In other words, the government receives more euros than it could have if it had gone to a FX dealer to exchange its dollars and yen. These additional euros can be applied against the country's existing debt, thereby enabling it to meet regulatory requirements. Meanwhile, the end of the swap is timed to align with the maturity date of the yen- and dollar-denominated bonds. This means the government receives yen and dollars which it can use to pay the bonds. In return, however, it must pay back all the euros it obtained at the exchange rate originally contracted. Keep in mind that this total includes an additional amount they would have never been able to acquire in the first place in the currency market. As such, the swap is effectively a loan to the government equal to that amount. Under derivative accounting rules, companies would have to immediately record that swap as a liability on their balance sheet. This is because the swap carries an initial negative price. No one else would subsequently take over that side of the swap without being adequately compensated for what is essentially a forward currency transaction set at a rate less favorable than the market. But under

the accounting rules of the regulator overseeing the euro currency framework, the swap did not have to be carried on the books as having a negative value. The extra euros would be all that showed up in the accounts.

This is not a fictitious example. It is what Greece did in a 2002 swap negotiated by Goldman Sachs, the world's most elite investment bank. That swap allowed the country to legally circumvent the public debt and budget deficit criteria for membership in the Euro.[57] Italy also entered a deficit disguising swap in the years leading up to the Euro.[58] In 1996, it exchanged Y200 billion at 19.30 yen to the lira when the market rate was 13.40. This meant that when the swap expired, Italy would have to pay significantly more lira than it originally received. In assuming this greater future liability, though, Italy obtained an astonishing floating rate of LIBOR minus 16.77 % on the interest rate component of the swap. As this translated to a negative rate of interest, the country received periodic lira amounts. These were used to lower the country's deficit numbers. In Chap. 4, while analyzing the relationship between states and the bond market, I argued that the financial markets are enablers of state largesse. Nothing more glaringly corroborates this point than these swaps transactions.

Credit Default Swaps

For greater political repercussions, however, one must look to another area of the swaps market. That area is Credit Default Swaps (CDS). Representing the youngest of the major derivative securities, CDS originated in the early 1990s as a small private market in which the underlying assets chiefly consisted of corporate debt.[59] Not until 2001 does the ISDA lists statistics for CDS, when the notional value outstanding was $631.5 billion.[60] It was around this time that CDS based on sovereign

[57] Beat Balzli, "How Goldman Sachs Helped Greece to Mask its True Debt", *Der Spiegel* (August 2, 2010), http://www.spiegel.de/international/europe/greek-debt-crisis-how-goldman-sachs-helped-greece-to-mask-its-true-debt-a-676634.html

[58] Jules Evans, "How Italy Shrank its Deficit", *Euromoney* (December 1,2001), http://www.euromoney.com/Article/1003330/BackIssue/50052/How-Italy-shrank-its-deficit.html

[59] Gillian Tett tells the story of how the CDS came about at J.P. Morgan in *Fool's Gold How the Bold Dream of a Small Tribe at J.P. Morgan Was Corrupted by Wall Street Greed and Unleashed a Catastrophe* (New York: Free Press, 2009), 47–48.

[60] ISDA, "ISDA Market Survey Historical Data", http://www.isda.org/statistics/historical.html

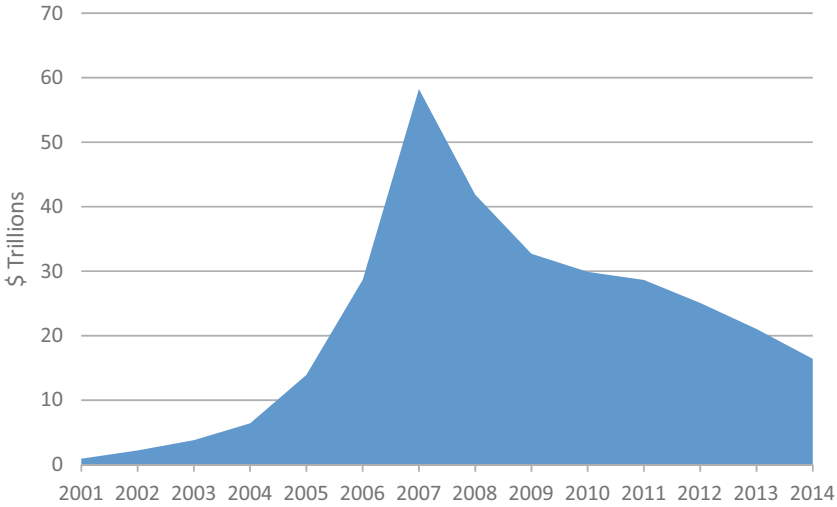


Fig. 6.11 CDS market by notional value, 2001–2014. *Source*: ISDA and BIS

debt emerged. By 2014, CDS had grown into a $16.4 trillion market, though that was noticeably down from the peak of 2007 (Figure 6.11).[61]

Revolving around a bond or some other type of loan, a CDS is a contract where one party agrees to make regular payments over a number of years to another. This is on the understanding, mind you, that the latter party receiving the payments will guarantee the principal of the debt should a so-called credit event take place. A credit event is defined as a bankruptcy, default, repudiation, moratorium, or restructuring on the part of the lender that significantly impairs the value of the debt. When this happens, the party making the regular payments, also called the protection buyer, is entitled to deliver the bond to the counterparty, the protection seller, and receive the principal value. Alternatively, CDS can be cash-settled. In that scenario, the protection buyer receives from the protection seller the difference between par value and the current market value of the debt security.

That a credit event has in fact occurred is not always certain. An illustration of this occurred in early 2012 when Greece restructured its debt. The country offered its creditors new debt securities in exchange for the

[61] BIS, "Semiannual OTC Derivatives Statistics" (November 5, 2015), http://www.bis.org/statistics/d5_2.pdf

bonds they were currently holding.[62] As the new debt carried a lower principal, the bond holders were essentially being asked to accept a loss. European politicians trying to contain the sovereign debt crisis hoped that the voluntary nature of the request would keep the ISDA, which decides whether or not a credit event has transpired, from declaring such an event. As it turned out, the ISDA saw through the pressure that the Greek government put on bond holders to accept the deal. In thus triggering CDS payouts, the Greek situation illustrated how CDS provides insurance to financial market players holding bonds or loans containing risks to which they would prefer not be exposed. In the meantime, CDS prices continually vary as perceptions about the credit quality of the underlying entity shifts among market participants. By playing on these price movements, CDS can be employed to bet on whether or not a government or corporate borrower is going to run into financial distress.

When swaps promise to assist governments to veil their debt and deficits, they hearken to them. But when swaps are used to hold governments to account for their debt and deficits, it is a very different matter. CDS exemplifies this unsurprising contradiction. When CDS prices on Southern European bonds soared from 2010 and into early 2012, what especially irked politicians in places like Greece and Portugal, as well as those in the Northern part of the continent trying to quell the Euro sovereign debt crisis, were so-called naked positions. One is said to be naked on CDS if one has taken a position on the swap contract without also having a stake in the underlying security. So irked were European politicians with this form of derivative trading that they banned naked CDS positions.[63] Thanks to that ban, the CDS market on European government bonds has practically disappeared.[64] The rationale for the ban was that trading in naked CDS enables speculators to herd against a particular country's bonds, forcing it to pay higher yields than a reasonable observer would judge. European politicians insisted that this is precisely

[62] ISDA, "Greek Sovereign CDS", http://www2.isda.org/asset-classes/credit-derivatives/greek-sovereign-cds/

[63] Alex Barker, "EU ban on naked CDS to Become Permanent", *Financial Times* (October 19, 2011), http://www.ft.com/intl/cms/s/0/cc9c5050-f96f-11e0-bf8f-00144feab49a.html#axzz2FF9p4P49

[64] Serena Ruffoni, "Wherever Did Europe's Sovereign CDS Go?" *The Wall Street Journal Moneybeat*, (January 31, 2014), http://blogs.wsj.com/moneybeat/2014/01/31/wherever-did-europes-sovereign-cds-trading-go/

what bedeviled countries like Portugal and Greece. This, in turn, made it more challenging for the economically healthier part of the EU to supply those countries with assistance.

Whatever doubts may have initially been entertained about the scale of the debt problems faced by southern European nations, these were certainly dispelled with the passage of time. CDS did not create or exacerbate the Euro sovereign debt mess. It merely alerted people to it and reflected the turmoil. Were democratic states not so prone to running up huge debt, the CDS market for government bonds would never become highly active. The real problem is why the CDS market did not provide an earlier warning. In this respect, it imitated the shortcomings of the government bond market, which the CDS market for sovereign issuers closely mirrors. Whether it comes later rather than sooner, however, the information conveyed in CDS prices about the financial status of bond issuers is very helpful to economic agents in making their calculations and decisions. When the issuer happens to be a state, it serves as a check on the government's pursuit of unwise policies. Without the ability to take naked CDS positions, traders and investors with a negative view of a sovereign issuer will otherwise be left to express it on the bond market. Shorting bonds, though, is harder than trading CDS. For this reason, information is apt to be impounded first in the CDS market and then subsequently flow to the bond arena.[65] Restricting the information flow to the bond markets means governments can go on being irresponsible longer.

Exhibit A in the case for beefing up regulation of derivatives is AIG. For decades, AIG had been a global player in the insurance business operating in well over a 100 countries. In 2004, the company reached the pinnacle of corporate America by becoming a constituent of the Dow Jones Industrial Average. Just four years later, however, the company found itself on the brink of bankruptcy. A London-based affiliate had built up a huge CDS business insuring debt instruments with a notional value of about $533 billion. A good part of this portfolio was written against sub-prime mortgage securities.[66] Once these securities came under pressure with the collapse of the US real estate market, the company was forced to post more

[65] Rene M. Stulz, "Credit Default Swaps and the Credit Crisis". *The Journal of Economic Perspectives* (2010), 75–76.

[66] Financial Crisis Inquiry Commission, *The Financial Crisis Inquiry Commission Report* (Washington: US Government Printing Office, 2011), 139–141, http://fcic.law.stanford.edu/report

collateral with the counterparties to their CDS contracts. As conditions in the sub-prime arena grew more critical in September 2008, AIG became unable to meet the escalating demands for additional collateral. Since the company was insuring significant holdings of numerous investment and commercial banks, the US government feared that the collapse of AIG would spread the financial equivalent of a deadly virus throughout the entire system were it to default on its CDS obligations. As a result, the government came to the rescue of AIG, eventually backstopping its CDS positions to the tune of $182 billion.[67] The immediate beneficiaries of this were actually the company's counterparties. These included a number of European banks as well as bulge bracket investment banks like Goldman Sachs, which received $2.9 billion straight to its bottom line.[68]

Once again, as a consequence, we saw an historical pattern repeated. That is, new regulations tend to come in large doses all at once after a dramatic event changes the political calculus. Thus, the AIG debacle gave rise to provisions in the 2010 Dodd-Frank targeting the derivatives industry. Before this, not even the 1998 collapse of Long-Term Capital Management, a hedge fund that was heavily invested in interest rate swaps, managed to bring the weight of the state heavily into the derivatives space. Part of the 2010 Dodd-Frank Act, however, encompassed various edicts relating to derivatives. The chief provision consisted of a directive to move more trading activity onto exchanges away from OTC venues.

This return to the old order will not work. The Dodd-Frank mandate is premised on the idea that exchanges offer the benefit of a clearing agency. What a clearing agency does is act as a third party standing between the two counterparties to a trade, guaranteeing that the terms of the derivatives contract are fulfilled. It does this by ensuring that traders put up sufficient collateral to support their positions given prevailing market conditions. It also periodically transfers money between traders' accounts to reflect price movements. Should one of the parties default on their side of the deal, the clearing agency is required to pay the other party what they would have otherwise been entitled to receive on the transaction. With such an agency checking that derivative trades are appropriately backed up, the government's hope is that there will not be another AIG

[67] Robert W. Kolb, *The Financial Crisis of our Time*, 117–124; Financial Crisis Inquiry Commission, *The Financial Crisis Inquiry Commission Report*, 350.
[68] Financial Crisis Inquiry Commission, *The Financial Crisis Inquiry Commission Report*, 378.

beguiled by all the money coming their way for providing CDS insurance. The hope, too, is that the presence of a clearing agency will calm nerves whenever markets get tempestuous. Financial institutions could thereby be prevented from calling in all their credits at counterparty firms out of a concern for their own viability.

But it is not as if derivative disasters have never occurred on exchanges. What Nick Leeson did in bringing down Barings was the result of futures and options trades executed on the Singapore International Monetary Exchange and the Osaka Stock Exchange. In 1996, Sumitomo took a $2.6 billion loss on copper futures traded on the London Metals Exchanges. Ten years later in 2006, Amaranth Advisors LLC, suffered a $5 billion loss trading natural gas futures on the NYMEX.[69] In addition, a major reason why OTC market volumes dwarf those transacted on exchanges is that the customization of contractual terms that is more workable in the former venue is seen a huge benefit by market participants. To the extent that liquidity is reduced in the OTC market in favor of exchanges, such tailor-made transactions are going to be tougher to realize.

More ominously, though, is the prospect that a few clearing agencies, in light of the consolidation we are witnessing among exchanges, will hold sway in the industry.[70] Derivatives risk will be concentrated, just as it was with AIG, rather than dispersed. Should one of those agencies run into trouble, the government will be hard-pressed not to offer a bailout. Where the bulk of derivative trading is politically directed to exchanges, the clearing houses will become too big to fail. Of all the ways that politics now skews the derivatives markets—stimulating and convulsing these mainly through monetary and fiscal profligacy—nothing is scarier than this. As a by-product of its own evolutionary logic, democracy spurred the buildup of a ginormous betting ring. It is now on the verge of guaranteeing all the bets.

[69] Laurent L. Jacque, *Global Derivative Debacles*, 47–72; 97–102; 143–177.
[70] *The Economist*, "Centrally Cleared Derivatives: Clear and Present Danger", (April 7, 2012), http://www.economist.com/node/21552217

CHAPTER 7

The Currency Markets

The last of the financial markets left to politically investigate is the one that touches the state at its most elemental point. This is the market in which the monies that governments emit are traded against the monies produced by other governments. It is where traders express their willingness to hold the most fundamental constituent of a country's entire financial system. It is the foreign exchange (FX) market.

Of all the financial markets, this is the oldest. One of the earliest historical references to currency trading occurs in the New Testament. In every Gospel except that according to Luke—where the relevant scene is portrayed but Jesus merely speaks of traders—the seminal figure of Christianity is depicted as casting out the money changers from the Temple in Jerusalem. "My house shall be called a house of prayer", he says, "but you are making it a robbers' cave".[1] In ancient times, it was common for banking and financial activities to take place under the auspices of sacred edifices. Moneychangers had to assay the value of the metal contained in the myriad of coins flowing freely across borders and originating from different jurisdictions.[2] As this required a highly experienced eye, someone exchanging foreign coins for local currency could have been readily defrauded in receiving less metallic value than what they gave. Having the transaction occur in a sacred place reassured customers. The insinuation was that any moneychangers that cheated people would be detected by a

[1] Matt. 21.13 (Revised Standard Version).
[2] E. Victor Morgan, *A History of Money*, 155.

G. Bragues, *Money, Markets, and Democracy*,
DOI 10.1057/978-1-137-56940-0_7

divine power and receive appropriate punishment. Jesus' point is that the moneychangers were violating the sanctity of the Temple in that, despite the implied divine oversight, they were not being dissuaded from exploiting customers.

During the medieval period, currency trading began the shift toward paper money by settling international trade dealings via bills of exchange. These instruments typically incorporated a prospective FX transaction whose riskiness allowed financiers and merchants to circumvent usury laws.[3] Even if now represented and moved about electronically, paper remains the foundation of today's FX markets. It is just that now paper constitutes the very essence of the currencies being traded instead of, as bills of exchange did, merely serving as a medium to designate payment in some form of cash from one set of parties to another. With the government superintending the electronic whirl of paper currency transfers and enforcing laws against counterfeiting, it is now much more difficult for FX dealers to successfully cheat. And so with the physical context of divine sanctions no longer necessary to support an honest marketplace, currency trading has moved out of sacred places and into more secular domains. As such, its locus today is simply the market, rather than the market ensconced within a hallowed space. Yet we should not think that this separation from religious authority has entirely freed the buying and selling of currencies to reflect the dynamics of supply and demand.

Far from it—while the church is no longer part of the setting, the state remains a pivotal actor, as it always has, to one extent or another, since King Croesus took over the coinage of money in sixth century BCE Lydia. FX is thoroughly imbued by politics. It would surely be an exaggeration to say that there are no economic laws that states must heed. Still, numerous ostensibly economic factors impinging on currency prices come to sight, upon deeper analysis, to be the outcome of political forces. Through their central banks, states condition the supply side of the currency market, giving them the ability to influence prices. Indeed, we can view states in the currency market as analogous to different firms marketing their wares.

