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Systemic Uncertainty: An Examination of Its Causes and Repercussions

Abstract

This paper examines the nature of systemic uncertainty and the character of public policy which causes it by analyzing two time periods as case studies of how systemic uncertainty is generated by public policy choices. I analyze financial data and polling data for evidence of systemic uncertainty to identify the form of public policy and political leadership which results in the occurrence of uncertainty. My findings suggest that systemic uncertainty is generated by a lack of commitment to the protection of private property and/or a willingness to arbitrarily implement changes to the tax and regulatory structure in the future.

Keywords

Uncertainty Theory, Public Policy

As world leaders seek out solutions for the mounting economic problems which seem to insurmountably beset their fragile economies, it seems only natural to inquire as to the causes of this prolonged economic malaise. One of the most common explanations identifies low government expenditures as the culprit, but after three successive years in which the United States federal government budget has accounted for 40% or more of GDP, at the cost of rapidly escalating levels of federal debt, the likelihood of this hypothesis has been cast into doubt. Another school of thought, pioneered by Robert Higgs to explain the duration of the Great Depression, places the onus of responsibility upon the arbitrary actions of policy makers that instilled a “pervasive uncertainty among investors about the security of their property rights in their capital and its prospective returns.”¹ This paper will proceed along similar lines to analyze a broader spectrum of U.S. economic history, assessing why systemic uncertainty is evident in certain economic periods and which environmental conditions tend to create it.

Theoretical Foundations of Systemic Uncertainty

The analysis of systemic uncertainty arising from environmental factors within the political structure has become a popular topic since North and Thomas² posited their transaction-cost theory of economic history to explain the rise of the western world. According to those authors, economic growth is made possible through the “development of an efficient economic organization ... [which] entails the establishment of institutional arrangements and property rights that create an incentive to channel individual economic effort into activities that bring the private rate of return close to the social rate of return.”³ Since then, a large body of theoretical and empirical work has been dedicated to explaining and quantifying the relationship between certain environmental conditions created by government and the level of economic growth, with the basic propositions advanced by North and Thomas receiving a great deal of support.⁴

In a way, North and Thomas’s work anticipated Higgs’ regime uncertainty principle, identifying the primary theoretical links between the political structure and economic growth as uncertainty and rent-seeking behavior. This paper will

¹ Robert Higgs, “Regime Uncertainty: Why the Great Depression Lasted So Long and Why Prosperity Resumed after the War,” *The Independent Review* 1, no. 4 (1997): 561-590, 563.

² Douglass North and Robert Thomas, *The Rise of the Western World: A New Economic History* (Cambridge, MA: Cambridge University Press, 1973).

³ *Ibid.*, 1.

⁴ See Silvio Borner, Aymo Brunetti and Beatrice Weder, *Political Credibility and Economic Development* (New York: St. Martins Press, 1995); Mancur Olson, 1996, “Big Bills Left on the Sidewalk: Why some nations are rich and others poor,” *Journal of Economic Perspectives* 10 (1995): 3-24; World Bank, *The State in a Changing World* (New York; Oxford University Press, 1997).

focus on the first of those theoretical links, but the second is deserving of tangential acknowledgement, as it is a by-product of the activities of government that Higgs identifies as causing uncertainty.⁵ When government's commitment to private property declines, it is natural for individuals to advance and/or protect their interests by rent-seeking behavior, lobbying government officials and engaging the public policy process, activities which Henisz describes as, "at best, zero sum."⁶ Hence rent-seeking behavior may be viewed as a response to, or symptom of, systemic uncertainty, as individuals attempt to mitigate the level of uncertainty by influencing policy makers, and is sometimes used as a part of quantitative models of uncertainty.

Thus the primary causal nexus is the uncertainty principle which Higgs so aptly captured. Fundamentally, the problems of uncertainty are related to government expropriation of private property, or the threat of such expropriation, or of arbitrary tax or regulatory regime changes, all of which discourage market participants from engaging in normal profit-seeking behavior. This form of uncertainty is not simply caused by the government's lack of commitment to private property rights, but by the inability of market participants to ascertain what type of regime will exist in the future. As Stasavage writes, "If a firm fears that a government will have an incentive to make ex post changes in taxes or regulations, it may prefer to delay or cancel a proposed project."⁷

When the character of a nation's governance undermines the trust of investors, the trust which makes them sure of their possessions, there are a number of adverse impacts. First of all, it stifles private investment, for when firms and individuals react to uncertainty, it fundamentally alters their willingness to risk assets in the present. Thus any theory of private investment that neglects to include political environmental factors will not be able to fully explain the behavior of investors.⁸ Similarly, economic growth can't simply be understood as the inevitable progress of market economies, but rather as the direct result of the development of institutional structures that support social and commercial profit-maximizing relationships by protecting private property and establishing a system

⁵ Robert Higgs 1997, 567.

⁶ Witold Henisz, "The Institutional Environment for Economic Growth," *Economics and Politics* 12, no. 1 (2000): 1-31, 4.

⁷ David Stasavage, "Private Investment and Political Uncertainty," *London School of Economics Discussion Paper No. DEDPS 25* (2000): 1-37, 1.

⁸ *Ibid.*, 1; Joseph Schumpeter, *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process* (New York: McGraw Hill, 1939); and Robert Pindyck, "Irreversibility, Uncertainty, and Investment," *Journal of Economic Literature* 29 (1991): 1110-48, 1141.

to enforce contracts and resolve disputes.⁹ Without such a commitment to property rights and the rule of law, private investment will be repressed, to the detriment of the national economy as a whole.¹⁰ Gilchrist, Sim and Zakrajsek (2009) find that increases in uncertainty lead to an increase in the cost of capital, through an increase in bond premia, which negatively impacts private investment.¹¹ Similarly, Arellano, *et al*, show that increases in uncertainty lead to downsizing of investment projects to avoid default.¹²

The wariness of investors to risk their capital under conditions of political uncertainty not only negatively impacts the magnitude of private investment, but also has a severe distortionary impact on the rates investors demand, the instruments they use, and the time-frames for which they are willing to part with their funds. When faced with systemic uncertainty, investors demand higher rates, especially for long-term capital outlays, and use financial instruments to mitigate their downside risk. This can be clearly seen in the yield curve for corporate bonds, which develop wide gaps between the nominal returns to different maturities.¹³ Thus resources are allocated away from the long-term investment opportunities that are necessary for the growth of the capital stock. This inter-temporal distortion is only compounded in economies that rely on entrepreneurial individuals to drive economic growth.¹⁴

Resources may also be diverted towards derivative instruments that are designed to mitigate uncertainty. When investors are faced with uncertainty, they can control their downside risk by exercising a “wait-and-see” strategy,¹⁵ using options as a hedge. The prices of options are subject to the supply of, and demand for, these instruments, thus theoretically, a sudden increase in the uncertainty felt by investors could be observed in an increased demand for, and a subsequent

⁹ Douglass North, *Institutions, Institutional Change and Economic Performance* (New York: W.W. Norton & Company, 1990); Henisz, “Institutional Environment,” (2000), 2; Peter Klein, “New Institutional Economics,” in *Encyclopedia of Law and Economics*, eds. B. Bouckeart and G. De Geest (Cheltenham, UK: Edward Elgar, 2000): 456-89, 458; and Peter Klein and Hung Luu, “Politics and Productivity,” *Economic Inquiry* 41, no. 3 (2003): 433-47, 433.

¹⁰ Pindyck, “Irreversibility, Uncertainty, and Investment,” (1991): 1141.

¹¹ Simon Gilchrist, Jae Sim and Egon Zakrajsek, “Uncertainty, Financial Frictions, and Investment Dynamics,” mimeo Boston University Department of Economics (2010): 1-43.

¹² Cristina Arellano, Yan Bai and Patrick Kehoe, “Financial Markets and Fluctuations in Uncertainty,” *Federal Reserve Bank of Minneapolis, Research Department Staff Report* (2010).

¹³ Higgs, “Regime Uncertainty,” (1997): 583.

¹⁴ Lee Alston, Thrainn Eggertsson, and Douglass North, introduction to *Empirical Studies in Institutional Change*, eds. Lee Alston, Thrainn Eggertsson, and Douglass North (New York: Cambridge University Press, 1996), 4.

¹⁵ Nicholas Bloom, “The Impact of Uncertainty Shocks,” *Econometrica* 77, no. 3 (2009): 623–685.

increase in the price of, derivative instruments. Dreschler writes, “the prices of index options are sensitive to investors' level of uncertainty,” indeed, “options provide a hedge to variation in the level of uncertainty itself.”¹⁶ When the increased demand for derivative instruments is artificially inflated by government intervention, at least a portion of the resources directed to that purpose are no longer profit-maximizing and can be observed in the general price trend of these instruments.

Furthermore, the lack of political constraint on government officials complicates the entrepreneurial forecasting that is essential for the successful creation of new production structures and consumer goods. While the majority of the literature on this topic focuses on the impacts systemic uncertainty has on investors, the analysis can be easily extended to entrepreneurs. The causal-realist school has developed a rich understanding of the entrepreneur through the works of Mises¹⁷, Rothbard¹⁸, *et al.* In summarizing this body of literature on the entrepreneurial role, Peter Klein¹⁹ writes, “The entrepreneurial function has been characterized in various ways: judgment (Cantillon, 1755; Knight, 1921; Casson, 1982; Langlois and Cosgel, 1993; Foss and Klein, 2005), innovation (Schumpeter, 1911), adaptation (Schultz, 1975, 1982), alertness (Kirzner, 1973), and coordination (Witt 1998).”²⁰ A discussion of these various definitions is beyond

¹⁶ Itamar Dreschler, “Uncertainty, Time-Varying Fear, and Asset Prices,” *Wharton School of Business* (2009): 1-68, 1.

