Chapter 56
Effects of Free Goods on Market Sustainability

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ABSTRACT

Various types of 'bubbles', e.g. stock market, housing, dot.com, high-tech, historically, are commonly-observed phenomena in complex systems. Yet, their emergence often surprises people who remain unaware of history or their systemic roots. Bubbles are often considered to be simply the product of unwise speculative investments or social mania. Alternatively, conventional economic theories often consider factors, such as interest rates, to be the trigger. However, economic theories rarely account for the systemic structure of markets or for non-linear dynamics. The authors propose that special cases may emerge in some markets to trigger instability. Specifically, when minimal interest rates and capital requirements (down payments) are become extremely low a perceptual shift occurs among consumers such that they become viewed as approximate free goods. This paper proposes that unwise economic policies may activate a free goods scenario initiating a cascading series of destabilizing events leading to market collapse. The authors propose hypothesize that such incendiary policies caused both the 1929 stock market crash and the 2008 subprime housing crisis in the United States. To more deeply examine this claim, these policies were tested using a system dynamics model based on data from both the 1929 and 2008 crises. The model simulated and tested the effects of alternative rate policies on market dynamics. Some of the rates and down payments used in both crises set off tsunami-like shock waves through markets leading to their sudden collapse in these simulations. Based on the findings of this study, found that economic policies lessened market stability. The authors propose several revisions to these policies to foster greater market sustainability.

INTRODUCTION

Economic policy formulation is a critical function of government, yet its importance is often not fully appreciated save in retrospect. In the United States, economic policies are often formulated by relying on unbalanced inputs from stake holders since some interest groups, such as financial institutions, have greater power and financial resources. In recent history, initiatives designed to forecast

the prospective impact of government policies have not only been at times grossly ineffective, but they have placed the national economic system in peril. Some of these flawed policies owe to hubris and unmerited certainty among policy makers. Even worse, there is a general ignorance among policy makers of the limitations of human predictive abilities amidst complex dynamic systems. Misperceptions of dynamic feedback in large scale financial systems clearly hold the potential to lead to flawed analysis and erroneous conclusions.

Some of these limitations may be overcome by adopting a system dynamics approach to policy analysis. System dynamics is fundamentally a *policy science*. It is a body of knowledge, tools, and methods used by analysts to discern how decision processes convert information into action. The prevailing presumption of there being an easily observable and objectively rational basis for policy formulation in complex social systems is ubiquitous in western cultures. The operation of most societies often rest on veritable fragile assumptions. Namely, that rational grounding exists that deterministically guides purposeful collective human action toward effective goal achievement and that policy makers inherently know much about the precise operation of such systems and ideal policies used govern them. Actual predictive abilities of humans in complex dynamic policy environments often fall far below the self-assessed performance claims of most governments. This gap between imagined capabilities for highly effective policies and the commonly observed unintended consequences sets the stage for unreasonable risk and injury to the general welfare of society. While scholars often debate the prospective impacts of government policy, relatively little effort is invested in discovering the errors of judgment and lessons learned from prior policy initiatives. In the aftermath of the U.S. subprime mortgage lending crisis, former Federal Reserve chairman Alan Greenspan admitted that *"*he had put too much faith in the self-correcting

power of free markets and had failed to anticipate the self-destructive power of wanton mortgage lending." *New York Times* (2008) In 2008, the subprime mortgage lending crisis was arguably one of the most significant financial events in modern economic history. At minimum, it rivals the 1929 stock market crash and ensuing Great Depression for severity, loss of wealth, and its wide-ranging impact on all strata of American society. The conventional wisdom held among many policy analysts, is that the aforementioned events were unrelated, unpredictable, and unavoidable. They defend the view that such events are merely the result of common place speculative *bubbles* – capable of spontaneously emerging within any free-market economic system.

We question the veracity of such claims. We propose both the 2008 subprime lending crisis and the 1929 stock market crash resulted from the same ill-conceived systemic structures and government policies. In both cases, we argue these debacles were avoidable. More specifically, we propose that, in both cases, government policy had the unintended consequence of destabilizing these markets by using flawed policies that led to a perceptual shift among consumers toward seeing loans and credit *approximate free goods* in the financial systems in question. This precipitated a shift in market dynamics down a slippery slope toward the pattern of behavior typically found in a *tragedy of the commons* systems archetype. These already fragile financial markets reacted with a whipsaw behavior in response to the approximate free goods being withdrawn from the economic system by ill-conceived policies. While there is little doubt financial speculation also played a role in the collapse of these systems, it is more likely that such behavior worsened the tendencies already in play. Since apologists for the rightness of the financial policies used in both of these cases often blame the spiraling dynamics of collapsing markets on speculation and the intrinsic nature of financial markets in Capitalist countries we sought to challenge these claims by designing a system

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