The analogy to companies is not perfect. Governments cannot be conceived as simply trying to maximize income. Despite the availability of seigniorage profits, there is a diversity of ends that states additionally pursue in the FX area. These ends vary with the sectoral interests that happen

[3] Raymond de Roover, *The Rise and Decline of the Medici Bank: 1397–1494* (Washington: Beard Book, 1999), 11.

to be politically dominant at the time on the issue at hand. Traditionally, export promotion has been a prominent objective of government policy toward the currency markets. But for some states, the leading powers in particular, encouraging the widespread use of their currency is also a goal. This is so that other nations will be willing to hold onto their currency as a reserve asset. Sometimes, governments will act together as a cartel to influence the relative prices of their currencies. Less often, the purposes of numerous states coalesce so strongly that they merge their money-production operations by erecting a single central bank to oversee one currency for all of them. The euro is the result of such a merger and its origins, evolution, and struggles cannot possibly be understood without tracing the political considerations involved.

Whenever the matter of politics and currencies is brought up, the discussion invariably turns to the question of fixed versus floating rates. My discussion is no exception to this. Indeed, all the different approaches that governments can adopt in managing their respective currencies can be reduced to variants of those two alternative regimes. Of the two, fixed is the superior, albeit only on the condition—and this is a big condition—it is based on a reserve asset like gold. Here again, this time with currencies, we are confronted with a situation in which the ideal clashes with the practical realities of living in a full-fledged democracy, where the maintenance of a gold standard goes against the deepest tendencies of the regime.

Workings and Players of the FX Market

For our last financial markets primer, or review as the case may be among readers, a good place to start is with the enormous size of the FX market. Without question, the buying and selling of currencies is the largest sector of the financial markets, as measured by the value of daily transactions. In its latest triennial survey published in September 2013, the BIS estimated the volume of currency trades to be $5.3 trillion on average per day.[4] By contrast, in 2013, the global equity market saw $55 trillion of shares traded, but that was over a year.[5] Dividing that number

[4] BIS, "Triennial Central Bank Survey: Report on Global Foreign Exchange Market Activity" (September 2013), http://www.bis.org/publ/rpfx13fx.pdf

[5] World Federation of Exchanges, "2013 WFE Market Highlights", (January 28, 2014), http://www.world-exchanges.org/home/index.php/files/18/Studies%20-%20Reports/6/2013%20WFE%20Market%20Highlights.pdf

by 250, roughly the number of trading days in a year, one arrives at a figure of $220 billion share volume per day, which is a mere 1/25th of currency transactions. The reader perhaps might remember larger values in the area of $600 trillion being cited for derivatives. But those numbers referred to the worth of the assets underlying those contracts rather than actual amounts transferred between traders. While trading volume for derivatives is difficult to estimate, it is definitely less than what is transacted in FX markets.

Volume has grown prodigiously since the current floating rate regime started budding in the early 1970s. Back then, daily turnover was miniscule by today's standards at a dozen or so billion dollars a day it seems. By 1989, the earliest year for which the BIS has data, FX turnover had increased to $500 billion per day. Except in the early 2000s, owing to the euro's introduction reducing the number of currencies available for trading, activity has risen uninterruptedly at a rate of 10.3 % per year from 1989 to 2013. Over the same time frame, world trade grew by 5.7 % per year. Clearly, more is transpiring in the FX market than the facilitation of exports and imports. A more telling sign of this is that, by 2013, currency markets were transacting a significantly greater multiple in single day relative to 1989 than what was being traded around the world in goods and services in a whole year. If we look at both figures on a daily basis, the ratio of volume of currency trading to that of real goods and services has steadily risen (Fig. 7.1)[6].

Similar to bonds, most currency trading takes place over the counter in what is called the interbank market. As the term suggests, this is a network made up of major banks connected to each other by telephones, computers, and electronic trading systems. As one might expect from the massive transactional volumes, the interbank FX market is open 24 hours a day during the trading week. In North American and European time zones, this means that Saturday is the only day of the week that the FX market is closed. Activities commence in Auckland and Sydney when it is late Sunday afternoon in North America and evening in Europe. Several hours

[6] BIS, "Activity in the Foreign Exchange Market", http://www.bis.org/publ/rpfxf10t.htm and World Bank, "World DataBank: World Development Indicators", http://databank.worldbank.org/data/Views/VariableSelection/SelectVariables.aspx?source=World%20Development%20Indicators%20and%20Global%20Development%20Finance. Note that global trade in this graph is equal to world exports in 2005 US dollars, as opposed to exports plus imports, to avoid double counting.

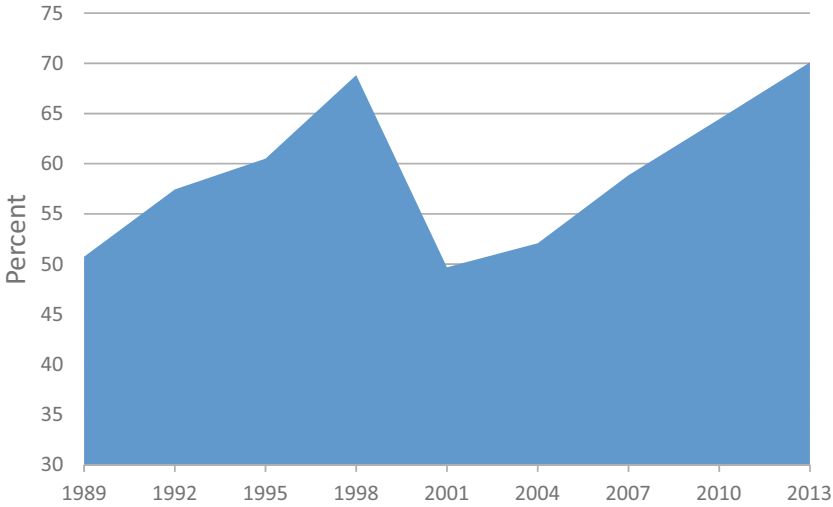


Fig. 7.1 Ratio of FX trading volume to global trade, 1989–2013. *Source*: BIS and World Bank

later, the trading action moves to Tokyo, Hong Kong, and Singapore. From there, the action heads to Zurich, Frankfurt, Paris, and London before finishing up for the day in Toronto, New York, and San Francisco. The large banks who participate in FX trading will typically hand their book—that is, the record of their trading positions—from one of their branches to another as the market travels westward from Australasia to North America. Amid this journey, the three main FX trading centers include Tokyo, London, and New York. London is the largest of these three, where 40.9 % of the world's currency transactions takes place.[7] Currencies are also traded on exchanges, the dominant venue being the Chicago Mercantile Exchange, where market participants have several active US dollar priced futures to choose from, including contracts on the euro, Japanese yen, Swiss franc, British pound, and Australian dollar. At

[7] BIS, "Triennial Central Bank Survey: Report on Global Foreign Exchange Market Activity" (September 2013), http://www.bis.org/publ/rpfx13fx.pdf

$128 billion turnover in 2013, however, exchange trading only made up 2.4 % of total FX market volume.[8]

Aside from futures, currencies are transacted through a wide assortment of derivative instruments, including swaps and options. Anchoring all this derivative activity, though, is the spot market. Representing 38 % of activity, the spot market is where currencies are traded for immediate delivery, within one or two days. It is the spot market that features most prominently at the many online FX brokerage services that now allow ordinary investors to play the currency market. Visiting the websites of one of those services, one can readily infer the most actively traded currency pairs. On the top of every quote screen is the Euro/US dollar rate, which represented 24 % of FX volume in 2013. Expressed as what a euro costs in terms of US dollars, this rate has taken the place formerly occupied by the US dollar/German deutschemark pair. Until the introduction of the continental currency in 1999, that pair used to serve as the barometer of the American–European relationship in the currency markets. Constituting 18 % of turnover, the second most actively traded pair is US dollar/Japanese yen, expressed as American dollars in terms of yen. Stated more intuitively, that rate indicates the number of yen that must be exchanged for each US dollar—the second currency listed is always the one in which the pair is priced. This is the more common way that US dollar-based pairs are quoted in the FX market. The third highest volume pair is British pound/US dollar making up 9 % of trading activity, followed by Australian dollar/US dollar, US dollar/Canadian dollar, and US dollar/Swiss franc. Emerging market economies have yet to make themselves as actively felt in the currency markets, though in China's case, this is due to the country's enforcement of capital controls. Nonetheless, the increasing weight of the developing nations in the world economy has drawn more attention to what currency traders refer to as exotic pairs. Of these, the US dollar/Brazilian real, US dollar/Indian rupee, and US dollar/Chinese yuan rates experience notable volume. Politically, the most salient of the exotic pairs is the US dollar/Chinese yuan. Partly, this is owing to the prodigious growth of China's economy over the past three decades. Measured in nominal GDP at least, China has become the world's second-largest economy. A more burning reason for the political significance of

[8] Exchange-traded figures obtained from, BIS, "Exchange Traded Derivatives Statistics", (September 13, 2015), http://www.bis.org/statistics/d1.pdf

Table 7.1 Key currency pairs

Rate	*% of Total FX Trading Activity, 2013*
Euro/US dollar	24
US dollar/Yen	18
British Pound/US dollar	9
Euro/Japanese Yen	3
US dollar/Chinese Yuan	2
US dollar/Brazilian Real	<1

Source: BIS

the US dollar/Chinese yuan rate is repeated accusations by American public officials and companies that China deliberately keeps its currency undervalued to promote exports (Table 7.1).

There are important pairs not involving the US dollar, the Euro/Japanese Yen rate chief among them. Nonetheless, the greenback is still the most widely traded component in FX market pairings. In 2013, the US dollar was an element in 87 % of transactions. Meanwhile, the euro factored in 33.4 % of trades, while the yen partook of 23 %. By the way, these percentage figures add up to more than 100 because FX trades involve two currencies—hence, for example, US dollar volume is actually 87 % of 200 %.[9] Helping account for this dominant position is the prevalent practice of invoicing export and import transactions in US dollars. Also explaining the greenback's role is that the world's central banks, major players in the FX markets, hold most of their FX reserves in US dollars. As of mid-2015, the percentage of total reserves in US dollars was 64 %. Despite much talk a decade ago about the euro possibly overtaking the US dollar as the world's reserve currency, the continental unit was still well behind the greenback in second place at 21 %.[10]

Apart from the major banks acting as market makers, the chief participants in FX include hedge funds. Not only do these funds, which pools money from investors, hedge against currency movements, they will actively bet upon them. Mutual funds, which also pools money from investors, trade in FX as well. Being more regulated than hedge funds, mutual funds do not make any speculative bets on the direction of currencies.

[9] BIS, "Triennial Central Bank Survey: Report on Global Foreign Exchange Market Activity" (September 2013), http://www.bis.org/publ/rpfx13fx.pdf

[10] IMF, "Currency Composition of Official Foreign Exchange Reserves", (September 2015), http://www.imf.org/external/np/sta/cofer/eng/index.htm

Mutual funds enter the FX market to enable the purchase of international securities or to insure their portfolios against adverse swings in the currency market. Insurance companies, brokerage firms, investment banks, and pension funds are involved for similar reasons. Multinational firms take part as well to facilitate foreign direct investments and remit foreign revenues into their home currency. Multinationals, too, hedge against the risks entailed in having revenues and expenses, as well as assets and liabilities, denominated in separate currencies.

Interestingly enough, only 9 % of the market's volume is attributable to non-financial organizations like corporations and government agencies. We may take this as an additional sign that there is more to FX trading than meets the needs of international commerce in goods and services. The biggest players, at 43 % of turnover, emanate from the financial sector among the just mentioned coterie of insurance companies, mutual funds, investment banks, securities brokers, pension funds, and hedge funds.[11] In this financial grouping, too, are central banks, who participate in the currency market to manage their FX reserves. This treasure chest functions as a means for the central bank to diversify its asset base out of domestic securities, finance the country's imports, and defend their currency against speculative assaults. Periodically, central banks will make dramatic entrances into the FX arena by intervening. Sometimes, they will do this in concert with the central banks of other nations to correct perceived market overshooting of exchange rates.

Of Big Macs, Relative Interest Rates, and State Influence

That, then, is all I will say for readers needing a brief introduction, or at the very least a review, of the FX market. Now onto the politics of currencies. With that in mind, the first question is: how much does the state actually influence the FX market? For many, a key test of the state's capacity to influence that market is whether it can achieve its price objectives through central bank interventions. Since the evidence concerning the efficacy of intervention is mixed, it is commonly thought that governments hold the weaker hand before the swarm of currency traders.[12] Yet this widely held

[11] BIS, "Triennial Central Bank Survey: Report on Global Foreign Exchange Market Activity" (September 2013), http://www.bis.org/publ/rpfx13fx.pdf

[12] Christopher Neely summarizes the numerous studies on the efficacy of central bank action in the FX market in the appendix to, "An analysis of recent studies of the effect of foreign

perception misses the fact that central bank intervention has shown some effectiveness by signaling to the market its monetary policy intentions.[13] Mesmerized by the more blunt and overt exercises of power, the common view of central bank intervention also neglects to consider the more subtle methods at the government's disposal. Not only that, it misconstrues where exactly the constraints on state action come from. While not immune in its decision-making to the ineluctable economic trade-offs, the political community can basically choose its FX rate. That the state does not achieve a desired price level is not so much a straitjacket thrust by the currency markets as it is a restraint imposed by the correlation of political forces in the community.

To compass these points, let us explore the determinants of FX rates. There is no better place to start than the most canonical model that economics offers: the purchasing power parity (PPP) theorem. Starting from the premise that money represents a claim to goods, PPP holds that two currencies should exchange at a rate that equates their purchasing power. That is, there should be no advantage in using one currency to purchase goods rather than another. Otherwise, people will use the undervalued currency to obtain more goods than one could obtain with the overvalued currency. By thus raising the demand for the first relative to the second, these efforts would eventually raise the price of the undervalued currency. It would keep rising until the latter's purchasing power edge is eliminated.

Like so many economic theories in finance, arbitrage is the underlying basis of PPP. While this makes for a good theory, it leads to difficulties when PPP is empirically applied given the limits to arbitrage that exist in the real world. As a general matter, a currency's convertibility into goods is geographically restricted. In order to bid up the value of an underpriced currency, people must be able to buy the goods of the applicable country either by importing them or by traveling there. Taking a trip can be expensive, which leaves imports. The latter, in turn, involves transport costs and maybe tariffs. Now the PPP model can be readily adjusted to take these factors into the equation. Still, not all goods are tradable across borders. One cannot import a haircut, an afternoon at the museum, or indigenous

exchange intervention". *FRB of St. Louis Working Paper* No. 2005-030B (2005), http://research.stlouisfed.org/wp/2005/2005-030.pdf

[13] Lucio Sarno and Mark P. Taylor, "Official Intervention in the Foreign Exchange Market: Is It Effective and, If So, How Does It Work?" *Journal of Economic Literature* 39 (2001): 839–868.

foodstuffs that perish quickly. Not surprisingly, empirical studies of PPP confirm that the model does an especially poor job of accounting for price differentials in the non-tradable sector.[14] Furthermore, goods may be restricted from entry into one's homeland by quotas imposed by local legislation or by export controls enforced by the originating country. Add to this the problem of defining the basket of goods to which the purchasing power of the currencies is supposed to refer. It would be forbiddingly difficult and time consuming to track the totality of goods produced. Hence, a representative sample must be chosen. Yet what ought to go into such a sample? And how are we to weight each of the goods selected? The problem here is the international analogue of coming up with a basket of goods to construct a price index to measure the domestic purchasing power of money.

A proxy for PPP invented by the *Economist* magazine offers a simple approach to the sampling dilemma. It concentrates on a single product: the Big Mac. Aside from its being sold in more than 100 countries, what makes the iconic McDonald's sandwich an appealing measure of PPP is that its ingredients—beef, sauce, lettuce, cheese, onions, and pickles in a sesame seed bun—are pretty much the same whatever part of the world one happens to order it. The only exceptions are India, Israel, and Islamic countries, where cultural and religious norms require McDonald's to substitute a different type of meat.[15] Also making the Big Mac a less than perfect indicator is that certain non-tradable goods factor into the cost of producing the sandwich. The prime examples of this are rent and wages. Economists deem labor to be non-tradable because of barriers to emigration that hinder workers from moving to countries with higher wages. Along with rent, labor is less costly in developing nations, with the result that the Big Mac Index systematically undervalues their currencies. More critically, it cannot be forgotten that the value of a thing is ultimately

[14] The thesis that deviations from PPP can be significantly explained by the inability to arbitrage price differences in the non-tradable sector was famously put forward by Paul A. Samuelson, "Theoretical notes on trade problems". *The Review of Economics and Statistics* 46, no. 2 (1964): 145–154, as well as Bela Balassa, "The purchasing-power parity doctrine: a reappraisal". *The Journal of Political Economy* (1964): 584–596. Evidence in favor of the Balassa-Samuelson theory is offered by Alan Heston, Daniel A. Nuxoll, and Robert Summers, "The Differential Productivity Hypothesis and Purchasing Power Parties: Some New Evidence", *Review of International Economics* 2, no. 3 (2006): 227–243.