¹⁷ Ludwig von Mises, *Human Action: A Treatise on Economics* (Auburn, AL: Ludwig von Mises Institute, 1998).

¹⁸ Murray Rothbard, *Man, Economy, and State: A Treatise on Economic Principles* (Princeton, NJ: Van Nostrand, 1962).

¹⁹ Peter Klein, “Opportunity Discovery, Entrepreneurial Action, and Economic Organization,” *Strategic Entrepreneurship Journal*, forthcoming (2008): 1-33, 4.

²⁰ Richard Cantillon, 1755. *Essai sur la nature de commerce en general*, Henry Higgs, ed. (London:

Macmillan, 1931); Frank Knight, *Risk, Uncertainty and Profit* (New York: August M. Kelly Publishing, 1964); Mark Casson, *The Entrepreneur: An economic Theory* (Oxford: Martin Robertson, 1982); Richard Langlois and Metin Cosgel, “Frank Knight on Risk, Uncertainty, and the Firm: A New Interpretation,” *Economic Inquiry* 31 (1993): 456–65; Nicolai Foss and Peter Klein, “Entrepreneurship and the Economic Theory of the Firm: Any Gains from Trade?” in *Handbook of Entrepreneurship Research: Disciplinary Perspectives*, Rashjree Agarwal, Sharon A. Alvarez, and Olaf Sorenson, eds., (Dordrecht: Springer, 2005); Joseph Schumpeter, *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle* (Cambridge, MA: Harvard University Press, 1911); T.W. Schultz, “The Value of the Ability to Deal with Disequilibria,” *Journal of Economic Literature* 13 (1975): 827–46; T.W. Schultz, “Investment in Entrepreneurial Ability,” *Scandinavian Journal of Economics* 82 (1982): 437–48; Israel Kirzner, *Perception, Opportunity and Profit: Studies in the Theory of Entrepreneurship* (Chicago: University of Chicago Press, 1979); Ulrich Witt, “Imagination and Leadership: the Neglected Dimension of an Evolutionary Theory of the Firm,” *Journal of Economic Behavior and Organization* 35 (1998): 161–77.

the scope of this paper,²¹ but suffice it to say that the theme that runs throughout is the intimate connection between entrepreneurs and uncertainty.

Entrepreneurial success is determined by the ability of the entrepreneur to predict future market conditions and find a combination of productive factors that can best satisfy those conditions. As Mises writes, “The ultimate source from which entrepreneurial profit and loss are derived is the uncertainty of the future constellation of demand and supply,”²² echoing Cantillon, who wrote that, “Entrepreneurs work for uncertain wages.”²³ Knight (1964) used this conception of model uncertainty to link entrepreneurial judgment to profit and loss (1964, 271).²⁴ Thus arbitrary government policies increase the model uncertainty facing entrepreneurs and hamper their ability to engage in economic calculation and ascertain profitable opportunities.

Thus the adverse impacts of government induced uncertainty include both the dead weight loss of resources allocated to non-profit-maximizing activities and the opportunity cost of new products and inventions stifled by the high degree of uncertainty facing entrepreneurs. Using this theoretical foundation, economists have used a wide array of formal models to simulate the relationship between politically generated systemic uncertainty and economic behavior. The most common practice is to create an index or proxy for political constraints and/or economic freedom that captures the commitment of the political structure to property rights and the degree of institutional restraints.²⁵ Such models have found political constraints to have a highly significant effect on GDP,²⁶ lagged GDP growth,²⁷ productivity,²⁸ and private investment.²⁹ However, as noted by Henisz (2000), many of these indexes lack a theoretical connection to the

²¹ See Klein, “Discovery, Action, and Organization,” (2008).

²² Mises, *Human Action* (1998), 291.

²³ Richard Cantillon, *Essai sur* (1755), 54.

²⁴ Frank Knight, *Risk, Uncertainty, and Profit* (New York: August M. Kelly, Bookseller, 1964), 271.

²⁵ Henisz, “Institutional Environment,” (2000), 4-5.

²⁶ See Rudiger Dornbusch, “Policies to Move from Stabilization to Growth,” *Proceedings of the 1990*

World Bank Annual Conference on Development Economics (1991): 19-48; Kevin Murphy,

Andrei Shleifer and Robert Vishny, “The Allocation of Talent: Implications for Growth,”

Quarterly Journal of Economics (1991): 503-530; Dani Rodrik, “The Positive Economics of Policy Reform,” *American Economic Review* 83 (1993): 356-361.

²⁷ See Robert Barro, “Economic Growth in a Cross Section of Countries,” *Quarterly Journal of Economics* 106 (1991): 407-43; Henisz, “Institutional Environment,” (2000).

²⁸ See Klein and Luu, “Politics and Productivity,” (2003).

²⁹ See Stasavage, “Private Investment and Political Uncertainty,” (2000); Brandon Julio and Youngsuk Yook, “Political Uncertainty and Corporate Investment Cycles,” *Journal of Finance*, forthcoming (2010).

commitment to private property that rests at the heart of the systemic uncertainty problem (2000, 5).

Economic Recessions and Evidence of Systemic Uncertainty

Into the muddled waters of this empirical literature, Higgs (1997) used polling data and evidence from financial markets to analyze what he coined, “regime uncertainty.” This paper will expand on that analysis, applying similar logic and augmented evidence to several periods of economic malaise since the Great Depression, looking for the sources of observed systemic recession. The first task is thus to determine the periods for analysis. The National Bureau of Economic Research’s (NBER) Business Cycle Dating Committee (2010) provides us with an excellent starting place. According to the NBER, there have been ten periods of economic recession since the Great Depression, where they define a recession as a substantial drop in economic activity for a prolonged duration and across a widespread area, visible in the fluctuations of real GDP, real income, employment, industrial production, and wholesale-retail sales. The NBER table can be seen below. For the purpose of comparison, I’ve chosen two time periods for analysis: March 2001 - Nov. 2001 and Dec. 2007 - June 2009. The rationale behind this choice is that the character of government leadership over those periods varied from President Bush to President Obama, and thus gives us the best glimpse at how the character of government and the commitment to property rights impacts systemic uncertainty.

Peak	Trough		Contract- ion	Expansion	Cycle	
<i>Quarterly dates are in parentheses</i>			<i>Peak to Trough</i>	<i>Previous to this peak</i>	<i>Trough from Previous Trough</i>	<i>Peak from Previous Peak</i>
July 1953(II)	May 1954	(II)	10	45	55	56
August 1957(III)	April 1958	(II)	8	39	47	49
April 1960(II)	February 1961	(I)	10	24	34	32
December 1969(IV)	November 1970	(IV)	11	106	117	116
November 1973(IV)	March 1975	(I)	16	36	52	47
January 1980(I)	July 1980	(III)	6	58	64	74
July 1981(III)	November 1982	(IV)	16	12	28	18
July 1990(III)	March 1991	(I)	8	92	100	108
March 2001(I)	November 2001	(IV)	8	120	128	128
December 2007 (IV)	June 2009	(II)	18	73	91	81

Source: National Bureau of Economic Research, Inc. “U.S. Business Cycle Expansions and Contractions,” *NBER.org*, < <http://www.nber.org/cycles.html> > Accessed Dec. 2, 2011.

Departing from the proper chronological order, we begin with an analysis of the polling data surrounding the most recent financial collapse, aided by the relative recentness of the polling data available and the multitude of different indexes provided by business research groups. Looking at the polling results, the intense ideological debate which characterized the 2008 election provides the most striking example of systemic uncertainty since Roosevelt's New Deal. Early evidence of this can be found in a September 2008 poll conducted by *Chief Executive Magazine*,³⁰ which found that an astounding 74% percent of CEOs polled "feared" an Obama presidency. That poll found that then-candidate Obama's tax policies scored the lowest in overall approval, though his stances on regulatory policy scored a close second. As president, Obama has not fared any better. A 2010 Bloomberg survey of 873 of its subscribers, conducted by Selzer & Co., found that 77% of the business and financial leaders surveyed believed Obama to be too anti-business. One respondent, David Young, a managing director for a broker dealer in New York, said, "Investors no longer feel they can trust their instincts to take risks."³¹ Participants in that poll cited Obama's efforts to trim bonuses and earnings, make health care his top priority over jobs, and plans to tax rich "fat cats," as primary sources of their uneasiness.³²

The lack of confidence in President Obama's policies has coincided with a period of economic turmoil, the combined effect of which can clearly be seen in the polling numbers. The Business Roundtable and the *Chief Executive Magazine* each conduct regular surveys of business executives, which, though lacking in specificity, can be used to gauge the general sentiments of these industry leaders. Graph 1³³ plots the poll numbers of these indexes from 2003 - 2011, with various important dates marked. As Graph 1 indicates, business leaders were well ahead of the general population in foreseeing the coming economic collapse, at least in the *Chief Executive Magazine* CEO Index, and their confidence has not yet returned to a pre-recession level.

The problem with using these CEO Confidence Indices is that they incorporate the sentiments of business leaders on a wide array of issues; the economy as a whole, market demand, etc. Thus, for our purposes, more in depth information is necessary to identify with any degree of certainty what events led

³⁰ Chief Executive, "Job Creators Prefer John McCain 4-to-1 Over Barack Obama," *ChiefExecutive.net*, October 8, 2008, accessed December 9, 2011, <http://chiefexecutive.net/job-creators-prefer-john-mccain-4-to-1-over-barack-obama>.