[15] Michael Pakko and Patricia Pollard. "Burgernomics: a big Mac guide to purchasing power parity". *Federal Reserve Bank of St. Louis Review* (2003), 10.

Table 7.2 Big Mac PPP implied rates versus actual currency rates, July 2015

Currency	*Big mac implied, local currency per $*	*Actual rate, local currency per US$*	*% Over/under valuation*
Euro	0.77	0.91	–15
Japanese Yen	77.24	123.94	–38
Canadian dollar	1.22	1.29	–5
Australian dollar	1.11	1.35	–18
British Pound	0.60	0.64	–6
Swiss Franc	1.36	0.95	42
Brazilian Real	2.82	3.15	–11
Indian Rupee	24.27	63.43	–62
Mexican peso	10.23	15.74	–35
Chinese Yuan	3.55	6.21	–43

Source: The Economist

decided by individual subjective preferences. While the divergence cannot be quantitatively measured, it is safe to say that these preferences differ toward the Big Mac. People in developed nations tend to value a marginal unit of a Big Mac less than those in less developed nations. There, a trip to McDonald's is considered a special treat. All these reservations notwithstanding, the Big Mac appears to serve the purposes of PPP just as well as more composite baskets of goods.

Thus, the application of the Big Mac Index to actual currency prices replicates the findings of the PPP literature. At any specific point in time, the exchange rate is hardly ever likely to be equal, or often not even close, to that predicted by PPP. The table below of US dollar-based pairs, based on Big Mac and currency prices as of July 2015, indicate numerous exchange rates trading at more than 10 % away from that implied by the burger indicator (Table 7.2)[16]. As is to be expected, the Chinese yuan, Indian rupee, and Mexican peso, among other emerging market currencies, are hugely undervalued according to the Big Mac Index. However, disparities in rents and wages cannot equally explain how the Swiss franc was 42 % overvalued against the American greenback or how the Brazilian real surpassed the hamburger standard by 11 %.

The best that can be said for the Big Mac variant of PPP is that the rates for two actively traded pairs—US dollar/Canadian dollar and British

[16]The Economist, "Big Mac Index" (July 16, 2015), http://www.economist.com/content/big-mac-index

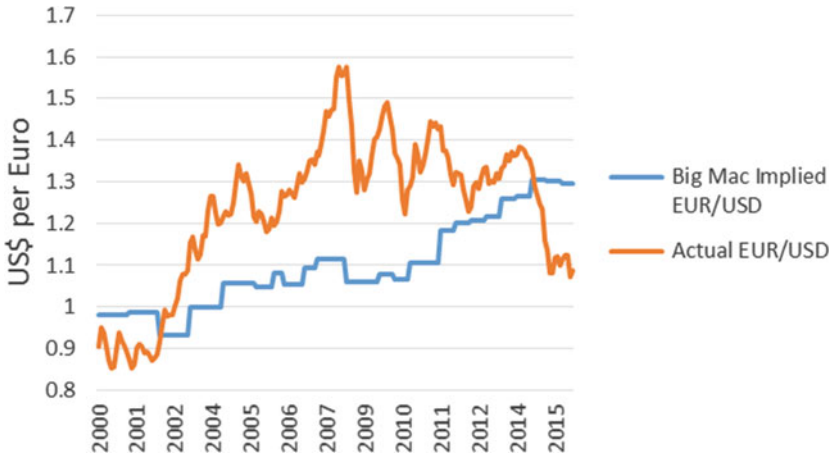


Fig. 7.2 Euro/USD rate versus Big Mac Index, 2000–2015. *Sources*: St. Louis Fed and Quandl

pound/US dollar—were all within 10 % of their theoretical values. With respect to the most actively traded pair in the world, the Euro/US dollar rate, the Big Mac Index was off by 15 %. If we go back to 2000, a year after the euro was first introduced to the FX market, the continental currency traded at a level closer to the Big Mac Index, at about a 5 % undervaluation (Fig. 7.2)[17]. As the euro went on to trade as low as $0.82, it became as much as 11 % undervalued. Starting in 2001, it did rally strongly, nearly doubling from its all-time low in reaching a high of $1.60 during the spring of 2008. By that time, the euro had reached a premium of 51 % as measured by the Big Mac Index. Over the ensuing years, the euro then proceeded to make a steady decline toward the range dictated by the Big Mac Index, before suddenly plunging into undervalued territory in 2015.

In view of the way that the euro has historically corrected from both overvalued and undervalued conditions, we can infer that PPP operates more as a magnet toward which FX rates are ultimately attracted than it

[17] Quandl, "Big Mac Index- Euro Area", (September 10, 2015) https://www.quandl.com/data/ECONOMIST/BIGMAC_EUR

does as an explanation of specifically traded prices. Corroborating this is the history of the American greenback against a wider set of currencies of its major trading partners. In the late 1980s, soon after the Big Mac Index was inaugurated in 1986, the Fed's trade weighted US dollar index (broad version) was more than 30 % undervalued vis-à-vis the burger criterion. The dollar then trended upward until reaching parity in 1997. It kept on rising until 2002, at which point it was more than 30 % overvalued.[18] With the Big Mac barometer acting again as a magnet, the dollar index then subsequently descended after 2002 before hitting an all-time low in 2012. Consistent with these patterns, PPP studies using a broader basket of goods have found currency prices eventually returning to theoretically correct levels over the long haul.[19]

What is the political upshot of all this? In maintaining that FX rates eventually reflect the relative price levels of nations, PPP is basically pointing to the decisive role of inflation. Thanks to its management of the money supply, the state is the entity that chiefly determines society's level of inflation. Ergo, the state is the ultimate cause of longer-term currency price movements—though with due allowance for the fact that FX rates are not merely driven by supply-side considerations, but by the demand-side as well. The value of a particular nation's money, as happens with any other good, originates with people's subjective preferences regarding its utility. Changes in the quantity supplied of money actually affect the degree to which this propensity is expressed. As a result, countries whose currencies are in especially high demand will have more leeway to run a looser monetary policy without running the risk of triggering a devaluation. The US dollar is the paradigmatic example of this. As everyone involved in the financial markets acknowledges, the greenback is hearkened to in times of financial stress. Not only that, it is valued as an attractive medium in which to hold cash balances and accumulate savings. This does not mean that the demand side of money is beyond politics. Crucial to maintaining demand for the dollar is the US government's role in maintaining an open financial system. Supporting the dollar, too, is the long period in which the USA has maintained a high credit rating on its public debt, not to mention the

[18] Michael Pakko and Patricia Pollard. "Burgernomics: a big Mac guide to purchasing power parity", 12–14.

[19] Alan M. Taylor, "A century of purchasing-power parity". *Review of Economics and Statistics* 84, no. 1 (2002): 139–150; Alan M. Taylor, and Mark P. Taylor. "The Purchasing Power Parity Debate". *The Journal of Economic Perspectives* 18, no. 4 (2004): 135–158.

global projection of American political and military power. Were it not for these factors, the US dollar would not be so eagerly sought after whenever safe harbors are at a high premium. Nor would it be widely used in global trade or stored as a reserve asset by central banks. That said, if the behavior of currency traders is any guide, demand is best treated as being mostly given. The larger and more frequent gyrations clearly arise out of the supply side.

Bearing witness to this is how closely the FX markets watch, and try to anticipate, every move that central banks make. If the monopoly provider of money looks as if it is about to drain liquidity and raise its benchmark interest rate, the consequence is a rally in the currency. If, on the other hand, it looks as if it is about to inject liquidity and lower interest rates, the consequence is a tumble in the currency. In international finance textbooks, these capital flows are portrayed as being motivated by shifts in the prospective return on assets, especially those on short-term debt securities and bank deposits. In this way, a distinction is made between FX rate changes induced by asset prices and those caused by goods prices. Only the latter are seen as being encompassed within the PPP model, whereas the former are conceived operating outside it. But the distinction here is not actually as sharp as it is made out to be. For one thing, as financial markets constantly seek to price in future developments, currency traders react to signals about where the over-all price ratios between countries are headed. When the interest rate of country X is hiked upwards relative to that of other nations, this portends a diminishing rate of inflation in X. By the logic of PPP, this implies a rise in the currency of X. In other words, playing interest rate differentials is akin to participating in a futures market on PPP. Furthermore, assets are goods too, if only of a peculiar kind. Since a bank deposit or a Treasury bill entails the sacrifice of present consumption for a future return, it is a capital good. This properly belongs in the PPP's underlying basket of goods alongside the more consumption-oriented array of products typically inputted into the model, a distortion admittedly reinforced in the Big Mac Index. If we integrate capital goods into the PPP, it becomes evident that an interest rate change in a country will alter its price ratios with the rest of the world. Where, for example, country Y's interest rate is lowered, its financial assets must rise in price. This will be due to a smaller discount being applied to prospective returns in the valuations of those assets. Consequently, Y's price level increases relative to that in non-Y nations, leaving its currency in need of a proportionate depreciation.

In their attempts to divine central bank actions, FX traders do not restrict themselves to whatever the Fed or ECB actually does or says. Both their open market operations and the statements made by central bank officials are scoured for clues as well. Still, the way that currency players mainly endeavor to predict the central bank's decisions is by absorbing a host of economic reports on everything from housing starts and retail sales to industrial production, consumer confidence, and employment.[20] Data suggesting that the economy is strengthening or overheating raises market expectations of an increase in interest rates and so leads to a rise in the currency. Conversely, data suggesting that the economy is weakening raises market expectations of a cut in interest rates and so leads to a drop in the currency. Now an observer watching the FX market anticipate and react to the multiplicity of data points that sway prices might easily gain the impression that currencies are driven by purely economic considerations. Economic reports, though, do not move FX markets by themselves. They have to be interpreted for their significance.

In a world where central banks exist, that significance is assessed by how those who run those institutions are likely to react to the numbers. As a general matter, currency traders go about this task by figuring the central bank to be following the Keynesian macroeconomic playbook. Traders are well aware, however, that this playbook is executed with varying emphases on the inflation and economic growth imperatives. Thus, depending on both the ethos of the central bank and the monetary philosophy of whoever happens to be leading it, the same data points will elicit disparate responses. During the 2000s, the US economy grew at a faster pace than that of the Eurozone, but this did not stop the greenback from falling against the euro. Throughout that decade, the Duisenberg-Trichet ECB was viewed as being more hawkish, more intent on maintaining price stability that is, than the Greenspan–Bernanke Fed. Since Mario Draghi assumed the reins of power at the ECB in late 2011 and took more dramatic steps toward QE than his predecessor, the bank's inflation fighting credentials have been downgraded somewhat. The result was that the euro subsequently took on a downright bias.

Granted, if central banks did not exist, economic reports would give rise to the same directional price patterns that we see now. Data corroborating

[20] For a picture of the sorts of reports that currency markets follow, see the calendar page of this popular website for FX traders: Daily FX, "Forex Economic Calendar", http://www.dailyfx.com/calendar

a strengthening economy would still push the currency higher on the expectation of higher interest rates. Yet this would take place out of the recognition that the demand for loans rises as economic activity increases. Market forces would determine FX trader responses without the mediating agency of a central bank authoritatively implementing its own reading of the economic landscape. Because of this interposition, trends are either prolonged or reversed more abruptly than would be the case if supply and demand were allowed to operate freely. And, as we shall see a bit later in this chapter, such interference distorts the flow of capital and goods to create production structures across nations misaligned with consumer preferences.

The FX Impact of Differences Between Democracies

Monetary policy alone cannot account for the national differences in price levels that currency prices ultimately track. Recall that what induces central banks to turn up the printing press is pressure from politicians to monetize large deficits and debt.[21] My contention in this book that democratic forms of government are constitutionally disposed to spend more than they garner in revenue will be of limited avail in dealing with the present-day FX market. After all, a currency's value is always relative to that of another, and the major currencies are all associated with democracies. Rather than speaking of democracy in general, I will have to explore whether there is something to the variations that regime can assume. Might these variations explain why one country's paper is either less or more abundantly supplied than that of another? An obvious possibility is the degree of insulation from the political process that is afforded the central bank. The scholarly literature leans toward the view that greater central bank independence correlates with lower levels of inflation.[22]

Applying PPP to this finding, it follows that central bank independence must vary directly with the currency price. If we consider nations with the most actively traded exchange rates and utilize the US dollar as the basis of comparison, the German and Swiss units should have performed well on the FX markets. This expectation is confirmed from 1971 to 1998, when the Swiss franc was the strongest currency of the non-US big five,

[21] Peter Bernholz, *Monetary Regimes and Inflation* (Cheltenham, UK: Edward Elgar, 2003).
[22] Helge Berger, Jakob De Haan, and Sylvester CW Eijffinger. "Central bank independence: an update of theory and evidence". *Journal of Economic Surveys* 15, no. 1 (2002): 3–40.

appreciating by 184 % versus the greenback.[23] The German deutschemark, which doubled in value over the same period against the US dollar, was only surpassed by the Japanese yen, though the latter's performance was helped by strong exports. Meanwhile in France and Italy, where more pliant central banks ran their respective currencies, the French franc declined 6 % against the US dollar, while the Italian lira depreciated by 31 %.

As for the euro, we do well to remember that the ECB was modeled on the Bundesbank. As such, the ECB was handed a mandate to concentrate on price stability above all else. So it makes sense that, for most of its lifetime, the euro has traded at a higher level versus the US dollar than where it opened in 1999. But Mario Draghi's adoption of QE starting in December 2011, more aggressively following up on similar actions taken in the late days of the Jean-Claude Trichet regime, reveals that the ECB has also succumbed to political pressure. Much of this pressure has obviously come from the Eurozone sovereign debt crisis. But no small amount of pressure has come too from the unwillingness of Europe's political elites to undertake structural reforms of their economies along free market lines. Here again, democracy is at the core of the dilemma. Structural reforms aimed at liberalizing the economy generate short-term economic dislocations, besides hurting those benefitting from the status quo. To the government in power, that consequence represents votes which are likely to be lost come the next election. Witness what happened in Greece. No doubt, the Greek government did less than they ought to have by way of economic reform upon receiving its first bailout in 2010. Yet even the limited efforts made were met with the voters' rejection of the two dominant parties, the Socialists and New Democracy, that had been running the country. It was the public's enmity against austerity which created the opportunity for the Syriza party to be elected. Likewise, in Portugal, where a right-of-center coalition, made up of the Social Democrats and Christian Democrats, had implemented various reforms, while successfully taking the country out of a bailout program it was forced to accept in 2011. As thanks for this, in the 2015 elections, the incumbent coalition lost their majority in Portugal's legislature, which emboldened a group of left-wing parties to come together and form a new government. With cautionary examples like these, it is not something to be wondered at that

[23] All currency price movements noted here were obtained from Werner Antweiler, "Pacific Exchange Rate Service", http://fx.sauder.ubc.ca

Table 7.3 US dollar and presidential elections, 1976–2012

Election year	*Year over year % change on election day*
1976	+2.1
1980	−2.6
1984	+7.4
1988	−1.6
1992	+2.2
1996	+4.2
2000	+10.2
2004	−8.1
2008	+7.9 %
2012	+2.6 %

Source: St. Louis Fed; calculations based on Fed Trade Weighted US dollar index—Major Currencies

Europe's politicians have pushed the responsibility of reviving Europe's economy onto the ECB. Accordingly, the euro has moved lower versus the US dollar. By 2015, it was well-ensconced under the $1.19 per euro threshold, where the continental currency inaugurated in 1999.

Other political determinants impinging on the supply of currency are harder to pin down. The scholarly literature on the political economy of fiscal policy originates with the political business cycle thesis. According to that thesis, incumbent governments attempt to gain re-election by running deficits to pump up the economy.[24] To affect the currency market more directly, the central bank would have to accommodate this fiscal stimulus with an easier monetary policy. There is some, though admittedly not overwhelming, evidence that money supply goes up in a statistically significant rate prior to elections.[25] Everything else remaining equal, then, elections must, as a matter of logic, be something of a depressant on the currency. As not everything else remains equal in reality, however, this relationship does not readily show up in the historical data. Taking the US as an example, ten presidential elections took place between 1976 and 2015 ever since currencies have been fully allowed to float. In seven of these instances, the Fed's trade weighted US dollar index (major currencies) rose in the 12-month period leading up to the election (Table 7.3).

[24] William Nordhaus, "The Political Business Cycle", *Review of Economic Studies* 87, no. 2 (1975): 169–190.

[25] Alberto Alesina, Gerald D. Cohen, and Nouriel Roubini. "Macroeconomic policy and elections in OECD democracies", *National Bureau of Economic Research Working Paper*, no. w3830 (1991).

While these upward moves went in the opposite direction than would have been expected, seven out of ten is not statistically telling. That said, a possible explanation for this is that central banks, in an attempt to preserve their reputations, are driven to hide their pursuit of a loose money policy. By selling a portion of their FX reserves heading into an election, the central bank can avoid showing their hand in the FX market by keeping the currency from falling. Illustrating this is the experience in Latin America, where devaluations have often been delayed until after the election.[26] Based on an analysis of 149 countries from 1975 to 2001, another study verified this hypothesis, though attempts to prop up the currency were stronger among democracies in the developing world than those in developed nations.[27] Perhaps, as the authors of this study conjecture, the public in the democracies of the latter group is more sophisticated and better educated, and therefore not so easily fooled.

The political economy of fiscal policy literature offers three additional explanations of deficits and debt that impinge upon the FX market.[28] One of them refers to political instability, understood as the proclivity for changes in government. The greater this proclivity, the more likely are incumbents to engage in deficit spending and consequent debt accumulation in order to remain in power. Facing more uncertainty about their careers, such incumbents are more disposed to undertake strong measures. They also face a greater likelihood of passing on any fiscal mess to their political opponents created by their attempts to retain power. A second hypothesis holds that ruling coalitions within parliamentary systems are more apt to run up state expenditures than majority ruled administrations. The reasoning here is that minority parties and interest groups hold greater leverage in the budget bargaining process. These factions, then, must be granted additional monies to prevent a collapse of the government. That the reigning political ideology matters is the substance of the third explanation. This explanation argues that left-wing governments, being more concerned about employment than inflation, are more liable

[26] Jeffrey Frieden and Ernesto Stein, "The Political Economy of Exchange Rate Policy in Latin America: An Analytical Overview" in *The Currency Game*: *Exchange Rate Politics in Latin America*, eds. Jeffrey Frieden and Ernesto Stein (Washington, D.C. Inter-American Development Bank, 2001), 15.

[27] Axel Dreher and Roland Vaubel. "Foreign exchange intervention and the political business cycle: A panel data analysis". *Journal of International Money and Finance* 28, no. 5 (2009): 755–775.

[28] For an overview of this literature, see Alberto Alesina and Roberto Perotti. "The Political Economy of Budget Deficits". *IMF Staff Papers* 42, no. 1 (1995): 1–31.

to run deficits and accumulate debt than right-wing parties. If these three theories are valid, then political instability, coalition governments, and leftist regimes put downward pressure on the currency. By contrast, political stability, majority governments, and rightist regimes will tend to put upward pressure on the currency.

Going through each of these possibilities, the least persuasive is that concerning the impact of coalition as opposed to majority governments. No logical reason exists why the presence of coalition rule alone must lead to excess government expenditures. The idea that it should relies on the assumption that the chief end of all political parties is to maximize the wealth of their supporters. Only on this basis can one argue that parties who hold out in negotiations must be bought off with an allocation of public funds. Yet not all parties are motivated by the economic demands of its followers. Some are driven by ideologies that have little or no bearing on fiscal policy. These can only be assuaged with the promise of offices and policies to advance their world-view rather than pecuniary considerations. Even when parties have economic demands to make, their leverage will vary over time with the voter's willingness to hold another election and hold intransigent politicians to account. Moreover, it is not as if majority governments are necessarily more fiscally responsible. A party intent on rewarding its backers has greater freedom to do so holding a majority in the legislature than within a coalition government.

Mirroring all this theoretical ambiguity, econometric analyses have arrived at conflicting conclusions about the effect of coalition governments on the size of deficits and debt.[29] Germany, Switzerland, and the

[29] The argument that coalition governments are more prone to debt and deficits was made by Nouiriel Roubini, and Jeffrey D. Sachs. "Political and economic determinants of budget deficits in the industrial democracies". *European Economic Review* 33, no. 5 (1989): 903–933. Corroborating this argument with the observation that coalitions with equally strong partners are especially conducive to deficits is Gerald Huber, Martin Kocher, and Matthias Sutter. "Government strength, power dispersion in governments and budget deficits in OECD-countries. A voting power approach". *Public Choice* 116, no. 3 (2003): 333–350. For a contrary view, see Jakob De Haan, and Jan.-Egbert Sturm. "Political and economic determinants of OECD budget deficits and government expenditures: A reinvestigation". *European Journal of Political Economy* 13, no. 4 (1997): 739–750. One counterargument to the Roubini–Sachs thesis is that it is minority governments, rather than coalitions ones, that actually drive up debt and deficits. On this, see Per-Anders Edub, and Henry Ohlsson. "Political determinants of budget deficits: Coalition effects versus minority effects". *European Economic Review* 35, no. 8 (1991): 1597–1603. Another counterargument holds that coalition governments simply make it harder for fiscal policies to be changed, whether

Netherlands have a long history of coalition governments without any notably adverse impact on their currencies since the move to floating rates in the early 1970s. Nonetheless, the prospect of a coalition government does involve uncertainty as to who will compose it as well as which sort of policies are going to be implemented as a result. It does turn out that this augments the volatility of FX prices.[30] Coalition governments, too, come to sight as more likely to reject fixed rate regimes in favor of letting the currency float.[31] This is because coalitions lack the political strength to enforce the austerity and wage deflation measures that might occasionally be necessary in lieu of a depreciation. Coalition governments would rather let the currency fall to restore the country's export competitiveness. They prefer to have the economic stimulus promised by greater exports serve as a reassurance to the financial markets that the fiscal situation will be less of a temptation to monetize the public debt. Now one might try to extrapolate this conclusion to a floating-rate environment. One might infer, in other words, that coalition governments will, under floating rates, lean toward allowing the currency to fall rather than tackle structural problems. One must be wary of doing so, however. Floating rates present a slighter test of a coalition's political will than does the preservation of a fixed level whose misalignment with the economic fundamentals grows by the day.

More compelling is the logic behind the claim that political instability buffets the currency. Repeated changes in government reinforce the shortcoming of democracy that officeholders, being temporary stewards of the public realm instead of holders of a more enduring stake, will be

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in favor of more government spending or less. On this, see André Blais, Jiyoon Kim, and Martial Foucault. "Public Spending, Public Deficits and Government Coalitions". Political Studies 58, no. 5 (2010): 829–846. A recent supportive view in sympathy Roubini and Sachs applied to parliamentary systems, which are more likely to generate coalition governments, can be found in, Torsten Persson, Gerard Roland, and Guido Tabellini. "Electoral rules and government spending in parliamentary democracies". *Quarterly Journal of Political Science* 2, no. 2 (2007): 155–188.

[30] John R. Freeman, Jude C. Hays, and Helmut Stix. "Democracy and markets: The case of exchange rates". *American Journal of Political Science* (2000): 449–468; William Bernhard and David Leblang, *Democratic Processes and Financial Markets*, 37–39.

[31] David A. Leblang, "Domestic political institutions and exchange rate commitments in the developing world". International Studies Quarterly 43, no. 4 (2002): 599–620; Jeffrey Frieden, Pierro Ghezzi, and Ernesto Stein, "Politics and Exchange Rates: A Cross-Country Approach" in *The Currency Game*: *Exchange Rate Politics in Latin America*, eds. Jeffrey Frieden and Ernesto Stein (Washington D.C. Inter-American Development Bank, 2001), 35–432.

inclined to heavily discount the future costs of immediately beneficial projects. A case in point is Italy, a country notorious for its instability, having witnessed more than 60 different governments since World War II. Prior to the euro, the Italian lira suffered a 64 % decline from 1950 to1998. This was among the worst performances of the dozen currencies that originally gave way in establishing the continental unit. Portugal's escudo was the worst performer, dropping an eye-popping 84 % over the same time frame. Much of that depreciation, though, occurred between 1976 and 1986 when the Iberian nation went through nine governments.

Portuguese politics then had a definite left-wing tilt. So its experience lends credence to the thesis that governments animated by such ideological leanings are associated with currency weakness. Committed to a more expansive state, requiring larger revenues to fund, left-wing parties face the greater prospect of tax resistance. They might well be enticed to avoid this by encouraging the central bank to print money instead. Yet it is difficult to find empirical corroboration of this in econometric studies. Neither does any consistent finding come to view when we turn to specific historical cases. It was, after all, Greece's fiscal predicament that initially sparked the euro crisis. Yet that country's public finances imploded under the rule of the New Democracy party, ideologically located on the right side of the Greek political spectrum. When the euro's travails subsequently deepened with Portugal's request for a bailout in 2011, the country had been led by the Socialist party on the left for 14 out of the previous 16 years. In Britain, amid the two consecutive Labor governments of 1974–1979, the British pound sagged against its European benchmark, the German deutschemark. It then rallied strongly in the first two years of Margaret Thatcher's administration, thus comporting with theoretical expectations. Afterwards, though, the British pound resumed its downward trend against the German benchmark. Not until the first several years of Tony Blair's tenure as the Prime Minister in the late 1990s was this reversed. Of course, Tony Blair was the head of the Labor Party, not the Conservatives.

A similar defiance of expectations implied by party ideology is present in the American experience. The Fed's trade weighted US dollar index (major currencies) fell 10 % when the Democrats held the Presidency with Jimmy Carter from 1977 to 1981. Later, however, the greenback saw its best post-Bretton Woods performance under one of America's two major parties, ascending 14 % during Bill Clinton's Democratic administration from 1993 to 2001. With just over a year left in the Obama administration,

Table 7.4 US Dollar performance by presidential administration and party, 1977–2015

Presidency (Dates)	*Party*	*% Change in USD during tenure*	*% Change in USD per annum*
Jimmy Carter (1977–1981)	Democratic	−10.4	−2.7 %
Ronald Reagan (1981–1989)	Republican	−4.2	−0.5 %
George H. Bush (1989–1993)	Republican	+0.6	+0.1 %
Bill Clinton (1993–2001)	Democratic	+14.1	+1.7 %
George W. Bush (2001–2009)	Republican	−21.5	−1.5 %
Barack Obama (2009–)*	Democratic	+13.1	+1.8 %
	Total 1977–2015	**−12.3**	**−0.3 %**
	Total Democratic	**+16.8**	**+0.8 %**
	Total Republican	**−25.1**	**−1.4 %**

Source: St. Louis Fed; calculations based on Fed trade weighted US dollar index—Major Currencies
*Obama administration evaluated as of November 20, 2015; Total Democratic and Republican percentages do not add up to the Total figure from 1977 to 2015 because those percentages are calculated from different bases

the US dollar's performance was veering close to Clinton's post-Bretton Woods record. Near the end of 2015, the US dollar was up 13.1 % during Obama's Democratic term of office. By contrast, under each of the full Republican administrations since the move to a system of floating rates—Ronald Reagan, George H.W. Bush, and George W. Bush—the American greenback either declined or was little changed (Table 7.4).

Thus I arrive at the same conclusion that I did in my examination of the relationship between party ideology and the stock market: it is complicated. Tying currency price movements to the political philosophies of those in power is complicated by the fact that not every left- or right-wing party ends up acting in line with their professed views. This could be because these views are followed with varying levels of doctrinal purity or because political circumstances demand a pragmatic compromise. Hence, investors endeavoring to make decisions based on partisan variables cannot rely on statistically attested empirical regularities. They must apply their prudential understanding to the peculiarities of the situation at hand.

Politicizing Trade and Bretton Woods II

Let us now step back for a moment and reminisce about the more placid days when the euro's existential crisis was not regularly in the headlines. Back then, a publicly-minded citizen of an advanced liberal democracy would most likely hear about their own currency in relation to international trade. He or she might watch a news report featuring a politician complaining that the prevailing exchange rate is harming the nation's export competitiveness. They might read a newspaper article quoting a group of CEOs alleging that recent strength in the currency is allowing imports to decimate local industries. Or, they might listen to an opponent of the sitting government argue that its current approach to the FX rate is responsible for chronic trade imbalances and impending balance of payments difficulties that calls the present level of the currency into question. Implicit in these statements is the notion that currency prices help determine the quantity of exports and imports along with the proportion between these two variables. Implicit in those statements, too, is the claim that the FX rate impacts how trade with the rest of the world is financed. Such assertions as can be gleaned from everyday political life are correct for the most part. Still, they are in need of elaboration, refining, and some emendation.

To begin with, the currency market does not so much cause exports and import activity as it does facilitate it. By making it possible for national currencies to be converted into one another, the FX market enables firms and individuals to export and import goods with confidence. Everyone is rest assured in the belief that they will be able to exchange revenues generated abroad into local money. Everyone, too, is confident that they will be able to import what they need by turning their local money into the currency from where they are securing their goods. Left to market forces, both the quantity and the character of what is exported and imported by nations will be fundamentally determined by their comparative advantages across the different lines of production in addition to their citizen's preferences for goods. That is, countries will tend to specialize in goods and services which they are able to produce at a relatively lower cost than others. Countries will then use the excess which they do not consume to trade for imports that their residents subjectively value. In this way, exporting is a kind of technology that allows people to obtain desired goods from abroad at a cheaper price than they could by producing them on their own.

Alas, deviations from this optimal condition persist. Not only is this because markets are hardly ever in equilibrium, it more often happens because states distort export and import flows through various barriers to trade. Such barriers include tariffs, quotas, export subsidies, bureaucratic requirements, and regulations. Then, too, there are government procurement rules discriminating against foreign companies in addition to the favoring of certain firms as national champions. Once markets and political forces have thus combined to create the framework of international trade, the FX rate will only play a distinct causal role in driving exports and imports when that rate substantially deviates from PPP. If the currency is lower than PPP, the prices of domestically produced goods will look cheap to foreigners. At the same time, the price of foreign-produced goods will look expensive to local residents. As a result, exports will rise, and imports will fall. On the other hand, if the currency is higher than PPP, the prices of foreign-produced goods will look cheap to local residents. Meanwhile, the prices of domestically produced goods will look expensive to foreigners. In that case, imports will rise and exports will fall. To this extent, the political interpretation of currency price movements is on the mark, even if the significance of PPP tends to be missed.

Where the political discussion, however, is especially liable to go off the mark is when the subject turns to the balance of trade. It has been nearly two-and-a-half centuries since Adam Smith rebutted mercantilism in *The Wealth of Nations*. Nevertheless, the opinion remains fixed in people's minds that a country is well off exporting more than it imports, neutrally positioned if it exports as much as it imports, and in trouble if it imports more than it exports. People today do acknowledge that making a trade surplus the object of public policy is self-defeating. Were every country to aim at exporting more than it imported, nobody would be able to do so. A trade surplus presupposes a deficit somewhere else in the world. Yet so ingrained is mercantilist reasoning that this logical contradiction has given way to a vision of international trade equating it to a prisoner's dilemma game. In the export–import version of that game, the trade balance is seen as the common interest of all nations, while trade surpluses indicate that a country is unduly benefiting as a free rider. Hence, the grievances expressed by US politicians against Japan's trade surpluses in the 1980s and those run by China from the 2000s forward. Given that FX rates can influence the direction of trade, such grumblings have invariably come to embrace the allegation that the currency of the trade surplus country at issue is too low. Sometimes the blame for that is assigned to the market

for mispricing the currency. Other times, the culprit is identified as a particular government said to be manipulating its currency. Herein lies the background for the aforementioned charge that China has kept its yuan artificially cheap.

By itself, the trade balance is nothing special. Whenever the value of imports exceeds that of exports, the difference is made up by the transfer of money from buyers of the imported goods to the sellers. As such, a trade deficit simply means that, in summing up the individual transactions made by a nationally demarcated group with persons belonging to other similarly defined groups, members of the first on net demonstrated a higher preference for goods over money, while those of the second revealed a stronger preference for money over goods. There is no more to it than that.[32] No one worries, after all, about the trade balance between, say, the boroughs of Manhattan and Brooklyn in New York City. All that distinguishes this example from the way exports and imports are usually aggregated is how the line happens to be drawn separating people. Why should national borders matter so much as opposed to the countless other ways that human beings can be sorted?