³¹ Heidi Przybyla, "Obama Seen as Anti-Business by 77% of U.S. Investors," *Bloomberg.com*, Jan. 21, 2010, accessed Dec. 2011, <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a8UiI1bCRdmY>.

³² *Ibid.*

³³ See Appendix 1: Graphs for Graph 1 - 10.

to this prolonged lack of confidence. Higgs³⁴ lists the multitude of legislative enactments that characterized the New Deal to support his case, and while a similar list for the current time period is far shorter, its most notable members, the Patient Protection and Affordable Care Act (PPACA) and the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank), are each thousands of pages long with far-ranging economic impacts. Perhaps most importantly, however, each bill delegates unprecedented rulemaking authority to the federal bureaucracy, creating an estimated 159 new agencies, boards, commissions, and other entities.³⁵ As Gary Lawson writes about the healthcare reform act, “As is true of most modern legislation of any consequence, the PPACA is not so much a set of norms to regulate conduct as an authorization to administrators to produce norms to regulate conduct.”³⁶ According to the Federal Register’s website, Dodd-Frank has been the subject of 590 rules and notices, an unprecedented total only dwarfed by the PPACA, which has generated an astounding 1,313 rules and notices, about a third of which are still in the proposal and comment stage.³⁷

As was discussed earlier, the inability on the part of entrepreneurs to ascertain future market conditions because of arbitrary government intervention is one of the primary causes of uncertainty. And the survey responses of business leaders indicate that the PPACA and Dodd-Frank are creating this sort of uncertain business environment. Shortly after the 2010 midterm elections, the Midwest Business Group on Health conducted a survey of business leaders and found that 60% of their sample believed that the intent of the PPACA was to eliminate the current employer-based system of health care delivery and move to a single-payer system. 64% of all respondents indicated that they expected the PPACA to increase the cost of doing business, including 80% of employers from companies with greater than 500 employees.³⁸ Larry Boress, MGBH President and CEO said, “There remains a great deal of uncertainty among employers about

³⁴ Higgs, “Regime Uncertainty,” (1997).

³⁵ Grace-Marie Turner, *et al*, *Why ObamaCare is Wrong for America* (New York: HarperCollins, 2011).

³⁶ Gary Lawson, “Reviving Formal Rulemaking: Openness and Accountability for Obamacare,” *Heritage Backgrounder* no. 2585, July 25, 2011
http://thf_media.s3.amazonaws.com/2011/pdf/bg2585.pdf.

³⁷ *Federal Register.gov*, Accessed 12/5/2010 <http://www.federalregister.gov>.

³⁸ Midwest Business Health Group, “Key Findings of Employer Reaction to Health Reform-Post Election Survey,” Dec. 22, 2010,
[https://www.mbg.org/templates/UserFiles/Files/Key%20Findings%20of%20Dec%202010%20Survey%20of%20Employers%20Reacton%20to%20Health%20Reform\(2\).pdf](https://www.mbg.org/templates/UserFiles/Files/Key%20Findings%20of%20Dec%202010%20Survey%20of%20Employers%20Reacton%20to%20Health%20Reform(2).pdf).

how health reform will ultimately impact their efforts to provide health benefits for their employees.”³⁹

Additionally, business leaders remain skeptical that the lofty goals of the PPACA will be achieved. 86% of those surveyed by the MBGH responded that it’s unlikely the PPACA will reduce the rate at which health care costs are increasing, with 74% responding that the bill will actually increase costs faster than if it hadn’t been passed.⁴⁰ A McKinsey & Company poll of 1,329 private sector employers found that 36.6% of respondents currently offering employer-sponsored health plans would probably or definitely drop those plans after 2014 due to cost escalation. And the more a respondent understood about the PPACA, the more likely they were to drop their current plans, with 68.3% of respondents evidencing “high” awareness of the bill’s content responding that they’d either probably or definitely end employer-sponsored insurance.⁴¹ A similar poll of small business owners conducted by Discover Small Business Watch found that 47% of small business owners were considering ending their employee health coverage due to rising costs, and that 55% of small business owners favor repealing the PPACA altogether.⁴²

When it comes to Dodd-Frank, there is dissension among industry professionals about how the law’s different provisions will impact their financial strategies. The opinions of banking professionals and fund managers carry additional weight since their sentiments are directly tied to the amount of capital they are willing to invest on behalf of their clients, which forms a large share of the nation’s private investment. A poll conducted by Ernst & Young of brokerage firm compliance officers found that high percentages of respondents believed that the changes made by Dodd-Frank and the subsequent Financial Industry Regulatory Authority (FINRA) regulations authorized by that legislation, will have a “high impact” on their compliance costs.⁴³ 71.5% of the participants in that survey responded that the FINRA suitability requirements would have a high

³⁹ Larry Boress, qtd. in Jenny Ivy, “Reform takes aim at benefits, employers say,” *benefitspro.com*, Jan. 3, 2011, <http://www.benefitspro.com/2011/01/03/reform-takes-aim-at-benefits-employers-say>.

⁴⁰ MBHG, “Key Findings,” 3.

⁴¹ McKinsey & Co., “Employer Survey on US Health care Reform: Details regarding the survey methodology,” *mckinsey.com*, June 2011, www.mckinsey.com/Features/US_employer_healthcare_survey.

⁴² Discover Small Business Watch, “Discover Survey Finds Majority of Small Business Owners Favor Repeal of Health-Care Reform Law,” *InsuranceTechnology*, Jan. 18, 2011, <http://insurance-technology.tmcnet.com/news/2011/01/18/5251891.htm>.

⁴³ Ernst & Young, “Compliance perspectives on new regulations 2011,” *www.ey.com*, 2011 [http://www.ey.com/Publication/vwLUAssets/Compliance_Perspectives_on_New_Regulation_2011_FINAL/\\$FILE/Compliance_Perspectives_on_New_Regulation_2011_FINAL.pdf](http://www.ey.com/Publication/vwLUAssets/Compliance_Perspectives_on_New_Regulation_2011_FINAL/$FILE/Compliance_Perspectives_on_New_Regulation_2011_FINAL.pdf), 4.

impact on their compliance costs. A similar study conducted by Grant Thornton LLP, found that 91% of the bank CEOs, CFOs and audit committee members surveyed identified the burden of regulatory reform on their bank as the primary concern for their institution over the next 12 months.⁴⁴ In that study, 48% of respondents indicated that they believe Dodd-Frank will not be effective at all in detecting systemic risks to the financial industry.⁴⁵ A similar question posed to the attendees at Hedge Fund Association's Risk and Regulation Symposium found that 93% of the fund managers surveyed at the event, a somewhat biased sample due to the self-selected nature of the group, responded that Dodd-Frank would not prevent another market crash.⁴⁶

The common sentiment among financial and banking industry professionals thus appears to be a combination of doubt over Dodd-Frank's effectiveness and dismay over what they perceive to be a dramatic increase in their compliance costs. The additional oversight of derivative instruments and the elimination of proprietary trading have created a great deal of uncertainty regarding future profits. A survey of derivatives traders conducted by the TABB Group found that almost 90% of those surveyed believe that the Dodd-Frank will have a negative effect on their ability to make a profit, while about two thirds of the sample thought the act would erect steep barriers to entry in the market.⁴⁷

An interesting result of the polling on Dodd-Frank is that investors appear more pessimistic about the actual content of the law, and subsequent regulation. Compared to the PPACA, Dodd-Frank's language has been more definitely laid out and the negative reaction on the part of industry professionals seems to be primarily opposition to that language and the way in which it will negatively impact their business models.

Augmenting the polling evidence provided above, an examination of the financial data during the time period from 2007 - 2011 shows that private investment did/has not recovered to anywhere close to its pre-recession level. In the second quarter of 2006, real gross private investment was at \$2,263.1 billion and one year later it stood at \$2,193.0 billion. Then the financial crisis hit and

⁴⁴ Nichole Jordan, "Bank Executive Survey: Bankers' optimism rebounds amid concerns over Dodd-Frank," www.grantthornton.com, June 2011, accessed Dec. 8, 2011, <http://www.grantthornton.com/staticfiles/GTCom/Financial%20services/FSandFI%20files/Bank%20Survey/Grant%20Thornton%20LLP-Bank%20Director-18th%20Annual%20Bank%20Executive%20Survey.pdf>, 2.

⁴⁵ *Ibid.*

⁴⁶ Jing Chen, "Fund Managers Not Dodd-Frank Fans," www.hedgefund.net, Sept. 27, 2011, accessed Dec. 7, 2011, <http://hedgefund.net/publicnews/default.aspx?story=12914>.

⁴⁷ Kevin McPartland, "Credit and Rate Swap Dealers 2011: Redefined and Reborn," *Tabb Group.com*, Oct. 12, 2011 <http://www.tabbgroup.com/PublicationDetail.aspx?PublicationID=996>.

gross private investment dropped almost a trillion dollars to \$1,397.2 billion in the second quarter of 2009, the bottom of the investment trough, roughly three quarters after the failure of Lehman Brothers. And over the last two quarters, private investment has plateaued at around \$1.8 billion per annum, as can be clearly seen in Graph 2. Even if we remove residential investment from the data, and consider non-residential real private investment, we can still see that private investment, while on a steeper upward trajectory, is still well below the pre-recession levels.

Furthermore, the labor market in the U.S. has clearly not fully recovered, with the number of employed workers in all private industries still falling six million below its pre-recession level.⁴⁸ The employment aspects of both the *Chief Executive* and Business Roundtable CEO Confidence indices remain well below the broader index values, evidencing significant uncertainty within the labor market. A measure of evidence contrary to this position was obtained by the Federal Reserve Bank of Philadelphia's Business Outlook Survey⁴⁹, depicted in Graph 3, which surveys manufacturers in the Third Federal Reserve district. The diffusion indices, calculated as the difference in the percentage of manufacturers who have reported (present) or expect (future) employment increases and those who have reported or expect decreases, show that manufacturers in that sample have recovered to a greater extent than those surveyed by other studies. The difference among uncertainties generated within different industries may be an interesting area for further research, or perhaps this is capturing a geographical trend, but it is in disagreement with other survey data on business executives and has been used as the basis for several studies disputing systemic uncertainty.⁵⁰

There is also substantive evidence of continuing systemic uncertainty to be found in the market for corporate bonds. According to data obtained from the Board of Governors for the Federal Reserve System, the yield rates for 30-, 60-, and 90-day maturities of AA-rated non-financial corporate paper have differed from each by an average of .87%⁵¹ from 1997-2007, with two deviations to about a 10% difference between 30- and 90-day maturities in the summer of 2000.

⁴⁸ Robert Higgs, "U.S. Economic Recovery Remains Anemic, at Best," *The Beacon Blog*, Nov. 6, 2011, <http://blog.independent.org/2011/11/06/u-s-economic-recovery-remains-anemic-at-best>.

⁴⁹ Federal Reserve Bank of Philadelphia, "Business Outlook Survey," www.phil.frb.org, accessed Dec. 12, 2011, <http://www.phil.frb.org/research-and-data/regional-economy/business-outlook-survey/>.

⁵⁰ Rudiger Bachmann and Christian Bayer, "Uncertainty Business Cycles - Really?" *National Bureau of Economic Research*, Working Paper No. 16862 (2009); Rudiger Bachmann, Steffen Elstner and Eric Sims, "Uncertainty and Economic Activity, Evidence from Business Survey Data," *National Bureau of Economic Research*, Working Paper No. 16143 (2010).

⁵¹ The percent difference between non-financial AA-rate corporate paper of 30- and 90- day maturities averaged for every month during the years 1997 - 2007.

During the financial crisis, the percent difference between the yields on 30- and 90-day commercial paper reached an astounding 74.2%. Simultaneously, the difference between 30- and 60-day maturities also increased to 64.8%. Since that time, the difference between the rates-of-return has failed to return to pre-recession values, as can be clearly seen in Graph 4. While the stock market may have recovered much of the value it lost during the financial crisis, the steep yield curve exhibited by the difference between varied maturities of corporate bonds is compelling evidence that investors are uncomfortable with parting from their capital over long-periods without a much greater return on their investment.

The effect of uncertainty is even more pronounced in the market for AA-rated financial paper, see Graph 5, where the effects of the financial meltdown and the ongoing debt crisis in Europe is wreaking havoc on the ability of market participants to accurately forecast into the future. Thus in the financial sector, far from dissipating after peaking at a 69.9% difference between 30- and 90-day maturities in September 2009 and subsequently declining, the yield gap has been steadily trending back upward, reaching 57.14% in November of 2011, the latest month for which data is available.

Turning to the financial data on financial derivative instruments meant to transfer or mitigate risk, two of the most obvious instruments to examine are interest rate swaps, futures contracts, and options. Interest rate swaps can be used to mitigate risk exposure to interest rate fluctuations, among other functions, and thus under conditions of greater systemic uncertainty, the premium put upon long-term contracts increases relative to their shorter-duration counterparts. While much of the data on options and futures is proprietary, the Federal Reserve Board of Governors data contains the interest premium charged on interest rate swaps over the past decade, and as before, there is a clear difference between varying contract terms, see Graph 6. Prior to the financial collapse, interest rate swaps of 1- and 3-year were nearly on par, separated by only 1 - 6%. But through 2008, the interest rate swap differential has not fallen below 50% until August, 2011.

With the evidence from the current economic situation before us, let us turn our focus towards the smaller recession that the NBER data indicates during 2001, the first term of President Bush. The bursting of the so-called “dot com bubble,” caused a dramatic stock sell-off of internet companies and a period of GDP decline over the course of several months. As previously seen in Chart 1, business confidence reached and maintained high numbers from 2003 until the financial collapse discussed in the preceding pages. Yet President Bush’s first year in office was characterized by a stock market collapse, the September 11th attacks, and economic recession. According to the NBER numbers, the recession of 2001 lasted only eight months, but the stock market slump continued over

almost two-years, with the S&P Index dropping almost half of its value during that period. Private investment continued to slump through much of 2002, returning to its former upward trajectory at pre-bubble levels in 2003 - 2004.

Evidence from polling data surrounding that time supports the general assertion that President Bush was generally viewed as a “pro-business” president. During his reelection campaign, a Fortune Small Business poll found that 53% of entrepreneurs and small-business owners preferred President Bush to challenger John Kerry.⁵² The Duke University Fuqua School of Business and Financial Executives International conducted quarterly polls from 1998 - present, and their results indicate that though the economy was generally underperforming, large percentages of CFOs and CEOs remained confident that an economic rebound was imminent. Even during the height of the 2001 recession, quarter 3, the FEI survey found that a full 48% of respondents indicated that they were planning on adding to the payroll in the coming quarter, with an average reported percent increase of 3.31%.⁵³

The September 11th attacks on the World Trade Centers and the Pentagon shattered what looked like a quick recovery. The stock market plunged to lower levels than seen during the trough of the recession. Yet in the midst of that, the FEI survey found that 88% of CFOs believed that the country’s economic future was secure and would rebound by either the first (17%) or second (71%) of 2002.⁵⁴ The fourth quarter report of the Fuqua FEI report continued this trend, with CFO’s overwhelming responding that employment would come back from its highpoint of 5.7% and 53% of respondents answering that their own firms would be hiring in 2002.⁵⁵ While the results of the survey indicate that only modest growth was predicted, the main point is that they still generally viewed the conditions of the economy positively. By the first quarter of 2002, 259 out of 260 surveyed CFOs responded that GDP growth for 2002 would be positive and that corporate earnings would be up.⁵⁶

It would be theoretically convenient to point to the robust business confidence in this period by pointing to the Bush Tax Cuts passed in two parts in 2001 and 2003. However, several survey results would undermine this. In the first quarter of 2002, only 1.7% of CFOs in the Fuqua FEI survey identified the

⁵² Richard Murphy, “Why Bush Gets a Thumbs-Up on Main Street,” *Fortune Small Business*, Oct. 1, 2004, http://money.cnn.com/magazines/fsb/fsb_archive/2004/10/01/8187291/index.htm.

⁵³ Duke/CFO Magazine, “Global Business Outlook Survey,” *cfosurvey.org*, accessed Dec. 12, 2011, <http://www.cfosurvey.org/index.htm>.

⁵⁴ *Ibid*, 2001 Quarter 3 results sheet.

⁵⁵ *Ibid*, 2001 Quarter 4 results sheet.

⁵⁶ *Ibid*, 2002 Quarter 1 results sheet.

new tax laws as having the greatest effect on their business for the coming year, while consumer spending came in at 37.6%.⁵⁷ However, this result can actually be viewed as support for the argument that the level of uncertainty that occurred as a result of the political actions taken by George W. Bush was minimal. Across the next three years of survey data, no political factor ever ranked above 5% on this particular question as businesses focused on the problems of labor supply, technological advancement, and consumer spending patterns. The silence speaks volumes.

The financial data generally confirms this analysis. Over the period from 2001 - 2003, private investment steadily rebounded, even accounting for the secondary dip after the attacks on September 11th. Private investment reversed its downward trajectory by the fourth quarter of 2001, and by early 2004 it surpassed its pre-2000 level of \$2.01 trillion. Comparing the private investment graphs for the 2001 and 2008 recessions, shown in Graph 7, the greatest difference to be seen is the duration of the change. The left-hand graph, though following the same basic pattern of the right-hand graph, accomplishes a complete rebound in under two years. The right-hand graph shows only half as much progress over almost three years. This growth is even more impressive when one considers that the primary economic causal forces were supplemented by the terrorist attacks on 9-11, which provided a short-run crisis in the stock market.

There is an interesting discrepancy to note among the financial data, however. The yield differentials over this time period were consistent with the data presented above, with very small differences across the terms to maturity for non-financial, and financial, corporate paper, see Graph 8. In this regard, the difference between the returns to various maturities fluctuates for the most part between 0 and +/- 5%, with notable exceptions directly preceding national elections for president, which Julio and Yook found to be highly predictive of cyclical investment behavior.⁵⁸ But the interest swap rates over President Bush's first year in office manifested a high degree of divergence based upon the length of the contract. The analysis advanced previously would thus conclude that a high degree of model uncertainty existed with regard to interest rate fluctuations. This seemingly contradictory finding can be explained with an examination of President Bush's monetary policy during his first term. Under the leadership of Alan Greenspan, Chairman of the Federal Reserve Board of Governors, President Bush expanded the money supply dramatically over the course of his first term. Graph 9 tracks the expansion of the money supply, M1, during that time. Apart from the dramatic surge that can be seen in the fall of 2001, President Bush

⁵⁷ *Ibid.*

⁵⁸ Julio and Yook, "Political Uncertainty and Corporate Investment Cycles," (2010).

steadily increased the supply of money supply through aggressive monetary policy, in the words of Greenspan himself, “During 2001, in the aftermath of the bursting of the bubble and the acts of terrorism in September 2001, the federal funds rate was lowered 4 $\frac{3}{4}$ percentage points. Subsequently, another 75 basis points were pared, bringing the rate by June 2003 to its current 1 percent, the lowest level in 45 years.”⁵⁹

Given the inflationary policies being followed to mitigate the negative effects of the burst, it should be no surprise that investors were faced with a measure of interest rate uncertainty. It would be interesting to examine whether such trends extended to other financial derivative instruments, but for the moment, we will content ourselves with the inflationary explanation. The difference between the rates earned on different term to maturity interest swaps can be seen below in Graph 10, where we can see that the percent differences almost reach the same level of magnitude as in the 2007-2010 case.