It will be said that nationally distinguished groups share a currency that affects the prices of all goods in the community. Thus, the international exchanges conducted by the nation's residents on the basis of their self-interest may combine to generate externalities that impinge on the public good. But, in fact, individual actions impacting the currency are either benign or self-correcting. The foreigner who receives money in return for goods can proceed in one of two ways: they can keep it in the currency of the country to which they sold and invest it in a bank deposit, a bond, or shares; or, they can arrange to convert the funds into their own currency and bring them home. In the first case, all that has happened is that the foreigner has opted to buy capital goods of the country to which they have exported. To put it in the terminology of international macroeconomics, the deficit in the current account has been made up by a surplus in the capital account, thereby leaving a zero balance of payments. In case you are wondering how these accounts are defined, the current account happens to include the trade balance whereas the capital account measures the flow of investment in and out of the country. A country's balance of

[32] Murray Rothbard, *Man, Economy, and State with Power and Market*, 822–826.

payments equals the difference between the current and capital accounts.[33] Since this balance remains unchanged when a recipient of foreign currency reinvests that money in that country's securities, the FX rate also remains unchanged. In the situation where a recipient of foreign currency exchanges it into their own money, the currency price does change, at least in a floating rate regime such as most nations have today. What happens then is that the supply of the importing nation's currency offered on the market rises at the same time that the demand for the currency of the exporting nations rises. The upshot is that the currency of the importing nation will fall in price relative to that of the exporting nation. If such an excess of imports over exports persists, however, the currency's continued depreciation will eventually stimulate exports and dampen imports. So will the bidding up of prices in foreign countries as a result of the buying of goods originating from there. This will then produce a trade surplus compensating for the earlier deficit.

Trade imbalances only become an issue when governments follow policies that disturb this adjustment process. A preeminent example of such a policy is that of maintaining a fixed rate peg. Depending on the nation's economic circumstances, keeping the FX rate within a tightly specified range will be equivalent to upholding either a price floor or a price ceiling on the currency. In general, where unit labor costs, equaling wages adjusted for productivity, render export industries competitive on global markets, the peg acts as a price ceiling. Rising exports means the government authorities are left to fend against an appreciation of the currency. By contrast, where a pattern of rising unit labor costs undermines the competitiveness of the export sector, the authorities are faced with the task of arresting a depreciating currency. At that point, they are endeavoring to maintain a price floor.

Of the two scenarios, the last presents the more challenging task for the state. This is because the resulting trade deficit, to the extent that it is not matched by capital inflows, must be financed by drawing on the central bank's FX reserves. Letting the currency fall to reverse the deficit by encouraging exports and discouraging imports is precluded by the peg.

[33] The IMF, along with other international organizations, actually breaks down the capital account into the financial account and capital account. What I have placed in this example as a transaction in the capital account, the IMF would instead put in the financial account. I am following here the standard usage in macroeconomics and refer to any change in the ownership of domestic assets by foreigners as part of the capital account.

Once currency traders sense that the country's FX reserves are not going to be sufficient to defend the floor, they are presented with an enticing one-way bet against the currency.[34] Should the government succeed in maintaining the floor, speculators pretty much lose nothing (except the opportunity cost of deploying their funds in their next best trade idea). Should the government abandon the peg, however, the profits will be large. This is because the prior extended commitment to a fixed rate will have built up the necessity for a larger adjustment in the FX rate. Shorting a pegged currency, too, is self-fulfilling in that the very act of betting against it depletes the FX reserves needed to uphold its value. True, the option of raising interest rates is available to attract inflows of capital. It is an option that is almost always taken for a time, but it eventually weakens the economy on whose vitality the government depends for public support. Numerous historical instances of this self-destructive dynamic can be invoked as illustrations. Among the most recent is Argentina, which fixed its peso to the US dollar at a one-to-one rate from 1991 until it was forced to float the currency in 2001. By that time, the sequence of spiraling trade deficits, high interest rates, and regime uncertainty had combined to subvert the economy.[35]

While not so politically challenging to maintain, the consequences of operating a price ceiling on the currency are also damaging. Rather than exhausting FX reserves, a price ceiling requires the central bank to add to them by selling local money in exchange for foreign money. A portion of these sales can be sterilized—that is, reversed by purchasing domestic currency through open market operations in the money and bond markets. Yet the government cannot continually do this without jeopardizing the fixed rate on the currency. Hence, the local money supply will tend to increase and interest rates will tend to decline, thereby stimulating the economy—precisely why a currency price ceiling is politically less challenging to implement than a floor.

Difficulties are bound to arise, though, since the interest rate driving the upswing in the economy is artificially low. It might appear justified because the trade surplus, deriving from the reduced price of credit, implies that the country has increased its savings. With receipts for exports

[34] Paul Krugman, "A model of balance-of-payments crises". *Journal of Money, Credit and Banking* (1979): 311–325.
[35] Martin Feldstein, "Argentina's Fall: Lessons from the Latest Financial Crisis". *Foreign Affairs* 81, no. 2 (2002): 7–14.

greater than the expenses of imports, the difference is effectively saved on the country's behalf by its central bank in the form of FX reserves. Even so, this savings reflects the preferences of the state and its central bank—it is a forced savings. Far from it being guaranteed that the government's preferences are coterminous with those of the people, it is certain that they are not. For if the currency were permitted to rise, the demand for imported goods would be higher. In other words, consumer desire for future goods versus present goods is less than that connoted by the state's coerced savings. A boom driven by malinvestments is the logical outcome of this policy. Enticed by low interest rates, entrepreneurs embark on projects with seemingly bright long-term payoffs. The consequence is a boom which must end in a bust. One can never be sure exactly when, but with the passage of time the revelation will inevitably come that the expected demand for future goods was all an illusion.

China is a perfect example of this. In a neo-mercantilist effort to grow its economy through exports, the emerging Asian power has long been managing a price ceiling on its yuan. In the process, China has augmented FX reserves at an astounding 2220 % rate from 2000 to 2014.[36] Responding to US and international pressure, the yuan was allowed to appreciate slowly, with the trading bands around the currency widened in 2007 and again in 2012. In 2014, as signs that China's economy was slowing, the yuan reversed course and began a gentle descent. By the summer of 2015, that descent turned into a plunge once China's government gave into the wave of FX traders betting against the yuan and officially devalued the currency (Fig. 7.3).

The yuan's fall was the clearest indication up to that point that the malinvestments generated by China's easy money policy—a corollary of its amassing of foreign reserves but then magnified in its response to the 2007–2009 financial crisis—were finally catching up with the Asian nation. As part of that policy, credit was supplied in abundance to a sizzling economy that never grew less than 7 % per year from 2000 to 2014.[37] Though surely impressive, part of that growth rate is masking a multitude of empty buildings and urban developments clustered throughout the country, ghost towns constructed amid the boom that

[36] "China's Foreign Exchange Reserves, 1977–2011", http://www.chinability.com/Reserves.htm

[37] World Bank, "Data: GDP Growth (Annual)", http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG

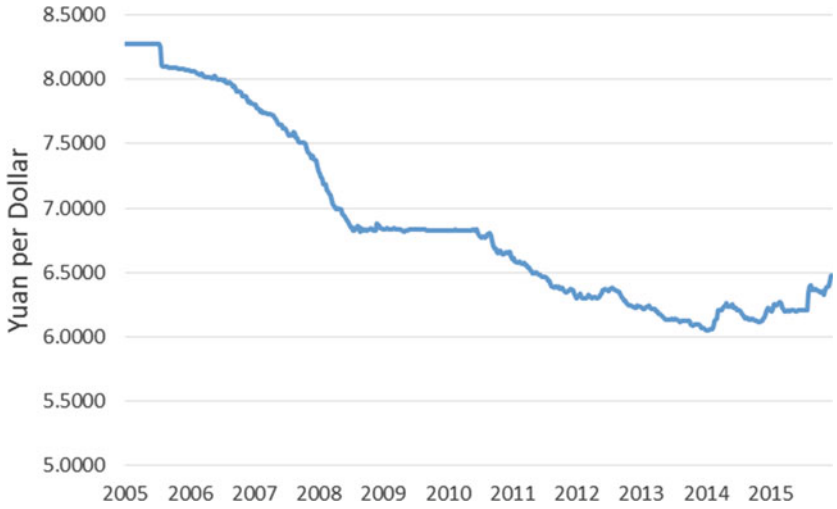

Fig. 7.3 US dollar/Chinese Yuan rate, 2005–2015. *Source*: St. Louis Fed

anyone can see on a train ride through China. For those who have never been to China, a search of the phrase "China's ghost towns" on Google Images will return numerous pictures of the excess construction that has taken place. When, and how exactly, China's economy cracks remains to be seen—but the repercussions, both in China and the rest of the world, will be challenging.

This is owing to an ersatz international monetary architecture that some claim has emerged to replace Bretton Woods.[38] Though not formally recognized in any treaty or organizational framework, an implicit agreement between China and the USA has been dubbed as Bretton Woods II. In return for being allowed to keep its exchange rate low so that it can promote its exports, China purchases US treasury bonds. The American government then gets to borrow freely at cheap rates, while retaining the advantages of controlling the international reserve currency. Chief among these advantages is the ability to continually run

[38] Michael P.Dooley, David Folkerts-Landau, and Peter Garber, "An essay on the revived Bretton Woods system, no. w9971. *National Bureau of Economic Research Working Paper* (2003); Michael Dooley, David Folkerts, Landau, and Peter Garber. "Bretton Woods II still defines the international monetary system". *Pacific Economic Review* 14, no. 3 (2009): 297–311.

trade deficits without having to suffer the adjustment costs that any other country would normally have to incur. To correct a chronic excess of imports over exports, the US does not have to resort to a combination of wage reductions and a large devaluation of the greenback. The USA can literally buy more goods and services from the world than it produces in exchange by mere dint of printing more dollars. In the 1960s, Valery Giscard d'Estaing, then the finance minister of France under Charles de Gaulle, referred to this as America's "exorbitant privilege".[39] What has occurred since this statement was made is that the assumption of US foreign liabilities has shifted from Europe to Asia, and especially, to China. Whoever it is, though, that happens to buy its debt, the USA is able to borrow cheaply from other countries to finance investment abroad. In the process, the country generates a positive yield differential of more than 3 % between its foreign assets and liabilities, a much higher rate of return than any other developed nation.[40]

Bretton Woods II is not without its shortcomings for the USA and, indeed, the world. The lower cost of issuing debt provided under this arrangement can distort America's economy by encouraging individuals and firms to overinvest in long-term assets and capital projects. Thus, by bidding down interest rates through its massive purchases of American bonds, China's part in Bretton Woods II helped drive the 2000's US housing bubble that subsequently turned into the sub-prime mortgage crisis of 2007–2009. However, we should not misconstrue this factor as Alan Greenspan and Ben Bernanke have done in an attempt to exonerate themselves from the charge that the Fed set the stage for the financial storm with its easy money policies. Both the former and current chairman of the Fed maintain that a savings glut in emerging market economies like China, reflected in an excess of exports over imports among these countries, filled a pool of money in the world's financial system that found its way into American debt securities.[41] Yet as the Chinese example shows, it

[39] Barry Eichengreen, *Exorbitant Privilege*: *The Rise and Fall of the Dollar and the Future of the International Monetary System*. (Oxford: Oxford University Press, 2011), 4. The phrase, "exorbitant privilege", is often wrongly attributed to Charles de Gaulle.

[40] Maurizio Michael Habib, "How Exorbitant is the Dollar's Exorbitant Privilege?", *Vox*, (March 29, 2010), http://www.voxeu.org/article/how-exorbitant-dollar-s-exorbitant-privilege

[41] Alan Greenspan, *The Age of Turbulence*: *Adventures in a New World* (New York: Penguin, 2008); Ben S. Bernanke, Carol Bertaut, Laurie Pounder DeMarco, and Steven Kamin, "International Capital Flows and the Returns to Safe Assets in the United States, 2003–2007", *Board of Governors of the Federal Reserve System International Finance Discussion Papers*, no. 1014 (February 2011), http://www.federalreserve.gov/pubs/ifdp/2011/1014/ifdp1014.htm

was not so much an overabundance of savings—indeed this was markedly lower as a percentage of global GDP in the 2000s than it was in the 1970s and 1980s[42]—that induced purchases of American bonds, as it was a desire to promote exports. Those bonds happen to be a convenient place to park all the US dollars acquired in the course of keeping the local currency cheap. In fact, to the extent that the Fed augments the money supply, this dynamic is exacerbated, even among countries not equally committed to the neo-mercantilism pursued by China.

To be more precise, this effect must extend to any government under political pressure to defend the country's export industries. The more dollars that America's central bank creates, the higher the value of other currencies. From which it follows that the more dollars there are out there, the more U.S. currency that other countries are compelled to mop up with the injection of additional amounts of local money. This they must do if they are to keep their currency from escalating. In this way, loose US monetary policy spreads throughout the world with all the deleterious consequences associated with that stratagem, including the commodity price explosion of 2007–2008 and the housing bubbles witnessed in Spain and Ireland during the 2000s.[43] Of course, tight US monetary policy can be globally transmitted as well. When this happens, the consequences can be far from benign, as other nation's economies are shaken by the sucking away of capital back to the USA. Remember that such troubles usually arise out of the US attempt to correct for a prior policy of loose money. The looser that policy was at the outset, the more destabilizing the subsequent capital outflows end up being. At any rate, given how democracy is prone to the unholy trinity of deficits, debt, and money printing, it is the prospect of excess liquidity that always represents the greater international peril.

For this reason, too, one is right to echo the chorus of financial commentators who worry that Bretton Woods II is unsustainable. American democracy possesses the unique advantage that the class conflict between tax consumers and taxpayers can be more readily tamed there. Chalk this up to the willingness of private fixed income investors and central banks around the world to assume the risk of holding American currency. When the bills

[42] John B. Taylor, "The financial crisis and the policy responses: An empirical analysis of what went wrong" *National Bureau of Economic Research Working Paper*, no. w14631 (2009).
[43] John B. Taylor, "Monetary Policy and the Next Crisis" *The Wall Street Journal*, (July 4, 2012), http://online.wsj.com/article/SB10001424052702304211804577501190349244840.html

of the tax consumers come due, American politicians have an easier time of passing those on to the bond and money markets and avoiding the wrath of taxpayers. Since this can be done so easily, the fiscal defects of democracy wind up being more exploited in the USA than anywhere else. This portends an ever increasing supply of US dollars onto the currency markets. So long as the demand for the greenback keeps up, or at least does not precipitously collapse, the dollar's global dominance will persist.

The big question is whether this demand will hold up. At some point, perhaps, the Fed's printing presses, put into overdrive by the inability of America's democratic system to control the public debt, could tip market expectations toward the inevitability of a large devaluation and so trigger a mass liquidation of US financial assets in a race to get out of the dollar. Or, maybe, confidence in America's democratic capabilities declines slowly, if steadily. In this scenario, a more orderly movement out of the dollar takes place during which investors and central banks diversify their holdings into other national monies. Out of this one would emerge a multipolar currency order. The possibility cannot be discounted, either, that the US dollar will continue to trudge along with its exorbitant privilege given the paucity of the alternatives.[44] The euro no longer looks as attractive as it did earlier in its still relatively short career, thanks to the sovereign debt overhang that continues to weigh over the currency's southern tier. Precisely because China is not a democracy freely open to commerce, but rather an authoritarian regime with a closed economy, the yuan does not present an inviting means of transacting globally and storing wealth. The truth is that nobody knows which of these scenarios is going to transpire. For all we know, the script may play out quite differently than any of the potential outcomes envisioned here. That said, democracy's propensities suggest that some kind of displacement of the US dollar has to be assigned a more than middling degree of probability.

Fixed Versus Floating

From the poor example set by China currency's peg, it ought not to be concluded that a floating system is ideal. As the best way for a society to manage its money is through a gold standard, the problem lies not with

[44] For an elaboration of this view, see Eswar S. Prasad, *The Dollar Trap: How the U.S. Dollar Tightened its Grip on Global Finance* (Princeton: Princeton University Press, 2014).

a fixed rate as such but with how it is fixed. For if all societies adhered to a gold standard, as they would in a perfect world, then their respective currencies would necessarily trade at determined values with each other. Suppose country X sets its currency at 25 units equal to one ounce of gold. Now, further suppose country Y establishes its own currency at 50 units equal to one ounce of gold. The currency of X will be worth twice as much as that of currency Y. That is, one will pay 2 units of Y to obtain 1 of X or, reciprocally, 0.5 units X to obtain 1 unit of Y. Were it to deviate from this rate, an arbitrage possibility would arise. Gold could be bought more cheaply in one place and then immediately sold more dearly in another. Such an opportunity will be quickly exploited and, consequently, eliminated—at least until a differential from the theoretically correct rate is reached that reflects the costs of transporting gold between the two countries.

Exchange rates were fixed in this way during the classical gold standard period extending from the 1870s to 1914. For instance, the world's dominant currency at the time, the British pound, was equal to 113 grains of pure gold, whereas the upstart US dollar was set at 23.22 grams. That meant the British pound regularly traded circa $4.86. While fixed exchange rates were also a defining feature of Bretton Woods from 1945 to 1971, they were not established in the same manner as the classical gold standard. Recall that Bretton Woods was actually a gold exchange standard. Only the US committed to exchange its dollars for gold at a set rate. Other nations simply promised to keep their currencies fixed versus the American greenback. The entire framework was essentially an international set of price controls, a variant of the regime that countries like Argentina and China have tried post-1971. A gold standard is different. The currency is not fixed by the central bank's willingness to go against the grain of the market by altering interest rates and buying and selling foreign currencies. Rather, a gold standard stabilizes exchange rates through the government's commitment to the yellow metal as the foundational ground of money.

The virtues of a fixed exchange rate system, then, depends on its being the outcome of an authentic gold standard. I have already pressed the case for that monetary framework, so I will not recapitulate all the arguments other than to say that the gold standard is the system most congruent with limited government, fiscal probity, monetary rectitude, and a circumscribed financial sector. On top of these points, let me add the merits specific to fixed exchange rates. Firms and investors benefit

from the diminished risk of engaging in international commerce, having greater assurances that their calculations will not be upset by unfavorable movements in the FX market. Companies also cannot rely on the crutch of a depreciating currency to make up for a lack of global competitiveness. In a fixed rate world, they are compelled instead to undertake the capital investments needed to render their operations and workers more efficient and productive. Fixed rates, too, impose discipline on politicians and central bankers by rendering it manifest to the public that they have opened up the monetary spigot. For it is one thing for a depreciation to occur slowly over time, as it often does in a floating system. It is quite another thing for a depreciation to occur in a big way all at once, as it does in a fixed system. The last is psychologically far more striking.

In a fixed rate universe as well, the business of currency trading would occupy a much smaller part of economic life than it does today. Think of how much human ingenuity and talent currently devoted to a $5.3 trillion per day industry could be liberated to engage in more worthwhile pursuits than trying to figure out whether the upcoming US retail sales report portends a rally in the Euro/Japanese yen cross-rate. Disabling public officials from adjusting the FX rate to suit their short-term political interests also precludes currency wars. These are not the sorts of wars that involve mass violence. But they can still do substantial harm, involving as they do countries engaging in tit-for-tat depreciations of their currency with the intent of advancing their exports at the expense of other nations. This dampens business activity by heightening the uncertainty among firms as to their ultimate revenues and costs. Worse, it conduces to an environment hostile to free trade. Commercial interactions with other nations come to be seen as a zero-sum game requiring tariffs, import quotas, and export subsidies to win. This is very much how events unfolded in the 1930s. Back then, a cycle of competitive depreciations went hand in hand with beggar-thy-neighbor policies that drastically reduced international trade. As was the case at that time, nationalist sentiments are bound to thrive amid a currency war, hindering the development of a cosmopolitan outlook suited to liberal democracy. Where we in the West politically reside, after all, individuals are meant to identify with each other as fellow humans beings bearing universal rights and dignity, instead of as members of irreducibly separate groups.

As a practical matter, though, gold cannot reasonably be expected to be revived any time soon as the basis for a new fixed rate regime. Thus we must resign ourselves to the prevailing system of floating currency prices.

The orthodox rationale in support of the status quo is that it enables governments to undertake monetary measures to smooth the business cycles in their respective economies. Invoking the Mundell–Fleming hypothesis, it is argued that the state confronts a trilemma. The state cannot simultaneously uphold free capital mobility and a fixed exchange rate, while conducting its own monetary policy.[45] If the government desires monetary independence, it must either impose restrictions on capital flows in and out of the country or allow its currency to float. Inasmuch as capital controls pose a tension with democratic commitments to individual freedom, letting the exchange rate be moved about by market forces is chosen as the more attractive option. It is surely right to prefer floating rates, as Milton Friedman did, on the grounds that property rights imply that individuals possess the right to take their assets anywhere they like in the world.[46] For now, the bottom line is this: floating FX prices are to be preferred because fixed rates can only be properly had with gold.

The Euro's Golden Lessons

Underscoring the antagonism between gold and democracy is the euro. That continental currency, now embracing 19 nations of the EU, can be seen as a non-metallic image of the gold standard. Instead of each of those nation's legacy currencies being made convertible into the yellow metal at a set rate, they have been equated at a predetermined level against a euro note. In turn, this piece of paper, as well as its electronic representations in bank checking and savings accounts, is under the ultimate authority of an agency placed well outside the political reach of the particular nations joined to the euro architecture. Just like governments cannot create or destroy gold at will, so too the members of that currency framework cannot legally print or shred new euros on their own. With its headquarters in Frankfurt, the body that oversees the euro, the ECB, geographically symbolizes its roots in the Bundesbank. The hard money principles of the German central bank, forged by the country's tragic experience with

[45] Robert A. Mundell, "Capital mobility and stabilization policy under fixed and flexible exchange rates". *The Canadian Journal of Economics and Political Science/Revue canadienne d'Economique et de Science politique* 29, no. 4 (1963): 475–485; Marcus J. Fleming, "Domestic Financial Policies under Fixed and under Floating Exchange Rates" *Staff Papers-International Monetary Fund* (1962): 369–380.

[46] Milton Friedman, *Capitalism and Freedom*, 57.

hyperinflation, are the closest thing that a major central bank has ever come to mimicking the discipline imposed by gold.

Indeed, the classical gold standard seems to have been an inspiration of sorts for European monetary union. Evidencing this is two of the early political figures in the multi-decade process that culminated in the euro. One of them is Valery Giscard d'Estaing, who advanced from serving as De Gaulle's finance minister in the 1960s to the presidency of France between 1974 and 1981. The other figure is Helmut Schmidt, the Chancellor of West Germany from 1974 to 1982. Giscard justified the pursuit of a common European currency framework as a return to the better monetary world that prevailed before 1914: "During the second half of the nineteenth century, up to the 1914 war, France enjoyed continuously successful economic growth and a steady buildup of its engineering industry, with a currency that was totally stable … the French as a nation cannot cope with an inflationary economy and a weak economy. They thrive on stable money".[47] Schmidt, in turn, explicitly compared the idea of a European currency system to the pre-World War I gold regime: "We had a currency union up to 1914 in Western Europe—the gold standard. From a historical point of view, I would draw a direct parallel".[48] The monetary structure that ended up being constructed only approximated the gold standard of old. Nonetheless, it was close enough to give rise to an ominous clash with the democratic realities of the more vulnerable Eurozone states.

As numerous observers pointed out amid the euro crisis, the continental currency unit historically reflects not so much a multilateral economic strategy as it does a larger political project. The euro's ultimate origins extend to the immediate aftermath of World War II. Surveying the enormous damage wrought by the six-year conflict, Winston Churchill called for an effort, "to re-create the European family, or as much of it as we can, and to provide it with a structure under which it can dwell in peace, safety and freedom. We must build a kind of United States of Europe".[49] Four years after this appeal, Robert Schuman, the French foreign minister, issued a declaration whose guiding principles had been devised by Jean Monnet,

[47] Giscard quoted by David Marsh, *The Euro: The Politics of the New Global Currency* (New Haven: Yale University Press, 2009), 69.
[48] Schmidt quoted in David Marsh, *The Euro*, 69.
[49] Winston Churchill quoted by European Commission, "Winston Churchill Calling for a United States of Europe", http://europa.eu/about-eu/eu-history/founding-fathers/pdf/winston_churchill_en.pdf

a French civil servant. In what came to be called the Schuman declaration, the French government requested West Germany take part in an initiative that would place their respective coal and steel industries within a common market overseen by a higher governmental body. Inasmuch as these materials were the basis of weapons and armaments, Monnet's idea was that having the two great powers in continental Europe working together under the same political umbrella would make a recurrence of war less likely.[50] Thus was the European Coal and Steel Community established. It brought those two economic sectors under a unified aegis not just in France and West Germany but also in Italy, Belgium, Netherlands, and Luxembourg.

In 1958, this framework was expanded to the rest of the European economy. While the goal of advancing economic growth now came into more prominence, the new arrangement was justified on similar grounds to its coal and steel predecessor. To wit, commercial interactions would foster interdependencies and mutual sympathies among nations contributing to the preservation of peace.[51] Signed in 1957 on Rome's Capitoline Hill, in a symbolic reminder of the historical precedent that existed for the unification of Europe, the treaty of Rome brought the European Economic Community into being. It began as a customs union in which the six signatories shared a common tariff wall and pledged the creation of a borderless economic space among their countries. The free movement of goods, capital, and labor was not fully secured until the 1986 signing of the Single European Act. By then, the EU (as the multilateral organization eventually came to be called), had added to the original six-nation membership.

Then came the fall of the Berlin Wall in 1989. There is reason to believe that European monetary union only came about precisely because of that world-historical event. To be sure, the euro did not emerge all of a sudden out of the debris of the Berlin Wall. The idea of a single currency was first broached in the last days of Bretton Woods in the 1970 Werner report.[52] The breakdown of that international financial architecture, along with the monetary disturbances and oil price shocks associated with it, forestalled

[50] Chris Mulhearn and Howard R. Vane, *The Euro*: *Its Origins*, *Development and Prospects* (Cheltenham, UK: Elgar Publishing, 2008), 5–7.

[51] See the preamble to European Economic Community, *Treaty Establishing the European Economic Community* (1957), http://en.wikisource.org/wiki/The_Treaty_establishing_the_European_Economic_Community

[52] Barry Eichengreen, *Globalizing Capital*, 151; David Marsh, *The Euro*, 53–57.

any hope of implementing Werner's plan during the 1970s. That decade, however, saw an attempt to fix exchange rates known as the snake. Under this regime, currencies were allowed a maximum of 2.25 % deviation between them. The snake proved too politically onerous for Italy, France, and the UK to abide by its strictures. It effectively became a deutsche mark zone encompassing West Germany and its various monetary satellite countries.[53] Not much later in 1979, another effort was launched to fix Europe's currencies, known as the European Rate Mechanism (ERM). This proved somewhat more resilient, producing enough confidence for the 1989 Delors report. Repeating Werner's earlier proposal for monetary union, the report was received positively by Europe's political elite and was subsequently codified in the 1992 Maastricht treaty.[54] This document certified that the effort to unify Europe had shifted from a reliance upon economic means of association to the political mode. Instead of simply enabling voluntary commercial exchanges in tying the continent's population together, Europe moved its unity project to the more coercive agency of a transnational state apparatus.

During the 1990s, many were the voices that declared the euro project stillborn. However, helped along by a strong recovery in European economic fortunes during the mid-to-late 1990s, political forces pushing for a continental currency managed to defy the reigning pessimism.[55] Even at the outset, there was a divide between Europe's northern and southern tiers. Countries like Germany, the Netherlands, and Finland in the north had both stronger economies and a better record of controlling its public finances than the southern nations of Greece, Spain, Italy, and Portugal. All of the latter countries had developed a habit of depreciating their currencies, thanks to the money printing to which they resorted in order to fund their deficits and debt. Encouraging such devaluations as well was the need to make their exports competitive against the goods being produced

[53] Emmanuel Moourlon-Druol, *A Europe Made of Money:The Emergence of the European Monetary System* (Ithaca, NY: Cornell University Press, 2012), 23; Bryon Higgins, "Was the ERM Crisis Inevitable?" *Federal Reserve Bank of Kansas City Economic Review* (1993), 29; Madeleine O. Hosli, *The Euro: A Concise Introduction to European Monetary Integration* (Boulder, CO: Lynne Rienner Publishers, 2005), 20–24.

[54] Barry Eichengreen, *Globalizing Capital*, 166–167.

[55] Barry Eichengreen and Jeffry Frieden, "The Political Economy of European Monetary Integration: An Analytical Introduction" in *The Political Economy of European Monetary Unification*, 2nd ed., eds. Barry Eichengreen and Jeffrey Frieden (Boulder, CO: Westview Press, 2001), 5–6.

more cheaply on a per-unit basis by the more productive workforce in the north. Why, then, would politicians in the southern tier give up the ability to depreciate the local currency? Why abandon a tool that allowed them to conveniently manage the conflict between taxpayers and tax consumers in their respective jurisdictions? And why would northern politicians tie their nation's fate to their southern neighbors? Why risk having to bail out those countries once their addiction to deficits and debt reasserted itself?

Perhaps the longing to secure a lasting peace in Europe was enough to overcome these chasms in national economic interests. Statements made by Helmut Kohl, the German chancellor who signed off on his country's agreement to join the euro, suggest the desire for peace was decisive: "The bitter experiences of war and dictatorship in this century teach us that the unification project is the best insurance against a relapse of national egoism, chauvinism, and violent conflict".[56] Even so, the reunification of Germany that was taking place around the time the euro was being conceived sparked fears of a resurgent colossus in the heart of continental Europe. A reunified Germany would approximate the size that the country previously encompassed when it caused World War II, if not also World War I. As a condition of recognizing the country's expanded borders, the leading Western powers exacted various commitments, including one allegedly at the behest of French President Francois Mitterand. He purportedly required Germany to give up its hallowed deutsche mark and accept a single European currency.

The evidence for such a deal is not clear-cut, if only because Mitterand seems never to have uttered the quid pro quo explicitly. He never exactly said to Kohl, "I won't support reunification unless you back the euro". *Der Spiegel*, a German news magazine, unearthed secret government documents hinting pretty strongly at such a deal.[57] In his blow-by-blow account of the euro's birth, David Marsh notes that Mitterrand became incensed after Kohl had failed to consult him on a detailed plan for reunification which the latter had communicated to German legislators. In a meeting a couple of days later with Germany's foreign minister,

[56] Helmut Kohl cited by Christian N. Chabot, *Understanding the Euro* (New York: McGraw Hill, 1999), 38.

[57] Michael Sauga, Stefan Simons, and Klaus Wiegrefe, "The Price of Unity: Was the Deutsche Mark Sacrificed for Reunification?", *Der Spiegel*, (September 30, 2010), http://www.spiegel.de/international/germany/the-price-of-unity-was-the-deutsche-mark-sacrificed-for-reunification-a-719940.html

Mitterrand indicated that Germany had to discuss the terms of monetary union or otherwise face an alliance of France, Britain, and Soviet Union. "We will return to the world of 1913", Mitterrand said.[58] Without saying it in so many words, the French President insisted upon a degree of conditionality between his willingness to go along with German reunification and the latter's participation in a common currency.[59] Pulling Mitterrand in this direction was a long-standing axiom of French foreign policy, bred by three bloody conflicts with Germany (the third during World War II involving an occupation of France) since its original unification in 1870. That maxim stated that Germany was a threat that had to be vigilantly contained. Thus, given the evolving movement toward European unification, Germany had to be fully ensconced within that project.

Also influencing Mitterrand's thinking, in a mindset shared by the French political class, was a deep antipathy toward the deutschemark. In one speech, he actually likened the West German currency to an atomic bomb: "The Germans are a great people deprived of certain attributes of sovereignty, with reduced diplomatic status. Germany compensates for this weakness with its economic power. The Deutsche mark is to some extent its nuclear force".[60] On numerous occasions, the strength of the Bundesbank-run currency had compelled France to watch helplessly as its franc sank. This laid bare to the world and to their public the failings of French politicians in managing the country's fiscal and monetary affairs. Though, economically speaking, France straddles northern and southern Europe, just as it does geographically, when it comes to its FX policies, it has proved itself to be southern. Doing away with the deutsche mark would end this embarrassment for the French. This must also have motivated the full-fledged members of Europe's southern tier. Its politicians also had to regularly suffer the indignity of their currencies getting lambasted in the markets by the deutsche mark.[61]

Beyond this, both the southern and northern sides were inclined to subscribe to the euro by less subversive impulses. In the south, governments sought to avoid the prospect of their nations' companies having access to the more advanced economies of the north being restricted were they to

[58] Mitterrand quoted by David Marsh, *The Euro*,137.
[59] Phillip Bagus forcefully makes this case in his *The Tragedy of the Euro* (Auburn, Ala: Ludwig von Mises Institute, 2012), 59–63.
[60] Miterrand quoted by David Marsh, *The Euro*, 93.
[61] Philipp Bagus, *The Tragedy of the Euro*, 43–44.

have stayed out of the euro. Not participating, too, might have compromised the southern nations' influence within the EU as a whole, where the one vote per country principle allows those countries to push above their economic weight. Among more market-oriented politicians, there was the hope that the rigors imposed by a monetary policy orchestrated through an outside agency would break domestic political logjams in the south. These were preventing the deregulation of labor and product markets as well the reining in of persistent government budget deficits.[62] Assisting the euro's cause in the north was the support gained from exporters, who were attracted by the prospect of being able to outcompete firms in the south without having to worry any longer about these countries devaluing their currency to eliminate their productivity edge.[63] Europe's financial sector also had an interest in seeing the Euro come into existence. That way, banks could operate with fewer encumbrances on a continental marketplace and thereby realize economies of scale. The critical thing to understand is that purely economic objectives, unrelated to the interests of politically influential domestic groups, do little to explain why the euro entered the financial markets in 1999.