Conclusion

There are a number of policy lessons that can be learned from the differences between the way Presidents Bush and Obama responded to economic crises. Though both administrations pursued similar fiscal and monetary policy, to some extent, the commitment to the business community and property rights that existed under President Bush, or at least the popular perception of the same, his roll-back of regulatory burdens, and his lowering of marginal tax rates across the board created an environment in which investors and entrepreneurs felt comfortable taking on additional risk. Evidence of this can be clearly seen in the polling data, where the confidence of the business community in the overall trajectory of the economy hardly faltered under Bush, despite poor economic performance, and in the financial data, where we can see private investment and bond yield differentials returning to pre-recession values with relative rapidity. Thus the environmental factors necessary to create systemic uncertainty never materialized in the period following the implosion of the “dot com bubble” in 2001.

Under President Obama’s administration, on the other hand, the federal government has fostered an atmosphere that is not conducive to economic recovery. Passage of the PPACA and Dodd-Frank has only exacerbated the uncertainty which already accompanied the generally unfavorable impressions with which business leaders viewed his leadership style. And upon careful

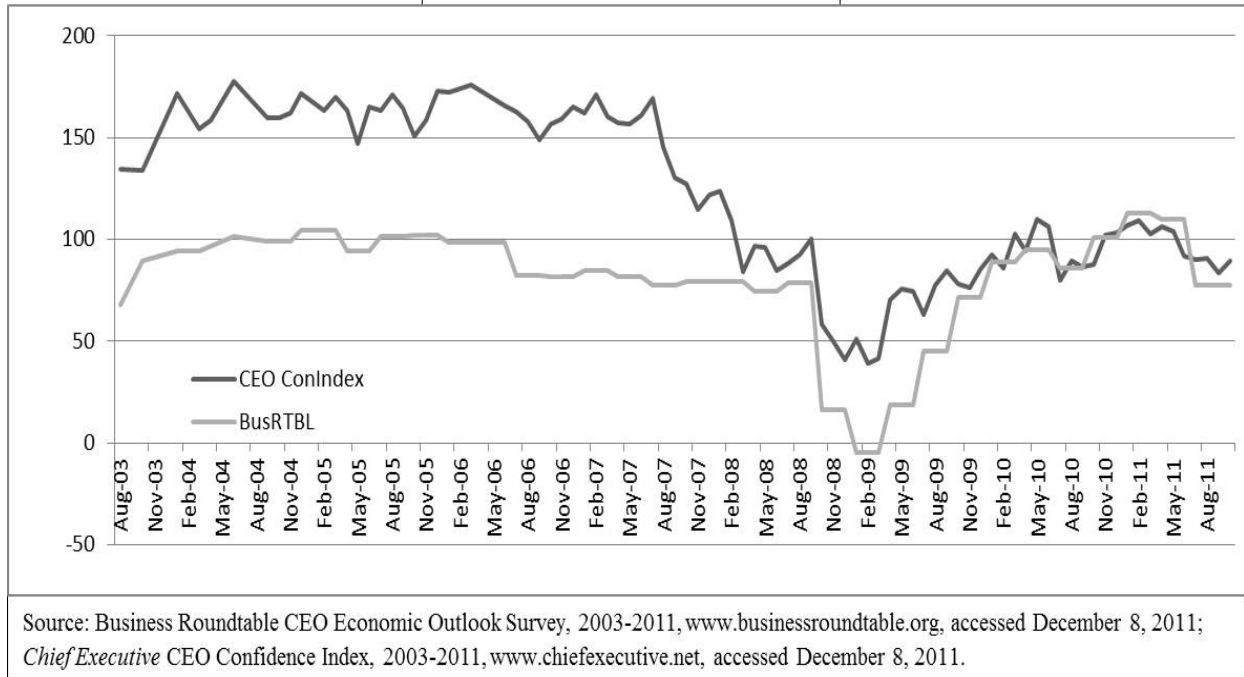
⁵⁹ Alan Greenspan, “Risk and Uncertainty in Monetary Policy,” *The American Economic Review* 94, no. 2 Papers and Proceedings of the 116th Annual Meeting of the American Economic Association (May, 2004): 33-40, 36.

reflection, the rhetoric of “fairness,” which has crept into almost every aspect of the president’s reelection bid, will only further damage his rapport with the business community, providing them with further evidence that his administration is strongly contemplating significant revisions to the tax code in the future. Between July 22 and October 6, 2011, President Obama held over sixteen events in which the theme of his address was tax hikes on topmost-bracket income earners.⁶⁰ Yet so far, he has been unable to put those policies in place, only adding to the uncertainty. If Obama is re-elected, he may well have the opportunity to move forward with many of his other policy objectives: stronger EPA rules on Carbon emissions and farm dust, eliminating the secret ballot in union organization, raising tax rates, and other potential regulatory changes that make it impossible for business leaders and investors to accurately forecast future market conditions. The data suggests that rather than risking their capital on the whims of an election, investors are shrewdly following their self-interest and delaying their plans until the systemic uncertainty has been diminished and a clearer picture of future market conditions can be obtained.

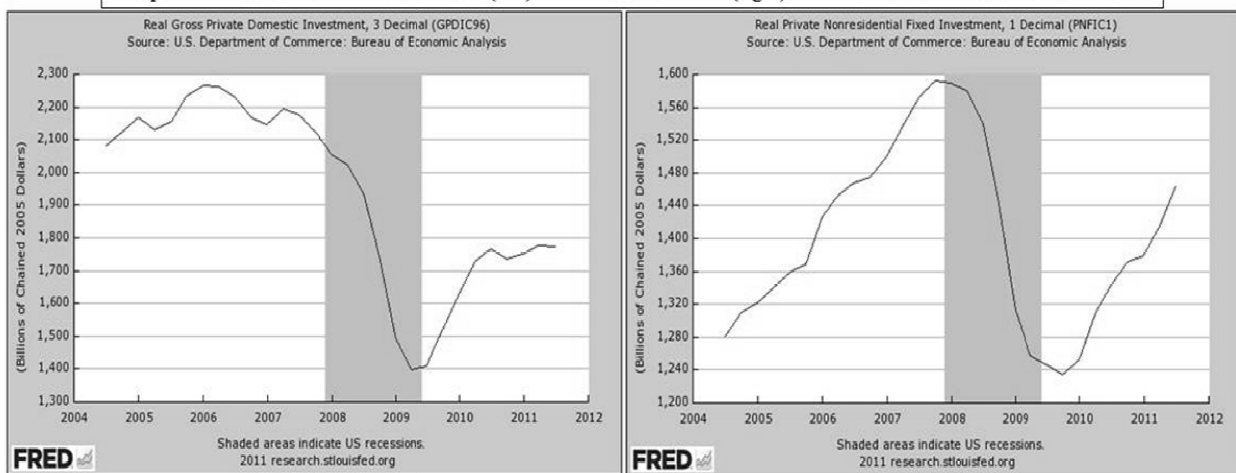
⁶⁰ The Office of the Presidency, “Speeches and Addresses,” *whitehouse.gov*, accessed October 2011, <http://www.whitehouse.gov/briefing-room/speeches-and-remarks>.

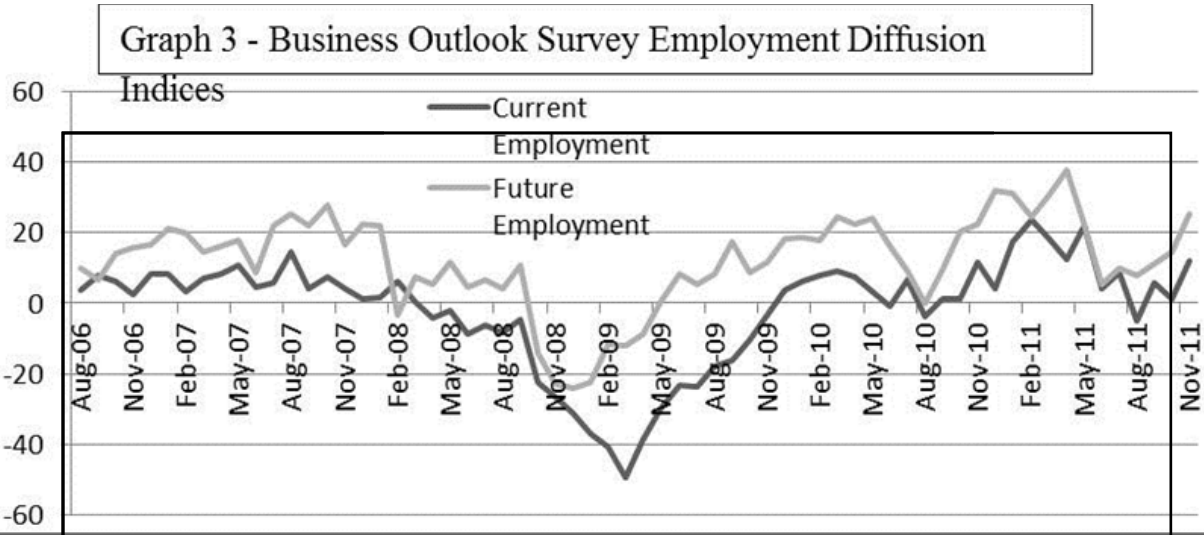
Appendix 1: Graphs

Graph 1 - CEO Confidence Indexes

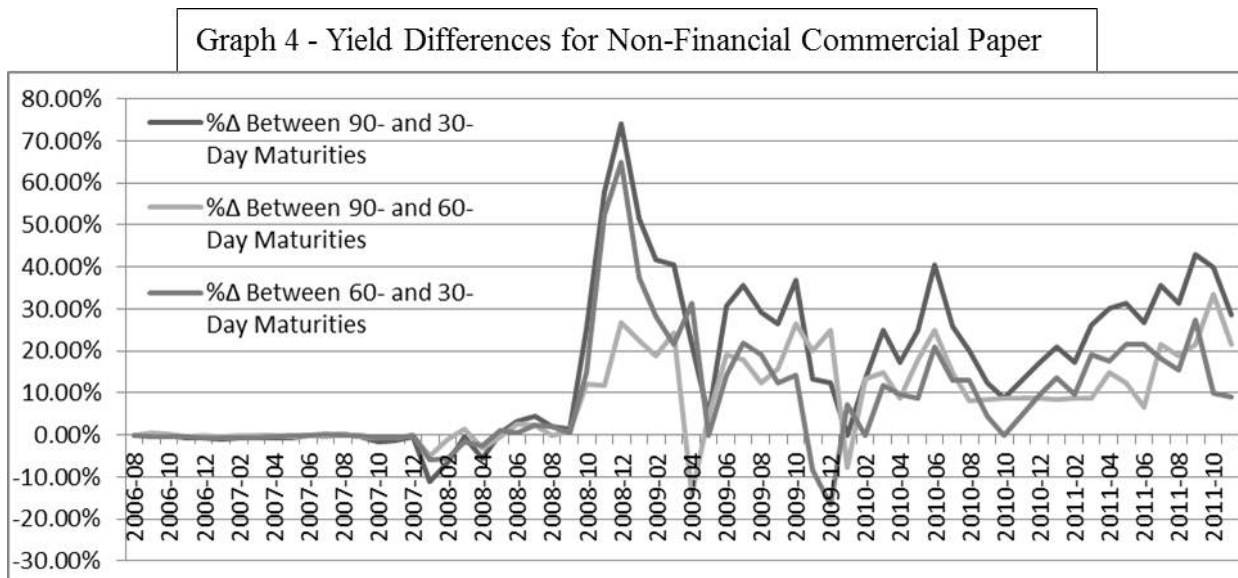


Graph 2 - Real Gross Private Investment (left) and Non-Residential (right) in Billions of Chained 2005 Dollars



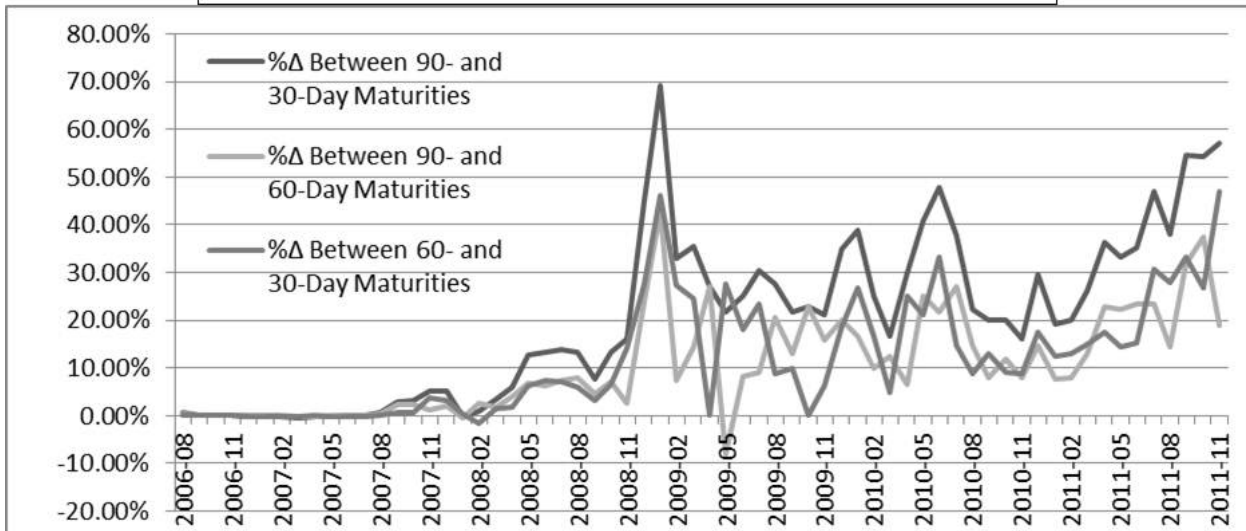


Source: Federal Reserve Bank of Philadelphia, "Business Outlook Survey," Employment Diffusion Indices for Current and Future Employment, accessed December 8, 2011.



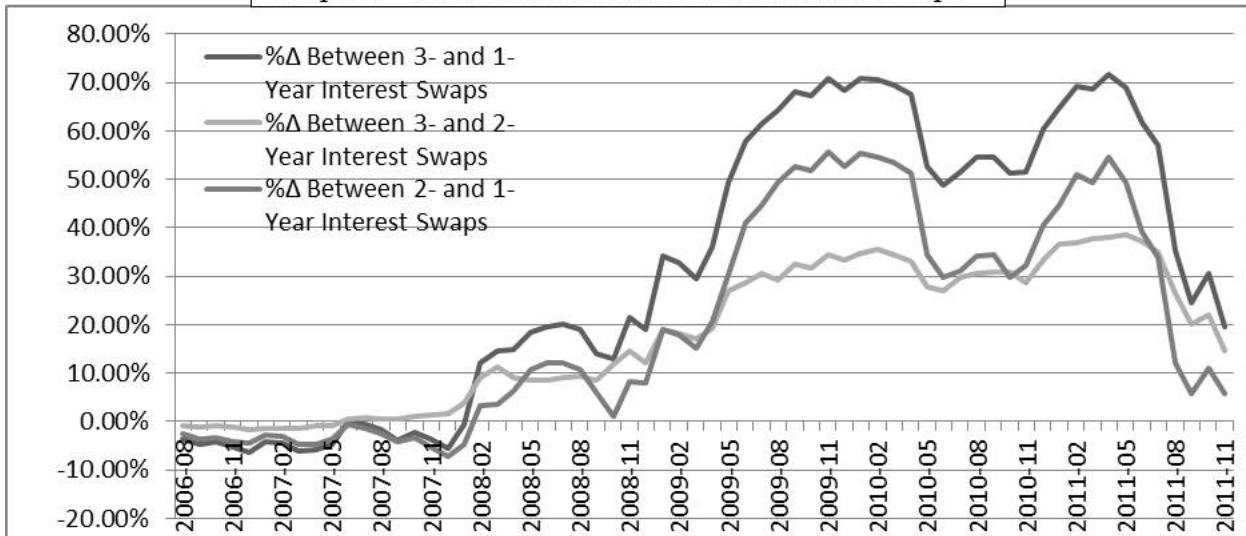
Source: Board of Governors of the Federal Reserve System, "Selected Interest Rates," AA-Rated Non-Financial Commercial Paper, accessed December 10, 2011.

Graph 5 - Yield Differences for Financial Commercial Paper



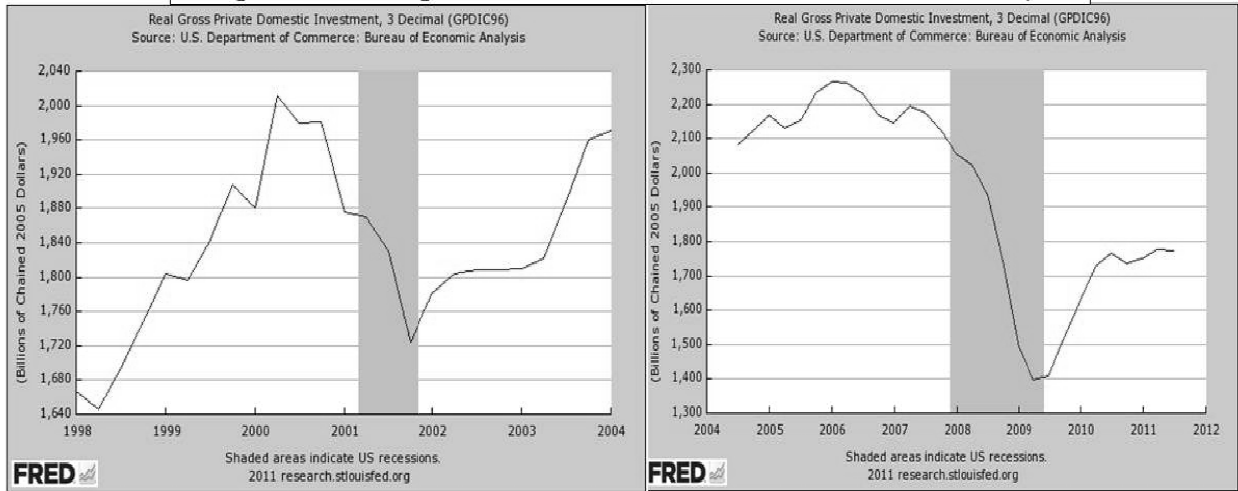
Source: Board of Governors of the Federal Reserve System, "Selected Interest Rates," AA-Rated Financial Commercial Paper, accessed December 10, 2011.