At that time, skeptics usually expressed their reservations about the long-term viability of the new currency by appealing to the notion of an optimum currency area. This is the thesis, originally articulated by Nobel Prize-winning economist Robert Mundell (the first person indicated in the aforementioned Mundell–Fleming hypothesis), that a given territory can share a currency to the extent that its business cycles occur in unison.[64] That is, if one part of the currency zone, given its predominant industries, tends to go into recession while another part is economically stable or expanding, then it is not optimal to have a single FX rate for the whole area. The reason is that the part suffering a recession needs to have monetary policy relaxed. That implies a depreciation of the currency. Yet such a decline will not necessarily be forthcoming because the monetary authorities have to factor in conditions elsewhere where economic

[62] Barry Eichengreen and Jeffry Frieden, "The Political Economy of European Monetary Integration: An Analytical Introduction" in *The Political Economy of European Monetary Unification*, 2nd ed., eds. Barry Eichengreen and Jeffrey Frieden (Boulder, CO: Westview Press, 2001), 11–12.

[63] Philip Bagus, *The Tragedy of the Euro*, 70.

[64] Robert A. Mundell, "A theory of optimum currency areas". *The American Economic Review* (1961): 657–665.

conditions are better. The resulting monetary policy winds up representing some kind of mean between the necessities of the two regions, leaving neither properly accommodated. To allay this, people have to be able to move freely into higher wage areas. At the same time, wages have to be free to drop in recession zones so as to enable firms there to reduce prices and compete more effectively. Fiscal policy must also come into play. Wherever commercial activity is slow, governments must stimulate their economies by running budget deficits. Meanwhile, governments in prospering regions must cool their economies by running budget surpluses. Critics argued that the Eurozone had none of these features of an optimum currency area.[65] Not only are economic cycles not synchronized, but cultural and linguistic differences between countries restrain people's willingness to move into more economically promising regions. Europe's labor markets are notoriously inflexible. National governments, too, were originally restricted in their capacity to employ fiscal policy by the rule that annual deficits could not exceed 3 % of GDP. Nor could any one government offer fiscal assistance to another. Bailouts were prohibited by the Maastricht treaty, a provision necessary to win German support.

What plunged the euro into an existential crisis was not exactly what the proponents of the optimum currency area thesis had in mind. Instead of divergences in the business cycle, the Eurozone was initially hit by a financial crisis emanating from the USA which affected all countries. If anything, the northern tier was more adversely impacted because its banks had invested more heavily in American sub-prime mortgage securities. The 3% deficit rule was entirely set aside (it had been violated before) as countries saw expenditures increase automatically on their social safety nets even as many of them engaged in Keynesian style fiscal pump priming in a bid to stave off recessionary conditions. A huge bailout fund was arranged, once again breaching a Maastricht requirement, with Portugal, Greece, and Ireland obtaining funds, though that did little to ease pressure on the euro in the financial markets.

What really threw the Euro into crisis was that it came into collision with the constraints present in democracies to anything even mirroring the strictures of the gold standard. More so than in the north, the southern European democracies entered the financial crisis having seen organized labor exploit

[65] Martin Feldstein, "The Political Economy of The European Economic and Monetary Union: Political Sources of an Economic Liability". *Journal of Economic Perspectives* 11, no. 4 (1997), 23–42.

their regime's susceptibility to majoritarianism and special interest group lobbying. In 2008–2009, according to the OECD, three of the four Eurozone countries offering the highest level of employment protection were Portugal, Greece, and Spain.[66] That makes it difficult for wages to decline in southern European countries during economic downturns. And when a country does not have its own currency to devalue, no other adjustment mechanism exists to reduce labor costs on a real inflation-adjusted basis and make its exports cheaper on global markets. With the euro, the southern European countries were effectively in the same predicament that they would have been in had they operated on a gold standard. Another effect of labor market inflexibility is that it inhibits investment. After all, firms will be wary of hiring workers when they cannot easily let them go should the company's economic fortunes unexpectedly change. With less capital to work with as a result, laborers in southern European nations are less productive. In turn, those countries' economies grow less, which makes bond traders and investors more nervous about their ability to pay off their rising public debt.

This debt had long been trending upwards. In the southern European nations, the taxpayer versus tax consumer dynamic had propelled the debt creating propensities of democracy to the fullest. In both Greece and Portugal, though more so in the first, parties sought to win voters by promising social programs, pensions, and public-sector jobs.[67] True enough, the governments of northern European countries spend heavily on tax consumption activities as well. But they oversee high-trust societies where individuals are more willing to pay taxes to the state. Southern European nations tend to have low-trust societies where the state is viewed with suspicion. Hence, tax avoidance is more common.[68] Underground economies in southern Europe are three times the size of those in the USA and Germany.[69]

[66] OECD, "OECD Indicators of Employment Protection", 2008) http://www.oecd.org/employment/employmentpoliciesanddata/oecdindicatorsofemploymentprotection.htm

[67] For an illuminating account of the historical background of Greece's clientelistic politics, see Takis Michas, "Putting Politics above Markets: Historical Background to the Greek Debt Crisis", *Cato Working Paper* (August 2011), http://www.cato.org/sites/cato.org/files/pubs/pdf/WorkingPaper-5.pdf. For a more detail analysis of how Portugal arrived at its current pass, see my "Portugal's Plight: The Role of Social Democracy", *The Independent Review* 16, no. 3 (2012), 325–349.

[68] On the role of trust in economics and politics, see Francis Fukuyama, *Trust: The Social Virtues and the Creation of Prosperity* (London: Penguin, 1995).

[69] David Howden, "Europe's Unemployment Crisis: Some Hidden Relief?" in *Institutions In Crisis. European Perspectives on the Recession*, ed. David Howden (Cheltenham, UK: Elgar Publishing, 2011), 56–75.

Since 2013, the impression has grown that the euro crisis has made a turn for the better, or at least has been put into remission. Even the rekindling of tensions with the 2015 takeover of the Greek government by the Syriza party did little to shake the sanguine mood in financial markets toward the Eurozone. The sense was that Greece was now cordoned off from the rest of Europe. Yields on Spanish, Italian, and Portuguese debt, which had been trending down since 2011–2012, continued to hold steady during the Greek drama, rising only slightly. But let us not be fooled into thinking that all this occurred due to the various bailout funds that were arranged, a process that ended up in the establishment of the European Stability Mechanism in 2013.[70] With an initial lending capacity of €500 billion, this facility offers Eurozone countries undergoing financial stress a permanent source of assistance. It cannot be doubted that this represents a step in the direction of fiscal union, as does the European Fiscal Compact, implemented in 2014, which is designed to make countries more immediately accountable for running excess budget deficits.[71] Fiscal union is often put forward as a solution to the euro's problems along the lines to what the USA effectively has in place to buttress the dollar. Were the euro zone to adopt a fiscal union, the tax revenues and expenditures of all member nations would be pooled. This would make it easier for resources to be redistributed from regions that are relatively prospering to those less economically vibrant. As the European Stability Mechanism, however, is restricted to emergencies, it is far from the regular and ongoing allocation framework that would constitute an authentic fiscal union.

Nor have the Euro's problems been alleviated because the most vulnerable countries in the currency union have successfully tackled their respective fiscal messes. Other than perhaps Ireland, where the debt to GDP has declined slightly from its crisis period high, austerity has not stopped debt levels from escalating among the most pressured euro nations.[72] All these nations ran head into a lethal defect of austerity policies. Granted, the reductions involved in government spending do ultimately benefit the economy by freeing up resources tied to the state that can be more effectively deployed in the free market. But the tax increases that also form part

[70] European Commission, "European Stability Mechanism", http://ec.europa.eu/economy_finance/european_stabilisation_actions/esm/index_en.htm

[71] European Commission, "Treaty on Stability, Coordination, and Governance in the Economic and Monetary Union", (February 1, 2012), http://europa.eu/rapid/press-release_DOC-12-2_en.htm

[72] Eurostat, "General Government Gross Debt", (November 25, 2015), http://ec.europa.eu/eurostat/web/government-finance-statistics/data/main-tables

of the standard austerity package invariably crimps the private sector—the very part of the economy that must integrate capital and workers dislocated out of the public sector, the very part that must motor the growth necessary to generate higher tax revenues for the state. Instead, austerity slows down economies, giving rise to less tax revenue than expected. In response to this, governments are then compelled to undertake a sequence of additional austerity measures that compound the economic troubles. Worse yet, such measures fire up social tensions, undermining the political cohesion required for economic restructuring to succeed. Seeing this very dynamic transpire in southern European nations, it is no wonder that by 2013, even the IMF, a longtime prescriber of the austerity drug to nations suffering from fiscal and monetary ills, expressed misgivings about austerity.[73]

In accounting earlier for why the Western democracies, led by the USA, abandoned the gold anchor in the early 1970s, I argued that it was written into the DNA of popularly elected regimes. To reiterate, democracies are institutionally disposed to heighten the perennial class conflict between taxpayers and tax consumers, favoring the latter over the former. To manage this conflict, elected politicians have very strong incentives to remove any constraints on the discretionary management of the money supply. In other words, democratic governments are congenitally liable to spending above their means and thus are driven to obtain complete sovereignty over money so that it can be printed as necessary to pay the bills.

Confirming this is the relatively short history of the euro. Barely a decade into its existence, the high political costs of resolving the fiscal disorders that reached a crescendo among the currency's economically weaker members not surprisingly gave way to the relative allure of a monetary solution. In so doing, the features of the euro that likened it to a precious metal system were effectively ditched. More and more, the ECB began to resemble a typical post-gold standard central bank in coming to the aid of specific nations in distress by providing liquidity.

Mario Draghi is the man primarily responsible for this momentous shift. At the same time, he is the chief reason why the euro's prospects

[73] Matina Stevis and Ian Talley, "IMF Concedes It Made Mistakes in Greece", *The Wall Street Journal*, (June 5, 2013), http://www.wsj.com/articles/SB10001424127887324299104578527202781667088?alg=y

are looking a tad brighter six years into that currency's crisis. Assuming the ECB's Presidency in 2011, Draghi took little time in introducing the Long Term Refinancing Operation, a program offering low interest rate loans to European banks. These institutions were then able to use the funds borrowed to buy their country's bonds and collect the higher yields for a tidy profit on the interest rate spread. The ECB thereby encouraged the purchase of troubled southern European bonds without actually having to buy them on their own, conveniently skirting the Maastricht treaty provision forbidding the ECB from directly financing states. In February 2012, the ECB extended this program by advancing €529.5 billion to 800 banks, slightly more than the initial €489.2 billion provision to 523 banks.[74] Figuring that this would not suffice, however, Draghi proceeded to more boldly challenge the Maastricht treaty's constraints. To be sure, Trichet had previously tested these constraints by rationalizing bond purchases on the argument that they were only banned in the primary market (i.e. debt securities bought directly from governments), but not in the secondary market (i.e. debt securities bought from other investors). This is a distinction without much of a difference in that a government could sell its debt to commercial banks who in turn were free to immediately resell it to the ECB. Draghi's testing of the Maastricht treaty's limits turned out more radical thanks to his now famous speech of July 26, 2012. Before an investment conference in London, he said: "the ECB is ready to do whatever it takes to preserve the euro".[75]

Negative market sentiment quickly reversed on this statement. Draghi subsequently backed this declaration with the Outright Monetary Transaction Program, under which the ECB commits itself to purchasing an unlimited amount of a nation's bonds so long as it seeks assistance from the European Stability Mechanism and abides by the latter's fiscal strictures.[76]

[74] David Enrich and Charless Forelle, "ECB Gives Banks Big Dollop of Cash", *The Wall Street Journal* (March 1, 2012), http://online.wsj.com/article/SB10001424052970203986604577252803223310964.html

[75] ECB, Verbatim of the remarks made by Mario Draghi Speech by Mario Draghi, President of the ECB. at the Global Investment Conference in London (July 26, 2012), http://www.ecb.int/press/key/date/2012/html/sp120726.en.html

[76] Lionel Barber and Michael Steen, "FT Man of the Year: Mario Draghi", *Financial Times* (December 13, 2012), http://www.ft.com/intl/cms/s/0/8fca75b8-4535-11e2-838f-00144feabdc0.html#axzz2GyOosli9

Though no country made such a request throughout the remainder of 2012, the mere announcement of the program altered market expectations so as to lower bond spreads. But as the Europe's economy continued to flounder, and as a calming of financial markets took pressure off the continent's politicians to push for further reforms, Draghi was impelled to up the monetary ante. In January 2015, he announced a massive scheme of QE, similar to what the US Fed had previously done, involving monthly bond purchases of €60 million until September 2016, for a total of €1.1 trillion.[77] As 2015 came to an end, this campaign was extended by six months to March 2017 for a revised total of €1.46 trillion.[78]

Arrayed against Draghi throughout his revolution of sorts was the President of the Bundesbank. In holding this office, Jens Weidman is also a member of the ECB's governing council. But as he merely represented one vote, he could do little to stop Draghi in trying to maintain the original intent of making the ECB into a continental version of the Bundesbank. Of course, in order for this intent to have been reversed at all, Draghi had to be appointed in the first place, which required the approval of the Eurozone's two leading powers, France and Germany. Given Draghi's background at Italy's central bank, it was widely surmised, and very much feared in conservative German quarters, that he would be less reluctant to press the monetary accelerator than Trichet had been. To Germany's political leadership, as opposed to its central bankers, Draghi must have appeared an attractive candidate by promising to lighten the hard task they were facing of having to convince their electorate of the need to harness their tax payments for the purposes of bailing out southern Europe. With this, the taxpayer versus tax consumer battle essentially took on a cross-border, and indeed a cross-cultural, dimension. As for France, given its traditional monetary stance, it would have had few qualms about Draghi. The only sticking point to his appointment wound up being their demand that an Italian member of the ECB's Executive board leave early to make

[77] European Central Bank, "ECB Announces Expanded Asset Purchase Program", (January 22, 2015), https://www.ecb.europa.eu/press/pr/date/2015/html/pr150122_1.en.html

[78] Hazel Sheffield, "Draghi extends quantitative easing: what the ECB decision means for savings and mortgages", *The Independent*, (December 3, 2015), http://www.independent.co.uk/news/business/news/mario-draghi-extends-quantitative-easing-what-the-ecb-decision-means-for-savings-and-mortgages-a6758876.html

room for a French replacement.[79] When all was said and done, this entire affair demonstrated that, though sitting governments may have to bide their time, the power to appoint central bank officials is a powerful tool at their disposal to swing monetary policy in their preferred philosophic direction.

The euro had to be taken to the brink, but France succeeded in disarming Germany's atomic bomb. France should credit the workings of democracy for this—both within the countries making up the Eurozone and within the governance structure of the Euro itself.

[79] The Telegraph, "Mario Draghi appointed European Central Bank president", (June 24, 2011), http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/8596645/Mario-Draghi-appointed-European-Central-Bank-president.html

CHAPTER 8

It's All About the Money

The subtitle of this book is "Politically Skewed Financial Markets and How to Fix Them". As readers might have already noticed, I have so far been much more copious in expounding upon the first part of the subtitle and relatively sparse with suggestions related to the second. I have definitely been more preoccupied with the skewing of markets by politics than by the fixing of those markets. Partly this is because any account of the skewing necessarily involves a description of the numerous channels by which the state and the financial markets are linked and affect one another. This naturally prolongs the diagnostic side of the story. Thus, we saw how the maneuvering room that politicians have is constrained by the financial markets and how central banks increasingly act in response to significant moves in the stock market. We also observed a myriad of political phenomena that get assimilated into market prices, including elections, cabinet negotiations, legislation, interest group lobbying, and wars. Indeed, the very existence of the bond, stock, and derivative markets is only truly explicable in political terms. Many are the highways and byways passing between politics and finance.