Graph 6 - Yield Differences for Interest Rate Swaps

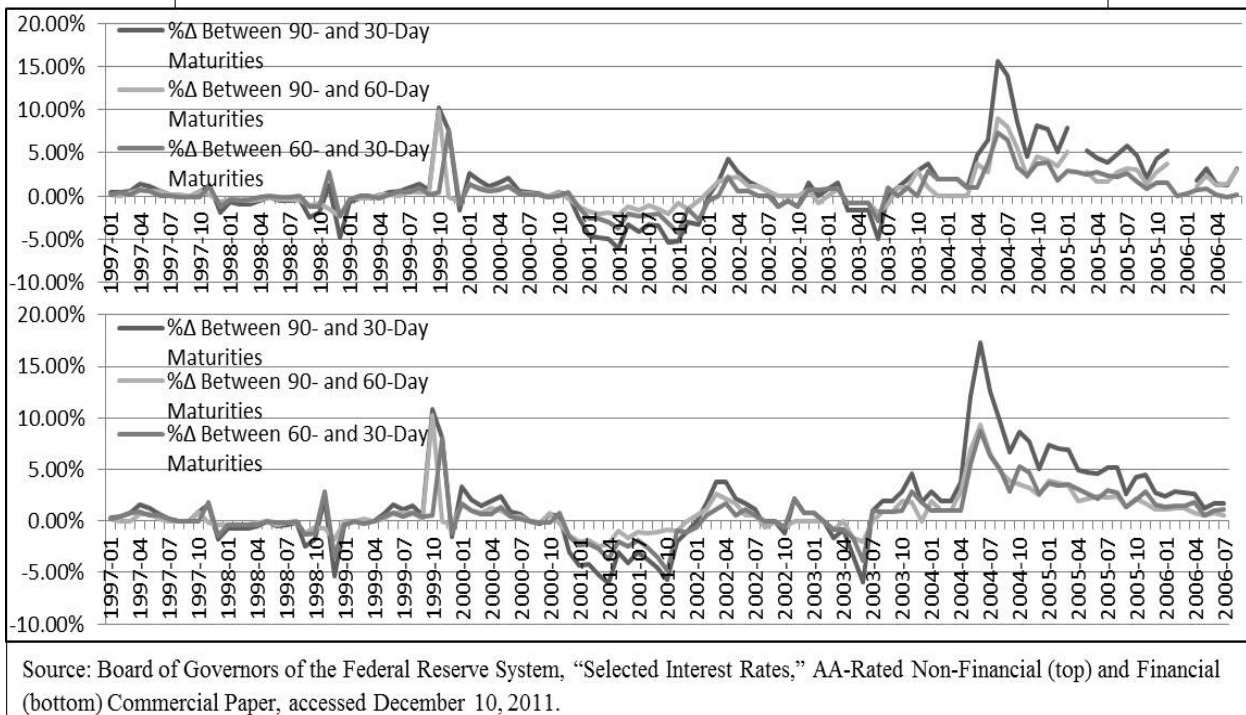


Source: Board of Governors of the Federal Reserve System, "Selected Interest Rates," Interest Rate Swaps, accessed December 10, 2011.

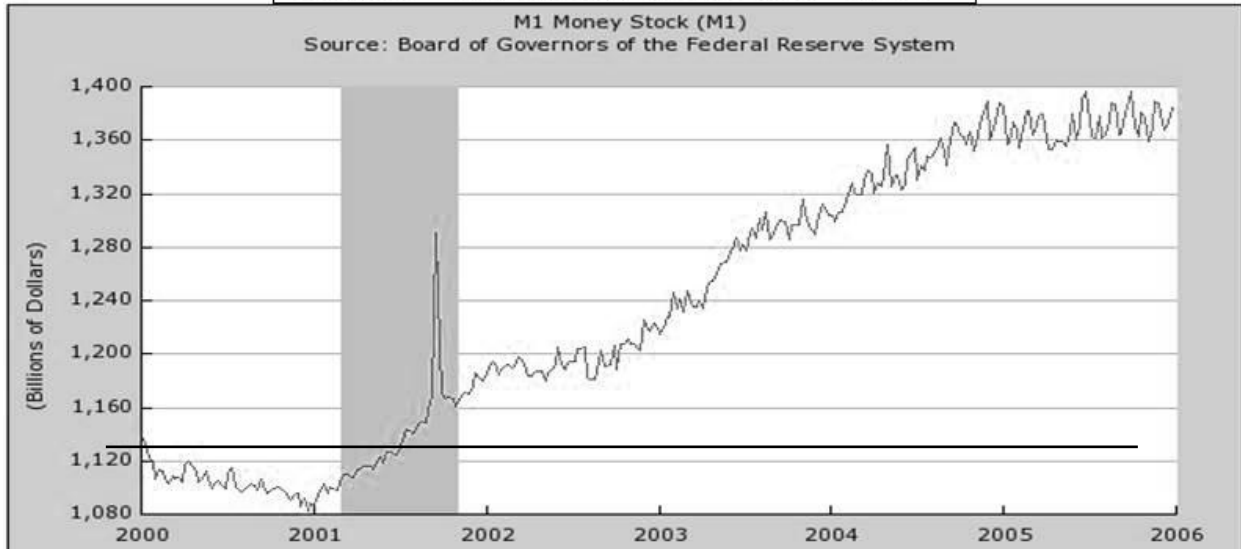
Graph 7 - A Comparison of Real Private Investment Recovery



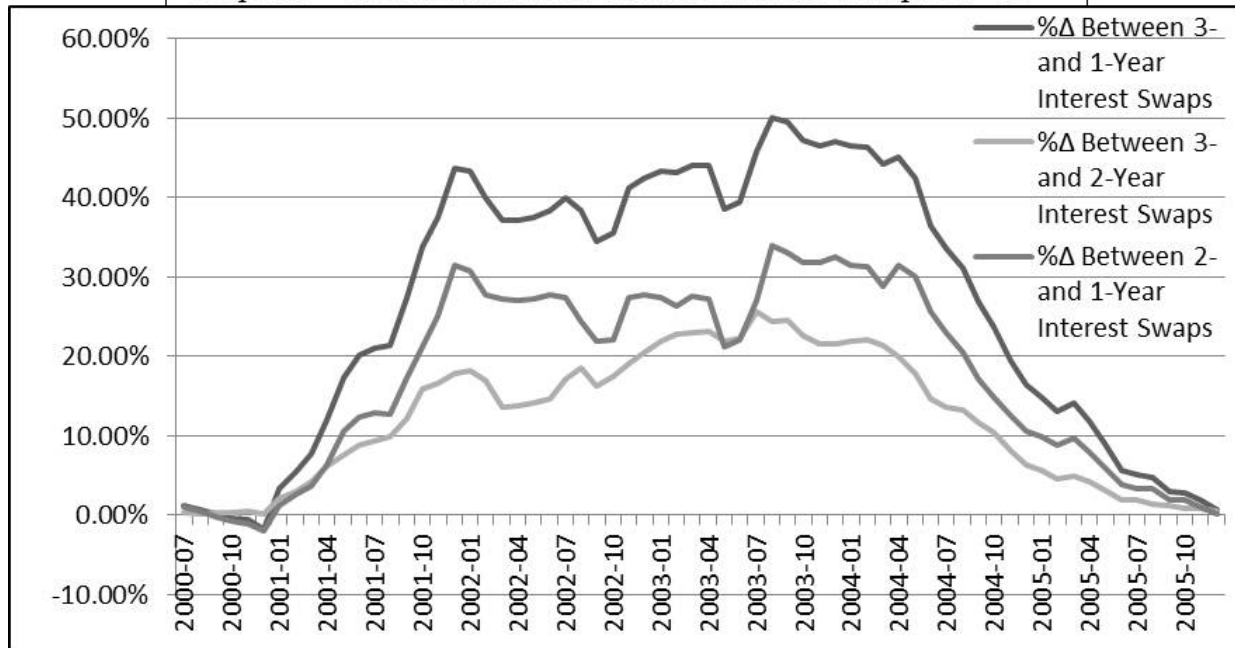
Graph 8 - Yield Differences for Non-Financial and Financial Commercial Paper



Graph 9 - M1 Money Stock 2000 - 2005



Graph 10 - Yield Differences for Interest Rate Swaps 00'-05'



Source: Board of Governors of the Federal Reserve System, "Selected Interest Rates," Interest Rate Swaps, accessed December 10, 2011.

References

- Alston, Lee, Thrainn Eggertsson, and Douglass North. Introduction to *Empirical Studies in Institutional Change*, eds. Lee Alston, Thrainn Eggertsson, and Douglass North New York: Cambridge University Press, 1996.
- Arellano, Cristina, Yan Bai, and Patrick Kehoe. “Financial Markets and Fluctuations in Uncertainty.” *Federal Reserve Bank of Minneapolis*, Research Department Staff Report (2010).
- Bachmann, Rudiger and Christian Bayer. “Uncertainty Business Cycles - Really?” *National Bureau of Economic Research*, Working Paper No. 16862 (2009).
- Bachmann, Rudiger, Steffen Elstner, and Eric Sims. “Uncertainty and Economic Activity, Evidence from Business Survey Data.” *National Bureau of Economic Research*, Working Paper No. 16143 (2010).
- Barro, Robert. “Economic Growth in a Cross Section of Countries.” *Quarterly Journal of Economics* 106 (1991): 407-43
- Bloom, Nicholas. “The Impact of Uncertainty Shocks.” *Econometrica* 77, no. 3 (2009): 623–685.
- Borner, Silvio, Aymo Brunetti and Beatrice Weder. *Political Credibility and Economic Development*. New York: St. Martin’s Press, 1995.
- Cantillon, Richard. *Essai sur la nature de commerce en general*, trans. Henry Higgs London: Macmillan, 1755.
- Casson, Mark. *The Entrepreneur: An economic Theory*. Oxford: Martin Robertson, 1982.
- Chen, Jing. “Fund Managers Not Dodd-Frank Fans.” *www.hedgefund.net*. Sept. 27, 2011. Accessed Dec. 7, 2011. <http://hedgefund.net/publicnews/default.aspx?story=12914>.
- Chief Executive Magazine*. “Job Creators Prefer John McCain 4-to-1 Over Barack Obama.” *ChiefExecutive.net*. October 8, 2008. Accessed December 9, 2011. <http://chiefexecutive.net/job-creators-prefer-john-mccain-4-to-1-over-barack-obama>.
- Discover Small Business Watch. “Discover Survey Finds Majority of Small Business Owners Favor Repeal of Health-Care Reform Law.”

InsuranceTechnology, Jan. 18, 2011. <http://insurance-technology.tmcnet.com/news/2011/01/18/5251891.htm>.

Dornbusch, Rudiger. "Policies to Move from Stabilization to Growth." *Proceedings of the 1990 World Bank Annual Conference on Development Economics* (1991): 19-48.

Dreschler, Itamar. "Uncertainty, Time-Varying Fear, and Asset Prices." *Wharton School of Business* (2009): 1-68.

Duke/CFO Magazine. "Global Business Outlook Survey." *cfosurvey.org*. Accessed Dec. 12, 2011. <http://www.cfosurvey.org/index.htm>.

Ernst & Young. "Compliance perspectives on new regulations 2011," *www.ey.com*. 2011. [http://www.ey.com/Publication/vwLUAssets/Compliance_Perspectives_on_New_Regulation_2011_FINAL/\\$FILE/Compliance_Perspectives_on_New_Regulation_2011_FINAL.pdf](http://www.ey.com/Publication/vwLUAssets/Compliance_Perspectives_on_New_Regulation_2011_FINAL/$FILE/Compliance_Perspectives_on_New_Regulation_2011_FINAL.pdf), 4.

Federal Register.gov. Accessed 12/5/2010. <http://www.federalregister.gov>.

Federal Reserve Bank of Philadelphia. "Business Outlook Survey." *www.phil.frb.org*. Accessed Dec. 12, 2011. <http://www.phil.frb.org/research-and-data/regional-economy/business-outlook-survey/>.

Foss, Nicolai and Peter G. Klein. "Entrepreneurship and the Economic Theory of the Firm: Any Gains from Trade?" in *Handbook of Entrepreneurship Research: Disciplinary Perspectives*, eds. Rashjee Agarwal, Sharon A. Alvarez, and Olaf Sorenson Dordrecht: Springer, 2005.

Gilchrist, Simon, Jae Sim, and Egon Zakrajsek. "Uncertainty, Financial Frictions, and Investment Dynamics." *mimeo* Boston University Department of Economics (2010): 1-43.

Greenspan, Alan. "Risk and Uncertainty in Monetary Policy." *The American Economic Review* 94, no. 2 Papers and Proceedings of the 116th Annual Meeting of the American Economic Association (May, 2004): 33-40.

Henisz, Witold. "The Institutional Environment for Economic Growth." *Economics and Politics* 12, no. 1 (2000): 1-31.

- Higgs, Robert. "U.S. Economic Recovery Remains Anemic, at Best." *The Beacon Blog*, Nov. 6, 2011. <http://blog.independent.org/2011/11/06/u-s-economic-recovery-remains-anemic-at-best>.
- Higgs, Robert. "Regime Uncertainty: Why the Great Depression Lasted So Long and Why Prosperity Resumed after the War." *The Independent Review* 1, no. 4 (1997): 561-590.
- Ivy, Jenny, quoting Larry Boress. "Reform takes aim at benefits, employers say." *benefitspro.com*. Jan. 3, 2011. <http://www.benefitspro.com/2011/01/03/reform-takes-aim-at-benefits-employers-say>.
- Jordan, Nichole. "Bank Executive Survey: Bankers' optimism rebounds amid concerns over Dodd-Frank." *www.grantthornton.com*. June 2011. Accessed Dec. 8, 2011. <http://www.grantthornton.com/staticfiles/GTCom/Financial%20services/FSandFI%20files/Bank%20Survey/Grant%20Thornton%20LLP-Bank%20Director-18th%20Annual%20Bank%20Executive%20Survey.pdf>, 2.
- Julio, Brandon and Youngsuk Yook. "Political Uncertainty and Corporate Investment Cycles." *Journal of Finance*, forthcoming (2010).
- Kirzner, Israel. *Perception, Opportunity and Profit: Studies in the Theory of Entrepreneurship*. Chicago: University of Chicago Press, 1979.
- Klein, Peter G. "New Institutional Economics." in *Encyclopedia of Law and Economics*, eds. B. Bouckaert and G. De Geest Cheltenham, UK: Edward Elgar, 2000: 456-89.
- Klein, Peter G. "Opportunity Discovery, Entrepreneurial Action, and Economic Organization." *Strategic Entrepreneurship Journal*, forthcoming (2008): 1-33.
- Klein, Peter G. and Hung Luu. "Politics and Productivity." *Economic Inquiry* 41, no. 3 (2003): 433-47.
- Knight, Frank. *Risk, Uncertainty and Profit*. New York: August M. Kelly Publishing, 1964.
- Langlois, Richard and Metin Cosgel. "Frank Knight on Risk, Uncertainty, and the Firm: A New Interpretation." *Economic Inquiry* 31 (1993): 456-65.

- Lawson, Gary. "Reviving Formal Rulemaking: Openness and Accountability for Obamacare." *Heritage Backgrounder* no. 2585. July 25, 2011. http://thf_media.s3.amazonaws.com/2011/pdf/bg2585.pdf.
- McKinsey & Co. "Employer Survey on US Health care Reform: Details regarding the survey methodology." *mckinsey.com*. June 2011. www.mckinsey.com/Features/US_employer_healthcare_survey.
- McPartland, Kevin. "Credit and Rate Swap Dealers 2011: Redefined and Reborn." *Tabb Group.com*. Oct. 12, 2011. <http://www.tabbgroup.com/PublicationDetail.aspx?PublicationID=996>.
- Midwest Business Health Group. "Key Findings of Employer Reaction to Health Reform-Post Election Survey." Dec. 22, 2010. [https://www.mbg.org/templates/UserFiles/Files/Key%20Findings%20of%20Dec%202010%20Survey%20of%20Employers%20Reacton%20to%20Health%20Reform\(2\).pdf](https://www.mbg.org/templates/UserFiles/Files/Key%20Findings%20of%20Dec%202010%20Survey%20of%20Employers%20Reacton%20to%20Health%20Reform(2).pdf).
- Mises, Ludwig von. *Human Action: A Treatise on Economics*. Auburn, AL: Ludwig von Mises Institute, 1998.
- Murphy, Kevin, Andrei Shleifer, and Robert Vishny. "The Allocation of Talent: Implications for Growth." *Quarterly Journal of Economics* (1991): 503-530.
- Murphy, Richard. "Why Bush Gets a Thumbs-Up on Main Street." *Fortune Small Business*. Oct. 1, 2004. http://money.cnn.com/magazines/fsb/fsb_archive/2004/10/01/8187291/index.htm.
- North, Douglass. *Institutions, Institutional Change and Economic Performance*. New York: W.W. Norton & Company, 1990.
- North, Douglass and Robert Thomas. *The Rise of the Western World: A New Economic History*. Cambridge, MA: Cambridge University Press, 1973.
- Office of the Presidency, The. "Speeches and Remarks." *whitehouse.gov*. Accessed October 2011. <http://www.whitehouse.gov/briefing-room/speeches-and-remarks>.
- Olson, Mancur. "Big Bills Left on the Sidewalk: Why some nations are rich and others poor." *Journal of Economic Perspectives* 10 (1995): 3-24.

- Pindyck, Robert. "Irreversibility, Uncertainty, and Investment." *Journal of Economic Literature* 29 (1991): 1110-48.
- Przybyla, Heidi. "Obama Seen as Anti-Business by 77% of U.S. Investors." *Bloomberg.com*. Jan. 21, 2010. Accessed Dec. 2011. <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a8UiI1bCRdmY>.
- Rodrik, Dani. "The Positive Economics of Policy Reform." *American Economic Review* 83 (1993): 356-361.
- Rothbard, Murray. *Man, Economy, and State: A Treatise on Economic Principles*. Princeton, NJ: Van Nostrand, 1962.
- Schultz, T.W. "The Value of the Ability to Deal with Disequilibria." *Journal of Economic Literature* 13 (1975): 827-46.
- Schultz, T.W. "Investment in Entrepreneurial Ability," *Scandinavian Journal of Economics* 82 (1982): 437-48.
- Schumpeter, Joseph. *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*. New York: McGraw Hill, 1939
- Schumpeter, Joseph. *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Cambridge, MA: Harvard University Press, 1911.
- Stasavage, David. "Private Investment and Political Uncertainty." *London School of Economics Discussion Paper No. DEDPS 25* (2000): 1-37.
- Turner, Grace-Marie, et al. *Why ObamaCare is Wrong for America*. New York: HarperCollins, 2011.
- Witt, Ulrich. "Imagination and Leadership: the Neglected Dimension of an Evolutionary Theory of the Firm." *Journal of Economic Behavior and Organization* 35 (1998): 161-77.
- World Bank. *The State in a Changing World*. New York; Oxford University Press, 1997.