Yet the reader may have also detected a note of fatalism running throughout the exposition of the political–financial nexus. The mutual influences between the two parts notwithstanding, the political fact of democracy structures that whole nexus. So when the resulting array of connections are distorted in ways that undermine the common good, it is not simply

G. Bragues, *Money, Markets, and Democracy*,
DOI 10.1057/978-1-137-56940-0_8

a particular policy, institution, or narrow set of interests that is to blame. It is democracy itself—the political regime that defines the architecture governing most of the world's financial markets, if not almost all the leading markets. Since democracy is not something we want to abandon—it being humanity's best option to advance personal freedom, dignity, and flourishing—my account does admittedly conduce to a sense of resignation before the ingrained tendencies of popularly elected government. Such a frame of mind is not fertile ground for the suggestion of fixes.

I confess my susceptibility to this temptation of accepting what democracy has impressed upon the financial markets. My lack of forthcomingness with solutions up to now can be taken as a tacit manifestation of that fatalism. But it is a feeling that must be resisted.

Checking Democracy

It must never be forgotten that the forces impinging on the markets from democracy are propensities, not necessities. These propensities may be a part of democracy's DNA, yet just like the genetically encoded traits of human beings, the expression of those propensities may be constricted and modulated given the appropriate environment. Not only that, democracy is capable of containing a mix of elements from other regimes and still remain, for all intents and purposes, a democracy. Such a mix was envisioned by America's founders in setting up a democracy with, to name just one feature, an unelected Supreme Court to judge the constitutional validity of laws passed by the elected representatives of the people. A similar inclusion of a non-democratic ingredient is financially manifest today with the powers allotted to central banks, such as the US Federal Reserve and the ECB. As was noted before, the people who control the levers of money—the linchpin of our entire financial system—are not elected, but appointed. Once placed in those offices, central bankers are not easily dislodged during their comparatively long terms. Not to be overlooked either is the large wing of the administrative state made up by the plethora of financial market regulatory bodies. In making and enforcing rules in place of an elected branch of government, what are these regulators but an aristocracy run by tenured bureaucrats?

The difficulty, though, is that these deviations from democracy are themselves the natural outcome of democracy. With everyone influenced by the mores of individualism to rely upon themselves in fending for their interests, with usually only a few friends and family on their little social

platoons to help them, people harken to the state to shield them from the commotions and upheavals of commercial life. By this prescient observation made over a century and a half ago, Alexis de Tocqueville perceived how democracy gives way to the administrative state. The same impulse lies behind the existence of a central bank. So too, as was elaborated before, the discretionary authority that the central bank wields is the result of a tax consumer versus taxpayer dialectic in democracies that impels governments to assume control over the money supply. The welfare state, brought about by the class conflict between tax consumers and taxpayers, demands a central bank at the ready to print money in order to help fund the mass of expenditures. Yet the financial regulatory apparatus along with the central bank are precisely what have to be tamed. And that requires measures that do not sit well in democracies.

If only to avoid contradiction, therefore, one cannot simply lay out the ideal set of arrangements between the state and the financial markets—and then call that a fix. As a logical matter, certain polity preferences do narrow the items that can be chosen from the full menu of economic alternatives. Thus, a strong case can be made that the mandated disclosure required of public companies by securities regulators does little to help investors. Better it would be if disclosures were made voluntary in accord with shareholder demands for them. But this policy change is not coming anytime soon to a democracy near us. No doubt, too, that restrictions on short selling impede the market's ability to correct overpricing in stocks and ferret out corporate wrongdoing. When such restrictions inhibit the naked short selling of CDS, they hinder markets from holding governments accountable for their fiscal mismanagement. Alas, one cannot feasibly propose that democratic governments, or any other governments for that matter, forswear entirely the imposition of short selling constraints. During a sharp downturn in prices, if at no other time, such a measure will look too seductive for politicians to resist as a means of stabilizing the market—or at the very least, as a means of giving the appearance of doing something. It would be preferable as well if governments were to get out of the business of encouraging residential mortgage finance. Bond markets would no longer be the scene of mayhem whenever a mass of people with low credit ratings cannot make their payments. But housing is too important an asset in people's estimations for anyone to expect democratic governments to exempt it from the imperative of promoting equality.

One can go on listing the compromises that have to be made in a democracy. No group of public officials empowered to oversee the risk

being taken by financial players, whether in the form of derivatives or some other chancy instruments, can be expected to spot even a few of the landmines that may be lying in the vast and deep terrain of financial markets, much less disarm them before they explode. Given our ever growing technological prowess, reams of financial data can surely be delivered to the government's computers. Still, no matter how much data public officials have, they cannot be expected to have the knowledge necessary to preserve market stability. Such knowledge would have to come from connecting all the widely dispersed dots amid the infinitude and intricacy of information generated by our mammoth marts of finance. More critically, those relatively few individuals watching the markets from the commanding heights of the state are not likely to have the fortitude to go against the weight of prevailing opinion during boom periods. William McChesney Martin famously stated that the Fed's job is to, "take away the punch bowl just when the party gets going".[1] One can certainly debate whether Martin always kept to his own maxim during his tenure at the Fed from 1951 to 1970. What cannot be debated is that party poopers with the requisite timing have been a rare species in government. Yet the prospect of having nobody superintending the financial scene is what no democratic public will permanently brook. We shall have to live with the likes of the SEC and CFTC, as well as the newly formed Financial Stability Oversight Council.[2] And, yes, currency prices managed so as to further the interests of politicians and favored industries get in the FX market's way of facilitating trade and economic co-operation across borders. Floating exchange rates do not help either in constraining governments from deliberately cheapening their currencies to avoid difficult economic reforms. But a call for fixed exchange rates is like asking for sandals to walk in the snow. It can be done for a while, but it is not bound to last. Politically siding with democracy economically means accepting less than optimal policies in the financial markets.

[1] Though this sentence is often attributed to Martin, what he actually said was less pithy: "The Federal Reserve … is in a position of the chaperone who has ordered the punchbowl removed just when the party was really warming up". See William McChesney Martin, "Address of Wm. McC. Martin Jr., Chairman Board of Governors of the Federal Reserve System before the New York Group of the Investment Bankers Association of America", October 19, 1955, https://fraser.stlouisfed.org/docs/historical/martin/martin55_1019.pdf

[2] US Department of the Treasury, "Financial Stability Oversight Council", https://www.treasury.gov/initiatives/fsoc/about/Pages/default.aspx

The Gold Lever

What, then, do the circumstances of democracy permit? Whenever one is operating under substantial constraints, a potent method to alter the situation at hand is to identify a lever. Of the several levers that may come to sight, the key is to pick the one that, if pulled, will create the greatest outsize effect. If I have argued my points clearly in this book, the reader will know what lever to target in the financial order: money. We must attack the problem at the atomic level of finance. Change the way we manage money and we change the entire architecture of the financial markets. Change the money correctly and the financial markets will be in a better position to promote the common good—better than they can nowadays, hobbled and distorted as the markets are by the proclivities of democracy. It is no coincidence that the one part of this book where I gave the most effort to elaborating a fix for what ails us in the politico-financial sphere was in articulating the historical alternative to our current fiat monetary regime. That alternative is what I referred to as the natural approach to money, its most practicable expression today being the gold standard. This is what should constitute the lever that is money.

Think of what the financial markets would be like were gold to be restored to its place as the foundation of our money. Assuming the world's major economies adopted the yellow metal, a durable system of fixed exchange rates would encourage global trade. No longer would the currency market be a scene of international tension, with nations influencing their respective currencies to gain an illusory economic advantage at others' expense. The currency market would perform its proper role of enabling mutual gains from trade among the diverse peoples of the world. A huge hoard of financial capital presently earmarked to prophesying the direction of FX rates could be released to meet more authentic human needs and wants. So too with all the people—what some economists like to refer to as human capital—currently applying their minds and energies to the job of currency market speculation. With no wild zigzags and predominant trends in the FX markets to hedge against, there would be little reason to create and trade derivative contracts based on currencies. What is more, there would be a lot less reason to trade derivatives based on interest rates, which as we saw is by far the largest segment of that market. Interest rate derivatives would lose much of their purpose for existence in a gold standard universe where governments could no longer create money to suit their political convenience. Among lenders, the uncertainty would be gone

surrounding how much inflation might erode the purchasing power of the money they are supposed to get back. The volatility of interest rates would decline accordingly as would derivatives trading related to those rates. After all, derivatives live on volatility; it is the oxygen they breathe.

In the end, derivatives markets would mostly retrench to a version of their earlier selves. They would once again be locales where individuals and firms go to hedge their exposure to commodities. Rather than seeking protection from politically constructed hazards, people would be mostly trading futures, options, and swaps on things like corn, wheat, soybeans, cotton, sugar, and oil to insure themselves against nature's limits and whims. At most, among the large medley of financial derivatives that emerged after the monetary tie to gold was completely abolished in 1971, the only instruments apt to remain active would be those based on equities. Remember that a stock price is always the present (or time discounted) value of a company's expected dividends. As such, the stock market is in the business of forecasting future profitability. Given how enshrouded the future is to the human mind, stock prices would continue to exhibit volatility even where money was backed by gold. A precious metal support would not stop expectations about companies from having to be continually reassessed in the face of newly incoming information.

But at least this volatility, deriving from the unpredictability of upcoming events, would not be compounded. When a democratic state, via a central bank, has discretion over the money supply, political incentives drive its functionaries to engender booms and bust. At even the slightest sign of an economic slowdown, the central bank is apt to inject liquidity into the financial system. Before this added money finds its way into the economy, it enters the stock market. There, traders and investors use the new funds to bid up share prices. Later, once those funds have been gushing for some time throughout the entire economy, the buoyant scene is brought to ground by its own contradictions—whether because the bad investments entered into amid the upswing come to be recognized as bad, or because a developing threat of inflation leads the central bank to tighten monetary policy, or because of a combination of both. The stock market, which will usually see this denouement coming months in advance, falls. Thus are bull and bear market cycles produced by the state's rule over money—or if not produced, exacerbated by the state, for one cannot eliminate the possibility that psychological forces by themselves can provoke bull and bear market sequences. Investors could still converge and oscillate around a single theme, alternating their visions of the future between hope and

fear. Still, it is hard to comb the history of financial manias and find one that was not preceded by easy money and credit.[3] Investors cannot so easily translate their enthusiasm into escalating share values if they are not lavishly furnished with the monetary stuff to buy stocks. This prospect, at least, a gold standard can forestall.

From this drop in volatility, there would likely ensue a fall in the demand for financial market regulation. To repeat, the historical pattern has generally been for the level of regulation to remain steady for long periods, but then suddenly lurch up after a stock market boom spectacularly collapses. The popping of the bubble jolts the existing equilibrium of political forces, suddenly lifting those advocating for greater state influence in the markets. These groups gain influence precisely because the demand for state action rises among the public. To the extent that a more solid monetary anchor can dampen market instability, it lowers the demand for government intervention. Simply arguing that the prevailing supply of government services in financial markets does not serve the public interest is never going to succeed in quenching periodic surges in demand for those services. A more effective strategy is to strike at the very source of the desire for more government involvement. By stifling big market swings, a gold-defined money promises to do just that. Then, too, the passage of time with relative market calmness will erode people's memories of violent market fluctuations and make them forget why they ever wanted regulation at all. Were matters to reach this stage, one could justifiably hope that all the arguments against the state's meddling into markets would gain a larger and more respectful hearing. Admittedly, it would be too much—to adopt a line from Karl Marx—to expect a withering away of the state vis-à-vis financial markets. We will still be living in a democracy, one hopes. Yet the possibility can be held out of a monetary reinstallation of gold leading to a chipping away of the state's presence in the constellation of finance.

In opposition to the scenario I have outlined, a dissenter might retort that I have chosen the wrong lever to bring it about. Whether or not equating money to gold will improve matters, the fact remains that, according to my very own account, democracy is not predisposed to welcome the yellow metal back into its financial fold. Has it not been my contention that democracies are naturally liable to spending more on tax consumers

[3] Charles Kindleberger and Robert Z. Aliber, *Manias, Panics and Crashes: A History of Financial Crises*, 6th edition (Palgrave Macmillan, 2011), 62–83.

than what they are willing to take from taxpayers? The bond market, in its quest for safe returns, fortifies this democratic addiction to deficits by its willingness to buy up the government's IOUs. Thus does the public debt rise inexorably within the government bond market complex. Were it not for this debt, the bond market would be markedly smaller and much less of a political factor than it is today. It would be more appropriately occupied with tending to the financing needs of private enterprise. Despite all the trillions of dollars at its command, however, the bond market cannot satiate democracy's urge to spend beyond its means. Consequently, a paper standard—what I have called the artificial approach to money—serves as a handy debt financing supplement to the bond market. Hence, the question is raised: why would any democracy take up gold again and thereby limit its financial options? Why give up its money-making machine?

To answer that, let us think first at the level of the individual. People often impose constraints upon themselves. A writer might disable the Internet on their computer while they work on an important essay. A gambler might tell a casino to prevent them from playing on the gaming tables. The classic literary example of this kind of self-shackling occurs in Homer's *Odyssey* during a scene where Odysseus is approaching an island where mermaid sirens are known to live.[4] Wanting to hear the sirens sing, but not wanting to be enticed into following them into his own ruin, Odysseus ties himself to the mast of his ship. He tells his sailors, whose ears he has blocked with beeswax, not to release him no matter how much he pleads. His stratagem works; Odysseus does not succumb to the sirens. Though not so dramatically as Odysseus did, people commonly restrict their freedom to better fasten themselves against short-term impulses whose fulfillment would work against their long-term interests. It is likewise at the political level. Constitutions are the principal manifestation of this, their provisions effectively representing various fetters that governments have imposed upon themselves to confine their actions. When it comes to liberal democracies, constitutions are meant to hinder majorities from sacrificing individual rights, whether to political expediency, momentary passions, or the interests and prejudices of the largest social groups.

Does this mean we should include a balanced budget requirement as part of every democracy's constitution? This idea has certainly been

[4] Homer, *The Odyssey of Homer*, S.H. Butcher and A. Lang, Trans. (New York: P.F. Collier and Son Company, 1909), 173–174.

floated. Indeed, a political movement is currently afoot in the USA to convene a constitutional convention with the aim of inserting a balanced budget amendment.[5] Yet one of the contentions of this book is that democracies are so strongly inclined to fiscal prodigality that they overrun any institutional barriers standing in their way. The gold standard was one of those barriers. Another one was the Maastricht Treaty that brought the Euro into being. Not only did that treaty restrict Eurozone nations from running deficits greater than 3 % of GDP, it prohibited the ECB from purchasing government bonds to help a country finance its debt. Both those provisions were broken. In both cases, the enforcement of the treaty was abandoned by politicians because, ultimately, it was felt that the public would not tolerate the economic consequences. It bears reiterating here in the conclusion what was said by way of definition in the introduction of this book: democracy is the rule of the many. There is no way of getting around this political reality in attempting to tie the majority's hands. A system of checks and balances can only restrain the populace for so long. Eventually, if they are determined and persistent in asserting their desires, the public gets what it wants.

No real fix, therefore, to the democratic skewing of our financial markets will be possible until a profound shift in public opinion takes place about the essence of money. The people will need to be persuaded that money is rightly founded upon gold. We need not, as some of gold's detractors imply would be necessary, erect a monetary version of Plato's noble lie and endow the precious metal with a cosmic and sacred significance so as to elicit feelings of reverence and faith from the public. We can more humbly appeal to people's intellects. Besides the positive scenario drawn here of a more stable and circumscribed financial system, there is much to recommend the anchoring of money in gold. It has the advantage of being a tangible and more readily understandable basis of exchange value than the paper and electronic records of the status quo. Where the supply of money is regulated by the quantity of gold, no unelected group of policymakers need be empowered to control interest rates for the community. In this respect, the gold standard is more consonant with democracy than a central bank's management of the currency.

[5] David Sherfinski, "Backers of Constitutional Convention Stepping up Campaign", *The Washington Times*, (August 12, 2015), http://www.washingtontimes.com/news/2015/aug/12/constitutional-balanced-budget-amendment-support-g/?page=all

History, too, provides a well-documented record of the state's propensity to abuse its authority over money. The state's demonstrated modus operandi is to transfer purchasing power to the beneficiaries and supporters of those wielding its coercive power, all this to the detriment of the wider community. Heeding this historical lesson, our democracies originally lent institutional substance to the dangers of paper money by favoring a metallic-based currency. For just over a century, this lesson was preserved as more democracies appeared on the global political map, reaching its apotheosis in the classical gold standard system. From 1871 to 1914, that system kept inflation at bay much better than anything that came after it, in addition to delivering impressive economic growth. Despite the tensions between gold and democracy, history does show that the two can coexist. This possibility must become more widely appreciated. Otherwise, our democracies will continue to swell the weight of financial markets in society, their full potential as a force for good unrealized.

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